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Docket Nos. 50-289, 50-275/323, 50-361  
50-362, 50-483, 50-528/529/530,  
50-416, 50-389, 50-370, 50-437

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MEMORANDUM FOR: Chairman Palladino  
Commissioner Gilinsky  
Commissioner Ahearne  
Commissioner Roberts  
Commissioner Asselstine

FROM: Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: STAFF POSITION REGARDING UNRESOLVED SAFETY ISSUE A-17  
(Board Notification 83-44 )

The enclosed information is being provided in accordance with present NRC procedures for board notifications. This issue is applicable to all nuclear power plants.

On February 18, 1983, the staff issued Board Notification No. 83-17 concerning allegations regarding Unresolved Safety Issue A-17, "Systems Interaction in Nuclear Power Plants." The staff has considered the concerns raised in that affidavit and has determined that there is no basis for any change in the staff's position regarding USI A-17. The enclosed testimony reaffirms the staff position on USI A-17. We now consider this issue to be resolved.

Original signed by  
Darrell G. Eisenhut

Darrell G. Eisenhut, Director  
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Office of Nuclear Reactor Regulation

Enclosure:  
As stated

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DATE	3/30/83	3/30/83	3/27/83	4/1/83		

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Waterford 3 (S. J. Wolfe, H. Foreman, W. H. Jordan)  
Indian Point (Gleason, Paris, Shon)  
Comanche Peak 1 & 2 (M. E. Miller, W. H. Jordan, K. A. McCollom)  
Byron 1 & 2 (I. W. Smith, D. Callihan, R. F. Cole)  
Callaway 1 & 2 (J. P. Gleason, G. O. Bright, J. R. Kline)  
Palo Verde 1, 2 & 3 (R. M. Lazo, R. F. Cole, D. Callihan)  
Perry 1 & 2 (Bloch, G. O. Bright, J. R. Kline)  
Zimmer (Frye, Hooper, Livingston)

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Waterford 3 (S. F. Eilperin, W. R. Johnson, C. N. Kohl)  
TMI-1 (Edles, Buck, Gotchy, Kohl)  
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Callaway 1 & 2 (A. S. Rosenthal, G. J. Edles, R. L. Gotchy)  
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330

March 10, 1983

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)	)	

NRC STAFF SUPPLEMENTAL TESTIMONY ON CONTNETION 7B  
BY ROGER J. MATTSON, RICHARD H. VOLLMER, CHARLES E.  
ROSSI, ASHOK C. THADANI AND FRANKLIN D. COFFMAN, JR.

Q.1. Please state your names and positions with the NRC.

A.1. I, Roger J. Mattson, am Director of the Division of System Integration, Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.

I, Richard H. Vollmer, am Director of the Division of Engineering, Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.

I, Charles E. Rossi, am a Section Leader in the Instrumentation and Control Systems Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation. A copy of my professional qualifications appears in the record of this proceeding following Tr. 6357.

I, Ashok C. Thadani, am Branch Chief of the Reliability and Risk Assessment Branch, Division of Safety Technology, Office of Nuclear

8303/0227

Reactor Regulation. A copy of my professional qualifications appears in the record of this proceeding following Tr. 6453.

I, Franklin D. Coffman, Jr., am Section Leader of the Systems Interaction Section, Reliability and Risk Assessment Branch. A copy of my professional qualifications is attached.

Q.2. What is the purpose of your testimony?

A.2. (Panel) The purpose of our testimony is to present the position of the Staff in response to the February 9, 1983 affidavit of James H. Conran, Sr.

Q.3. Have you reviewed the Conran affidavit and are you familiar with the matters discussed therein?

A.2. (Panel) Yes.

Q.4. Please describe the nature of your respective relationships to the Shoreham licensing process.

A.4. (Mattson) Significant portions of the review of the Shoreham application have been conducted by the Division of Systems Integration. Three members of the Staff's previous panel of witnesses on this contention -- Themis P. Speis, Charles E. Rossi, and Marvin W. Hodges -- worked within my division on the review of Shoreham.

(Vollmer) Significant portions of the review of the Shoreham application have been conducted by the Division of Engineering. Two members of the Staff's previous panel on this contention -- Walter P. Haass and Robert Kirkwood -- worked within my division on the review of Shoreham.

(Rossi) As a Section Leader in the Instrumentation and Control Systems Branch, a portion of the Shoreham review was performed

under my supervision. I appeared as a witness on behalf of the Staff on this contention during the earlier testimony.

(Thadani) The Systems Interaction Section within my branch is responsible for the Staff's program for the resolution of Unresolved Safety Issue (USI) A-17 and for the discussion of that issue which appears in Safety Evaluation Reports. Mr. Coffman and Mr. Conran are members of the Systems Interaction Section. I appeared as a witness on behalf of the Staff on this contention during earlier testimony.

(Coffman) I am responsible for management of the Staff's program for the resolution of Unresolved Safety Issue A-17 and helped to prepare the discussion of that issue which appears in Safety Evaluation Reports, including that for Shoreham. Mr. Conran reports to me within the Systems Interaction Section.

Q.5. Mr. Thadani and Mr. Coffman, are you familiar with the testimony given previously by Staff witnesses in this proceeding on the subject of USI A-17 and systems interactions?

A.5. (Thadani, Coffman) Yes, we are.

Q.6. Has the Staff's position as reflected in testimony given previously by Staff witnesses in this proceeding on the subjects of A-17 and systems interactions changed as a result of Mr. Conran's February 9, 1983, affidavit or for any other reason?

A.6. (Thadani, Coffman) No, it has not changed.

Q.7. Please explain.

A.7. (Thadani, Coffman) The principal points made by Mr. Conran and Mr. Thadani in their testimony in this proceeding on A-17 and systems interactions were as follows: 1) the Staff's current licensing

requirements provide reasonable assurance of no undue risk to public health and safety from potential adverse systems interactions; 2) Unresolved Safety Issue A-17 is confirmatory in nature; 3) the Staff's program on A-17 is progressing toward resolution; 4) Shoreham may be licensed for operation despite the pendency of Unresolved Safety Issue A-17; and 5) no plant-specific systems interaction analyses (other than those now required by the regulation or Staff practice) are or should be required until completion of the Staff's program determines whether they are necessary and justified.

Mr. Conran's views on A-17 have now changed for the reasons expressed in his affidavit. The Staff does not find in Mr. Conran's affidavit a sufficient basis for any change in the Staff's position as expressed in the foregoing paragraph and the Staff's previous testimony in this proceeding. We reaffirm that position here.

Q.8. What is the Staff's response to the specific items raised in Mr. Conran's affidavit in support of his changed views?

A.8. (Thadani, Coffman) Mr. Conran, in his affidavit, has concluded that: 1) the Systems Interaction program has experienced administrative delays to the extent that there now is an inadequate safety basis to license Shoreham; and 2) all licensees and operating license applicants should be required to begin limited systems interaction reviews.

The Staff believes there is reasonable assurance that the Shoreham plant can be operated without endangering the health and safety of the public. The Shoreham application was evaluated against licensing requirements that were founded on the principle of defense-in-depth. The

Shoreham design was reviewed against the "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (originally issued as NUREG-75/087 in December 1977, and reissued as NUREG-0800 in July 1981 with the addition of the TMI-2 accident requirements), which requires interdisciplinary reviews of equipment and addresses different types of potential systems interactions. Use of the Standard Review Plan in the review process results in safety requirements such as physical separation and independence of redundant safety systems, and protection against hazards such as high-energy line ruptures (Section 3.6.1 of the Standard Review Plan), missiles (Section 3.5.1 & 3.5.2), high winds (Section 3.3), flooding (Sections 3.4, 3.5, & 3.6), seismic events (Section 3.2.1, 3.4, & 3.9.2), and fires (Section 9.5.1). Thus, the existing requirements and licensing review procedures currently provide for an adequate degree of plant safety against potential adverse systems interactions.

The Staff's program on Unresolved Safety Issue A-17 was initiated to confirm that present review procedures and safety criteria provide an acceptable level of independence for systems required for safety by evaluating the potential for the more important undesirable interactions between and among systems. Progress in this program to date has provided no indication that present review procedures and criteria do not provide reasonable assurance that the effects of potential systems interactions on plant safety will be within the effects on plant safety previously evaluated (i.e., within the design-basis envelop).

On this basis it is concluded that additional plant-specific systems interaction studies are not necessary to provide reasonable

assurance of public health and safety as a predicate to licensing Shoreham. Systems interaction analyses are very expensive (even limited ones would cost over \$500,000 each). The Staff's program to resolve the A-17 issue is now at the stage where the next step is an application of the known and documented methods. The application of these methods will provide a basis to answer the questions of the efficiency of a specific methodology, 1) to discover unforeseen intersystems dependencies within the plant, 2) to rank-order such systems dependencies that are safety significant, and 3) to establish the resource efficiency from a safety-significance basis.

The Staff has considered several alternatives in applying available candidate methods for systems interaction analyses. Consideration was given to using the activities which include 1) the Power Authority of the State of New York (PASNY) study of Indian Point Unit 3, 2) the Pacific Gas and Electric Co. study of Diablo Canyon, 3) pilot studies on a limited number of light water reactors to test the candidate methodologies, and 4) the Consumers Power Co. program on Midland 2. Alternative consideration was given to an efficient integration of the proposed Systematic Evaluation Program (SEP) Phase III and the National Reliability Evaluation Program (NREP), together with the systems interaction methodology demonstration. Finally, consideration was given to applying the Staff's candidate methods to Indian Point Unit 3, to provide a comparison with the PASNY method of analyses. This latter alternative is the preferred one at the present time because it will allow the most efficient use of resources for a comparison that is less complicated by plant-wide variations. By October

1984, the Staff expects to complete a review of various systems interaction studies, assess the efficiency of the methodologies used in the studies, and to make a decision on the need for any requirement for plant-specific systems interaction analyses. This expectation is based on the following:

- 1) Initiate Staff Methodology Comparison Study on Indian Point Unit 3 in April 1983;
- 2) Receive PASNY Methodology results in August 1983;
- 3) Receive Results of Staff Study on Indian Point Unit 3 in July 1984;
- 4) Develop Safety Significance of Identified Interactions in July 1984;
- 5) Develop Basis for new licensing requirements, if any, as a result of the A-17 program in October 1984.

During the time Mr. Conran was responding to Contention 7B, the established schedule for the systems interaction program was as given as Enclosure 3 in a memorandum from W. J. Dircks, Executive Director for Operations, to P. Shewmon, Chairman of the ACRS, dated February 12, 1982. That schedule called for selection of the plants for demonstration analyses by February 1982, and a Staff decision on whether to issue a plant-specific systems interaction requirement by January 1984. Recognizing the large costs involved in demonstration analyses, the selection of the plants was delayed to consider the additional alternative of integrating the systems interaction demonstrations with the proposed SEP Phase III/NREP effort. This delay in the established

schedule was described as a potential delay within the Dircks to Shewmon memorandum of February 12, 1982. In November 1982, the Commission decision on a proposal to combine and implement SEP III/NREP was deferred until after a review on the safety benefits of the SEP Phase II was completed. The decision by the Commission on SEP Phase III is now scheduled for Summer 1983.

In the interest of a timely resolution of the systems interaction issue, the Staff has decided to secure the cooperation of PASNY to use the Indian Point Plant Unit 3 for the demonstration comparative analyses. Subsequently, the Staff met with PASNY on January 27, 1983, and PASNY indicated its willingness to cooperate in these demonstrations. The Staff effort to implement the demonstration analyses on Indian Point Unit 3 is now being prepared.

In summary, the Staff continues to believe that reasonable progress towards a timely resolution of USI A-17 is being made, and that, pending completion of that effort, there is reasonable assurance that the design, construction and operational practices used for the Shoreham facility provides reasonable assurance that the plant can be operated without endangering public health and safety.

Q.9. Dr. Mattson, Mr. Vollmer, and Dr. Rossi, are you familiar with the testimony given previously by Staff witnesses in this proceeding on the subject of safety classification?

A.9. (Mattson, Vollmer, Rossi) Yes, we are.

Q.10. Has the Staff's position as reflected in testimony given previously by Staff witnesses in this proceeding on the subject of safety

classification changed as a result of Mr. Conran's February 9, 1983, affidavit or for any other reason?

A.10. (Mattson, Vollmer, Rossi) No, it has not changed.

Q.11. Please explain.

A.11. (Mattson, Vollmer, Rossi) The adequacy of the Applicant's safety classification of structures, systems, and components at Shoreham has been questioned in part because of the Applicant's failure to have defined the term "important to safety" as the Staff defines the term. On the basis of its review of the Shoreham application and of the Applicant's testimony in this proceeding, the Staff took the position that there was close agreement between the Applicant and the Staff on the substantive treatment of plant items considered by the Staff to be "important to safety," despite the difference in terminology. Mr. Conran has changed his view, and he now believes that there "appears to be a substantive defect in Applicant's true understanding of what is really required minimally to protect public health and safety." (Conran affidavit at page 31). He asserts that the Applicant should be required to develop and demonstrate its understanding of regulatory requirements by preparing a list of plant items "important to safety" as a prior condition to issuance of an operating license. (Conran affidavit at pages 32-33). Having considered the statements contained in Mr. Conran's affidavit, the Staff continues to believe that the Applicant has acceptably demonstrated its compliance with the substantive regulatory requirements for plant items "important to safety," despite the Applicant's incorrect usage of the term. The basis for this continuing Staff position may be summarized as follows:

1) The Applicant used Regulatory Guide 1.70, Revision 1, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," dated October 1970, and other applicable regulatory guides in the preparation of its Final Safety Analysis Report (FSAR). The Staff conducted its review of the Shoreham FSAR in accordance with the Standard Review Plan. Accordingly, the FSAR addresses the Staff's requirements for structures, systems, and components important to safety. During the Staff's review of the FSAR, there has been no evidence that a substantive difference exists between the Staff and Applicant on the treatment to be accorded equipment important to safety.

2) During testimony at the hearing regarding specific systems used as examples for classification methodology, it was shown to the Staff's satisfaction that the systems had been properly treated and qualified, and that appropriate quality standards and quality assurance requirements were applied to those systems. The Staff does not believe that a substantive difference exists between the Staff and Applicant on the treatment to be accorded these specific systems.

Q.12. Is the Staff satisfied that the Applicant understands what is minimally required for safety?

A.12. (Mattson, Vollmer, Rossi) Yes. As stated above, during the design and construction phase of Shoreham, the Applicant has satisfied the deterministic criteria embodied in the Staff's Standard Review Plan, other regulatory guidance documents, and appropriate industry standards and practices. In addition, the Applicant has described to the Staff its organization to address facility operation as well as its programs to conduct and audit plant activities including its preventive and

corrective maintenance program, its procurement and storage programs, as well as its design change control program. It is the Staff's judgment that the proper design and construction, coupled with the Applicant's programs for operating the facility, demonstrate that the Applicant understands what is minimally required to operate the facility without undue risk to the health and safety of the public.

Q.13. Is a listing of non-safety related plant items which are "important to safety" necessary to demonstrate an understanding of what is minimally required for safety?

A.13. (Mattson, Vollmer, Rossi) No, there is an acceptable alternative as discussed below. Furthermore, a mere listing would not demonstrate such an understanding and, the review and approval of such a list by the Staff would shift the burden of safety to the Staff instead of the Applicant where it belongs. Alternatively, the Staff has done two things to ensure that the Applicant will comply with General Design Criterion (GDC) 1 during the operational phase at Shoreham, as follows:

1) The Staff has asked the ASLB to find that the Staff's definition of "important to safety" is correct and binding on the Applicant; and,

2) The Staff has asked the Applicant to make a suitable commitment in the FSAR that it will comply with GDC-1 during operations. This request was made at a meeting between the Staff and Applicant on February 18, 1983. Following that meeting, the Staff's request for the FSAR amendment was formally issued to the Applicant in a letter from Mr. D. Eisenhut to Mr. M. Pollock, of the same date. The Applicant's intent to file such an amendment was sent in a letter from Mr. M. Pollock

to Mr. D. Eisenhut, dated March 2, 1983. In order to ensure that there was no misunderstanding as to the exact meaning of the Applicant's commitment, the Staff requested that the FSAR amendment be sent to the Staff for review as soon as possible. This latter request was sent to the Applicant in a letter from Mr. D. Eisenhut to Mr. M. Pollock, dated March 7, 1983. On March 8, 1983, LILCO submitted examples of the language it intends to incorporate in the FSAR in response to Mr. Eisenhut's February 18, 1983 letter. We have reviewed that language and are satisfied that LILCO understands the importance of non-safety related structure, systems, and components. Furthermore, we are satisfied that throughout the lifetime of the plant, the safety significance accorded to these non-safety related structures, systems, and components by the FSAR, the technical specifications, and the emergency operating procedures can be maintained. Copies of the four letters referred to in this answer are attached for information.

Q.14. Please summarize the Staff's position in response to the matters contained in Mr. Conran's affidavit.

A.14. (Mattson, Vollmer, Rossi) With respect to the safety classification aspect of Mr. Conran's affidavit, the Staff's position may be summarized as follows:

1) The Staff considers that by the Applicant's compliance with Regulatory Guide 1.70 and the Standard Review Plan, the Applicant has identified and properly treated those structures, systems, and components the Staff deems important to safety. This has been documented in the Staff's Safety Evaluation Report of the Shoreham facility (NURF G-0420) and its three supplements.

2) The Applicant has committed to amend its FSAR to reflect that during operation, structures, systems, components, and associated computer software will be accorded as a minimum, the safety significance given to them in the FSAR, the technical specifications, and the emergency operating procedures. This same commitment will be reflected in the Shoreham preventive and corrective maintenance program, the design change control program, procedures for procurement of equipment, procedures for modification and removal of equipment from service, and the applicable portions of the Quality Assurance Program. This corporate policy will be present in the charters and decisions of the Review of Operations Committee, the Nuclear Review Board, and the Independent Safety Engineering Group.

3) Based upon the Applicant's demonstrated compliance with the substantive regulatory requirements for plant items important to safety during the design and construction phase and the Applicant's commitments for the operational phase, discussed in item (2) above, the Staff has a sufficient basis for believing that the Applicant understands what is required to protect the public health and safety.

(Thadani, Coffman) With respect to the systems interactions aspects of Mr. Conran's affidavit, the Staff's position may be summarized as follows:

1) The review of Shoreham against existing requirements provides reasonable assurance, pending the resolution of USI A-17, that the plant can be operated without undue risk to the health and safety of the public from potential adverse systems interactions.

2) The Staff's program on A-17 is confirmatory in nature, and the Staff continues to believe that reasonable progress toward a timely resolution of the USI is being made.

3) Additional plant-specific systems interaction studies are not necessary as a predicate to licensing Shoreham.

Statement of Professional Qualifications

ROGER J. MATTSON

Dr. Mattson is Director of the Division of Systems Integration in the Office of Nuclear Reactor Regulation. The Division has responsibility for radiation protection, reactor safety, core and containment design, and the balance of plant licensing review in all commercial reactors. He has previously served as Director of Surveillance and Emergency Preparedness in the Office of Radiation Programs, U.S. Environmental Protection Agency. Prior to his work at EPA, he spent thirteen years in reactor safety regulation and standards, beginning in what is now the Reactor Systems Branch of NRC. He served as Director of Site, Health, and Safeguards Standards in the Office of Standards Development from 1975 to 1977, Director of Systems Safety Technology in Nuclear Reactor Regulation from 1977 to 1980, and Director of Safety Technology in NRR. In addition, he directed the NRC's Lessons Learned Task Force on Three Mile Island, the NRC Steering Group for the TMI-2 Action Plan, the development of the proposed NRC policy statement on severe accidents and the NRC program plan for source term revisions.

Dr. Mattson received his PhD in mechanical engineering from the University of Michigan in 1972 and holds MS and BS degrees in mechanical engineering from the Universities of New Mexico and Nebraska, respectively. Prior to his government service, he spent three years at Sandia Corporation in Albuquerque, New Mexico in the design and operation of thermal, pulsed, and prompt burst reactor facilities.

Statement of Professional Qualifications

RICHARD H. VOLLMER

Mr. Vollmer received a B.S. degree in physics from the University of Notre Dame in 1952. Between the years of 1952 and 1968, he worked on reactor experiments and physics analysis for the Dupont Company at Argonne National Laboratory and at the Savannah River plant; directed the design, construction and operation of the prototype reactor experiments for the Pathfinder boiling water reactor for Allis-Chalmers; and directed the ground test analysis and safety evaluation work associated with SNAP (Systems for Nuclear Application in Space) for Atomic's International.

Mr. Vollmer joined the Commission in 1968 as a Lead Reactor Engineer in the Division of Reactor Licensing and became Technical Coordinator for Operating Reactors in 1970. In 1972 he became Chief of the Quality Assurance Branch and was responsible for development of standard technical specifications, conduct of operations, initial test programs, and quality assurance. In December of 1976 he became Assistant Director for Site Analysis, and in February of 1979 assumed the position of Assistant Director in the Division of Operating Reactors responsible for plant systems and analysis and the Systematic Evaluation Program. Mr. Vollmer was involved early with the response to TMI at the site and was subsequently named Director of Three Mile Island Support Staff, responsible for the review and evaluation of the ongoing operational and restoration activities at TMI until mid-1980.

Mr. Vollmer was then appointed Director, Division of Engineering, responsible for the Staff's technical review in the engineering disciplines, earth sciences, qualification of components, and environmental sciences and engineering.

Statement of Professional Qualifications

FRANKLIN D. COFFMAN, JR.

I serve as the Section Leader of the Systems Interaction Section, Reliability and Risk Assessment Branch, Division of Safety Technology in the Office of Nuclear Reactor Regulation of the U.S.N.R.C. I provide both technical and organizational supervision for nuclear-systems engineers regarding systems interaction analyses, probabilistic risk assessments, and reliability engineering programs. I have served in that capacity since April 1981.

Prior to the Office reorganization in April 1981, I served for one year as a Section Leader in the Systems Interaction Branch, Division of Systems Integration. There my responsibilities were focused upon systems interaction analyses including the evaluation of selected operating reactor experience.

From April 1976 until April 1980, I served as a Section Leader in the Reactor Safety Branch, Division of Operating Reactors, working on regulatory actions affecting nuclear steam supply systems at operating plants. I joined the NRC in May 1973, and for three years I evaluated mostly the mechanical and metallurgical behavior of fuel-assembly designs during both normal operations and postulated accidents.

From July 1971 to May 1973, I worked for Nuclear Fuels Services, Inc., as the Lead Metallurgical Engineer. There I was responsible for the fuel assembly metallurgy within the Nuclear Engineering Department and for metallurgical support to both the Manufacturing and the Reprocessing Divisions.

From October 1968 until June 1971, I worked for the General Electric Company, Nuclear Power Equipment Division, in both the Nuclear Fuels and Reprocessing Department and the Breeder Reactor Development Operation.

I received my formal education at the Colorado School of Mines (Metallurgical Engineering, Met E, 1961), the Carnegie Institute of Technology (32 graduate units in Metallurgical Engineering, 1962), and the University of Santa Clara (Quantitative Methods, M.B.A., 1971).

I have held a Professional Engineer license (CA, MT 1636) since 1973, and I have been a technical member of the American Society for Testing and Materials since 1972.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

Docket No.: 50-322

FEB 18 1983

Mr. M. S. Pollock  
Vice President - Nuclear  
Long Island Lighting Company  
175 East Old Country Road  
Hicksville, New York 11801

Dear Mr. Pollock:

Subject: FSAR Commitment for Non-Safety Related Items

As discussed with you in a meeting held on February 18, 1983, it is the NRC staff's position that you:

Amend the FSAR to commit for non-safety related structures, systems, and components, to include in the preventive and corrective maintenance program, the design change control program, the procedures for procurement of equipment, the procedures for modifications and removal of equipment from service, and the QA program, a provision that, as a minimum, the equipment and associated software shall be accorded the safety significance given to it in the FSAR, the technical specifications and the emergency operating procedures. The charters and decisions of the Review of Operations Committee, the Offsite Nuclear Review Board, and the Manager of Quality Assurance shall also reflect these considerations.

Your response in this matter is requested within 10 days of your receipt of this letter.

Sincerely,

A handwritten signature in dark ink, appearing to read "Darrell G. Eisenhut".

Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

cc: See next page

830320287

**LONG ISLAND LIGHTING**

175 EAST OLD COUNTRY ROAD • HICKSVILLE, N.Y.

FROM: M.S. Pulice  
DATE: 03/02/83  
TIME: 1:00 PM  
PAGES: 2

WILLIAM E. BOLLOCK  
VICE PRESIDENT - QUALITY

ENRC-844  
March 2, 1983

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20545

Dear Mr. Eisenhut:

I appreciated the opportunity for my staff and me to meet with you and the other members of the NRC Staff last Friday to elaborate upon the matters stated in my letter to Mr. Kovak of December 16, 1982 (ENRC-795).

It is noted that, as a result of our presentation and the examples we described, you and the Staff found our existing programs, which were developed over the years to ensure safety, high reliability and availability of an integrated plant, to be responsive to NRC concerns regarding non-safety related structures, systems and components. Obviously, it was not possible in my letter of December 16, 1982, to fully convey our sensitivity and philosophy with regard to quality measures applied to the entire station.

Your letter of February 18, 1983, as I interpret it in light of our presentation, requests that for non-safety related structures, systems and components, LILCO amend the PQR to include in the existing preventive and corrective maintenance program, design change control program, and procedures for procurement of equipment, the procedures for modification and removal of equipment from service and the applicable portions of the Quality Assurance Program, a suitable commitment that the responsible personnel implementing these programs and procedures shall, in exercising their judgment on the appropriate measures to be applied to non-safety related systems, structures, components, and associated plant computer software, consider the safety significance accorded to a non-safety related structure, system or component, given to it in the PQR, the technical specifications and the emergency operating procedures. The responsibilities of the Manager of Quality Assurance and the

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AND LIGHTING COMPANY

Mr. Darrell G. Eisentut  
March 2, 1983  
Page Two

charters of the Review of Operations Committee and the Nuclear Review Board would also reflect this consideration to assure that in carrying out their responsibilities their decisions are consistent with the FSAR, technical specifications and emergency operating procedures. The other programs described in my letter of December 16, 1982 are representative of those currently applied to maximize the effectiveness of our programs and will be utilized as appropriate to maintain our commitment as defined above.

Accordingly, I am writing to make this commitment on behalf of LILCO with the understanding that the ENE Staff will be satisfied that LILCO has and will be able to continue to meet : 1, as the Staff interprets it, with regard to non-safety related structures, systems and components during the operation of Shoreham.

Very truly yours,

*M. S. Pollock*

M. S. Pollock  
Vice President - Nuclear

MSP/lac

cc: Mr. J. Higgins  
All Parties

to be applied to non-safety related systems, components, and associated plant computer software, consider the safety significance accorded to a non-safety related structure, system or component, given to it in the FSAR, the technical specifications and the emergency operating procedures. The responsibilities of the Manager of Quality Assurance and the



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

MAR 7 1983

Docket No. 50-322

Mr. M. S. Pollock  
Vice President - Nuclear  
Long Island Lighting Company  
175 East Old Country Road  
Hicksville, New York 11801

Dear Mr. Pollock:

Subject: FSAR Commitment for Non-Safety Related Items

The NRC staff is in receipt of your letter dated March 2, 1983 (SNRC-844), regarding the subject issue. We had expected that your response would include the specific language to be inserted in the appropriate sections of the FSAR, as the staff requested during the meeting on February 18, 1983, and in our letter of the same date. We request that you provide these amendments as soon as possible so that this issue can be resolved.

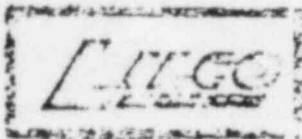
Sincerely,

A handwritten signature in cursive script that reads "Darrell G. Eisenhut".

Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

cc: See next page

8303140594



# LONG ISLAND LIGHTING COMPANY

175 EAST OLD COUNTRY ROAD · HICKSVILLE, NEW YORK 11801

MILLARD S. POLLOCK  
VICE PRESIDENT-NUCLEAR

ENRC-854

March 8, 1983

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Eisenhut:

In discussions with members of the NRC Staff on March 4, 1983, LIICO was requested to submit proposed FSAR revisions which reflect my commitments contained in SNRC-844, dated March 2, 1983.

Attached are revisions to FSAR Sections 3.1.2.1, 13.5.1.2 and 17.2.1, which we intend to incorporate into a formal FSAR amendment at the next opportunity. These changes, I believe, are consistent with my letters SNRC-795 and SNRC-844 and follow the guidance of your letter of February 18, 1983. As discussed with the Staff, these are indicative of the types of changes that will be incorporated into the FSAR to meet the commitments contained in SNRC-844. We are in the process of preparing changes to the rest of the FSAR and will submit them as soon as possible.

I trust that with these proposed FSAR changes, the Staff finds this issue resolved.

Very truly yours,

*M. S. Pollock*

M. S. Pollock  
Vice President-Nuclear

Attach.

cc: Mr. J. Higgins  
All Parties listed in Attach. #1

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safety shall be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit.

### Design Conformance

Structures, systems, and components important to safety are listed in Table 3.2.1-1. The total quality assurance (QA) program is described in Chapter 17 and is applied to the items contained in this table. The QA program assures that all phases of design and construction conform to regulatory requirements and design bases described in the license application. In addition, the program assures adherence to specified standards of workmanship and implementation of recognized codes and standards in fabrication and construction. It also includes the observance of proper preoperational and operational testing and maintenance procedures as well as the documentation of the foregoing activities by keeping appropriate records. The total QA program of Long Island Lighting and its principal contractors satisfies the requirements of 10CFR50, Appendix B.

Structures, systems, and components are first classified in Chapter 3 with respect to their location and service and their relationship to the safety function to be performed. Recognized codes and standards are applied to the equipment in these classifications as necessary to assure a quality product in keeping with the required safety function. In cases where codes are not available or the existing code must be modified, an explanation is provided in the application section.

Documents are maintained which demonstrate that the requirements of the QA program are being satisfied. This documentation shows that appropriate codes, standards, and regulatory requirements are observed, specified materials are used, correct procedures are utilized, qualified personnel are provided, and that the finished parts and components meet the applicable specifications. These records are available so that any desired items of information are retrievable for reference. These records will be maintained during the life of the operating licenses.

The detailed QA program developed by Long Island Lighting contractors satisfies the requirements of Criterion 1.

### 3.1.2.2 Design Basis for Protection Against Natural Phenomena (Criterion 2)

#### Criterion

Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) appropriate consideration of the most severe of the natural phenomena that have been historically reported for

INSERT "A"

3.1.2.1

Non-safety related structures, systems, components and plant computer software will be accorded as a minimum, the safety significance given to them in the FSAR, the technical specifications and emergency operating procedures. This will assure that the safety significance accorded to non-safety related structures, systems and components is maintained during the operation of Shoreham. The charters of the Review of Operations Committee, the Nuclear Review Board, and the Independent Safety Engineering Group shall also reflect these considerations. Also, the Shoreham preventive and corrective maintenance program, the design change control program, procedures for procurement of equipment, procedures for modification and removal of equipment from service, and the applicable portions of the Quality Assurance Program will ensure that LILCO continue to apply the safety significance accorded to non-safety related structures, systems, and components given to them in the FSAR, technical specifications and emergency operations procedures. Thus, the responsible personnel implementing these programs and procedures, shall, in exercising their judgment on the appropriate measures to be applied to non-safety related structures, systems and components, do so in accordance with this corporate policy.

will be prepared, reviewed, and approved per Fig. 13.5.1-1. Permanent changes to these procedures will require the same review and approval as the original procedure.

The written repair and maintenance procedures will indicate the inspections and checks which must be performed and will also indicate the records which must be kept. The procedures will indicate where independent verification of inspections or checks should be performed by other than those performing the maintenance. ↑

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Materials and parts utilized in the repair and maintenance of the safety related portions of the station will be of equivalent quality to the original materials. The procurement documents will be audited by LILCO Quality Assurance personnel to ensure that appropriate quality control requirements are fulfilled as defined in Section 17.2.

Storage and material identification procedures will assure that purchased materials and parts do not deteriorate in storage and are properly identified prior to their installation or use as defined in Section 17.2.

The Maintenance Engineer or his designated alternate will ensure that records of maintenance to safety related equipment are prepared in accordance with the applicable station procedures.

Fuel handling procedures will be prepared, reviewed, and approved per Table 13.5.1-1. The fuel handling procedures will indicate items which require verification by specified personnel other than those performing the operation.

### 13.5.1.3 Modifications

Proposed modifications to safety related systems or components are subject to review by the EOC. The design of modifications will be to the same or equivalent codes and requirements used in the original station design as defined in Section 17.2.

## 13.5.2 Procedures

### 13.5.2.1 Operating Procedures

Detailed written procedures and checkoff lists will be originated, reviewed, and approved prior to normal operation of safety related systems/components, per Fig. 13.5.1-1. Operating procedures are performed by, or under the direction of persons designated as holders of Reactor Operator or Senior Reactor Operator licenses. Operating Procedures consist of three basic categories; General Operating Procedures, System Operating Procedures, and Emergency Operating Procedures.

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13.5.1.2

The responsible personnel implementing these programs for routine repair and maintenance of non-safety related structures, systems, and components, shall, in exercising their judgment on the appropriate measures to be applied, maintain the safety significance accorded to them in FSAR, technical specifications and the emergency operating procedures. This will be accomplished within the context of the written repair and maintenance programs and procedures.

responsible for establishing and assuring implementation of the LILCO QA Program as described in the LILCO QA Manual. He is responsible for maintaining a working interface and communication within LILCO, regulatory agencies, consultants, contractors, inspection firms, and others as required to effectively execute the policies stipulated in the QA Program. He is responsible for assuring the establishment and continuous implementation of the quality assurance indoctrination and training program for LILCO quality assurance and other concerned personnel. The indoctrination and training will cover the quality related policies, procedures, and requirements applicable to the personnel involved. He is responsible for review and approval of applicable documents to assure the inclusion of appropriate quality requirements as indicated in Section 17.2.6. He is responsible for the performance of audits as described in Section 17.2.18.

TC

The QA Manager is responsible for defining the content and changes to the LILCO Quality Assurance Manual subject to review and approval as indicated in Table 17.2.6-1.

The QA Manager is authorized to evaluate the manner in which all activities both at the station and offsite are conducted, with respect to quality, by means of checks, reviews, audits, surveillance, and/or inspections. He will perform this evaluation on a planned and periodic basis to verify that the QA Program is being effectively implemented. He is responsible for periodically evaluating and reporting on the status and adequacy of the QA Program to the appropriate LILCO management. He has the authority and organizational freedom to identify quality problems, to initiate, recommend or provide solutions through designated channels, and to verify implementation of solutions. He has the authority to initiate stop work action, or control further processing, delivery, or installation of nonconforming material through appropriate channels as described in the applicable QA Procedure.

The minimum qualifications for the position of QA Manager are defined in Section 17.1.1A.

The QA Manager is assisted in carrying out his responsibilities by the QA Department staff consisting of Quality Systems and Field Quality Assurance Divisions. These Divisions consist of engineers, and technical and nontechnical personnel as required. In addition, this staff will be supplemented as required from other areas within LILCO, consultants or contractors. Line responsibility, coordination, and communication during this time will be through the QA Manager.

The Manager, Shoreham Nuclear Power Station (Plant Manager), reports to the Vice President, Nuclear, and has been delegated direct responsibility for the safe and reliable operation of the station. He is responsible for coordination of activities between regulatory agencies, other departments within LILCO,

INSERT C

17.2.1

The decisions of the Manager, Quality Assurance shall also consider the safety significance accorded to non-safety related structures, systems, components and plant computer software given to them in the FSAR, technical specifications and emergency operating procedures.

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  
(Shoreham Nuclear Power Station, ) (OL)  
Unit 1) )

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF SUPPLEMENTAL TESTIMONY ON CONTENTION 7B BY ROBERT J. MATTSON, RICHARD H. VOLLMER, CHARLES E. ROSSI, ASHOK C. THADANI AND FRANKLIN D. COFFMAN, JR." in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, or, as indicated by a double asterisk, hand delivered, this 10th day of March, 1983:

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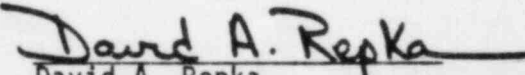
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