

January 3, 1983

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
(OL)

NRC STAFF POSITION ON
RESOLUTION OF SER OPEN ITEM #47

I. INTRODUCTION

On December 21, 1982, the Licensing Board requested the NRC Staff to file a pleading on SER Open Item # 47, Multiple Control System Failures. This open item was discussed during the testimony on Contention 7B. Therefore, the Board requested that the Staff pleading address two issues. First is the question of whether or not the record on Contention 7B can be closed notwithstanding the pendency of the item. The Staff takes the position below that the record should be closed. Second is the question of the Staff's ultimate plan for resolution of the issue. The Staff takes the position that this item should be resolved prior to fuel load. However, in recognition of the fact that the required analysis may be delayed, or that the analysis will indicate the need for plant modifications, the Staff below also briefly states the standard to be used in judging justifications for deferring resolution of the open item until prior to full power operation or later.

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II. DISCUSSION

B. Closing the Record on Contention 7B

The first question raised by the Board is whether the record can be closed for Contention 7B in light of the delay in completion of the Staff's review of LILCO's response to Staff questions relating to Unresolved Safety Issue A-47. The Staff believes there is no impediment to closing the record on Contention 7B at the present time.

The purpose of any administrative adjudication is to develop a clear and adequate record upon which to base a decision on the issues presented. To that end, the NRC's Rules of Practice (10 C.F.R. Part 2) empower the presiding officer to receive evidence and to rule on offers of proof (10 C.F.R. § 2.718(c)) and guarantee the right of every party to present such evidence as may be required for full and true disclosure of the facts (10 C.F.R. § 2.743(a)). If, upon completion of the parties' evidentiary presentations, an adjudicatory board has uncertainties with respect to the matters in controversy either because of a need for a clearer understanding of the evidence presented or because of a lack of sufficient information in the record, steps can be taken to clarify or supplement the record before it is closed. See 10 C.F.R. Part 2, Appendix A, Section V(g)(1). Otherwise, the record may be closed.

The record which has been painstakingly compiled on Contention 7B is clear and adequate and provides a sufficient basis for resolution of the issues in controversy. As the Board has emphasized many times, the focus of Contention 7B is the adequacy of the methodology utilized by LILCO and the Staff in the design and review of Shoreham, particularly as that

methodology relates to the analysis of systems interactions and the classification of plant structures, systems and components. The parties have constructed a wide-ranging record from which to draw conclusions on the adequacy of the methodology utilized by LILCO and the Staff. Unresolved Safety Issue A-47 is but one of several subjects discussed at length on the record to assess the methodology relied upon, and the remaining questions on A-47 are but one small part of the Staff's review of systems interactions. Clearly, the results of the Staff's review of LILCO's response to those remaining questions can be expected to add no new or different perspective to the exploration of methodology which has been extensively conducted throughout the evidentiary record on this contention.

A separate but related issue is whether the requirement of North Anna^{1/} for an explanation of why operation may be permitted despite the pendency of an unresolved safety issue has been satisfied for Shoreham.^{2/} Intervenor's prefiled testimony on Contention 7B raised this issue in relation to both Unresolved Safety Issues A-17 and A-47. The Board received this evidence over objections by LILCO and the Staff, and ruled that it would be incumbent on LILCO both under North Anna and for purposes of Contention 7B "to shoulder the burden of proof on why the licensing of this plant can go forward in the interim." Tr. 1099.

^{1/} Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-491, 8 NRC 245 (1978).

^{2/} The Staff does not believe that it is necessary to resolve the North Anna issue in order to reach a resolution of Contention 7B. Intervenor's allegations concerning A-47 are only one part of the evidence submitted with respect to Contention 7B; even were Intervenor to prevail on their claims relating to A-47, that would not be determinative of the issues raised by Contention 7B.

The Staff addressed this issue in its prefiled testimony by describing the problem under study, reviewing the status of the Staff's program for the resolution of the generic issue, and discussing how the Staff's review generally and of the Shoreham application specifically seeks to assure that the consequences of control system failures are within acceptable limits. ff. Tr. 6357, at 42-45. For Shoreham, this review includes the two specific items for which a response from LILCO remains pending. Importantly, the Staff's testimony stated: (1) that the Staff knows of no specific control system failures or actions on Shoreham or any other plant which would lead to undue risk to the health and safety of the public; and (2) that upon completion of the two items in question by the Applicant to the satisfaction of the Staff, the Staff will be able to conclude with reasonable assurance that control system failures at Shoreham do not represent an undue risk to the health and safety of the public. Id. at 44-45. If any additional Staff guidance or criteria result from this confirmatory program now ongoing under A-47, appropriate actions will be required of LILCO. ff. Tr. 6357, at 45; Tr. 7436-38 (Rossi).

The Staff, for its part, is prepared to submit findings that North Anna has been satisfied here despite the remaining open questions. At other facilities in which similar analyses were requested by the Staff, the Staff has been able to make the necessary findings for the issuance of an operating license under 10 C.F.R. § 50.57 prior to receipt and review of the requested analyses.^{3/} While the open items are part of a contested issue in this proceeding, that fact does not prevent the

^{3/} The facilities involved were Grand Gulf, LaSalle and Susquehanna.

subsidiary issue raised by the open requests of the Staff's A-47 review from being left for post-hearing resolution by the Staff. Consolidated Edison Co. of New York (Indian Point Station, Unit No. 2), CLI-74-23, 7 AEC 947, 951-52 (1074). Obviously, LILCO's response to the Staff's inquiries, and the Staff's evaluation of LILCO's response, will be provided to the appropriate Board and the parties. If the results raise a problem, the matter can be reopened upon sufficient showing or other appropriate action can be taken. See Indian Point, supra, 7 AEC 949, 951. There is no need to hold the record open at this time based on speculation that the results may have a material effect on this Board's decision.

B. Resolution of SER Open Item # 47

The record from Contention 7B on the schedule for resolution of Open Item # 47 consists of the following three statements:

1. We stated in the Safety Evaluation Report that we requested the applicant to provide additional information on control system failures. The applicant has committed to conduct a review to identify any power sources or sensors which 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 outside the bounds of the FSAR Chapter 15 analyses or beyond the capability of operators or safety systems. We believe that this commitment constitutes an acceptable resolution of this issue pending confirmation that all identified problems have been corrected prior to full power operation. Shoreham Safety Evaluation Report, Supp. 1, § 7.7, at 7-3 (emphasis added).^{4/}

^{4/} This position was restated in the NRC Staff's "Status Report on SER Open Items," June 29, 1982.

2. Q.41. What will be done specifically for the Shoreham plant to demonstrate that the consequences of control system failures do not represent an undue risk to the health and safety of the public?

A.41. The Staff has requested (see Section 7.7 of the Shoreham Safety Evaluation Report) that the Applicant identify any power sources, sensors, or sensor impulse lines which provide power or signals to two or more control systems and demonstrate that failures of these power sources, sensors, or sensor impulse lines will not result in consequences more severe than those bounded by the analyses of "anticipated operational occurrences" in Chapter 15 of the FSAR. In addition, the Staff has requested that the Applicant perform a review to demonstrate that the harsh environments associated with high energy line breaks will not cause control system malfunctions resulting in consequences more severe than those of the Chapter 15 accident analyses. Upon completion of these efforts by the Applicant to the satisfaction of the Staff, the Staff will be able to conclude, with reasonable assurance, that control system failures do not represent an undue risk to the health and safety of the public. The Applicant will, however, be required to address any additional Staff guidance which may result from the resolution of Unresolved Safety Issues A-47 and A-17.

Spies, et al., direct ff. Tr. 6357, at 45.

3. Q. (By Mr. Ellis) But I take it the Staff has not taken the position that these studies [control system failures and high energy line break] have to be completed before fuel load?

A. (WITNESS ROSSI) With respect to Shoreham, we have to review what is submitted on Shoreham. I would not want to make a statement like that with respect to Shoreham.
Tr. 7471-2.

The current schedule for resolution of the open item is consistent with this record. The Staff is requiring resolution prior to plant startup. Resolution will only be deferred to prior to full power operation (opera-

tion above 5% power) or later if there are unexpected developments and the Applicant provides a satisfactory justification for deferral.

The present status for Open Item # 47 is provided in a letter dated November 24, 1982, from A. Schwencer to M. S. Pollock. There it is stated that the Applicant's response on the open item (SNRC - 761, J. L. Smith to H. R. Denton, August 27, 1982) satisfactorily addressed the effects of power supply failures, but did not address control system failures caused by common sensors, hydraulic headers, and impulse lines. The Staff requested this analysis.

LILCO has informed the Staff that they plan to provide a preliminary report for resolution of the Staff's outstanding concerns no later than February 18, 1983, with a final report scheduled 45 days later. The Staff is asking LILCO to summarize in the preliminary report any problems with respect to control systems which it has identified in its analysis. At this time the Staff knows of no specific control system failures on Shoreham or any other plant. An analysis related to this issue has been completed for Grand Gulf (a BWR-6) and no changes to the plant design were found necessary. Given these expectations, the Staff is requiring resolution of the open item prior to fuel load.

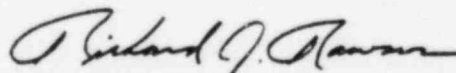
➤ If for some unforeseen reason all technical issues will not be resolved prior to fuel load, or plant modifications are identified which will not be completed prior to that time, the Staff expects LILCO to submit with their preliminary report their justification for allowing until full power operation or later for resolution of the item or completion of required modifications. Based on the Applicant's justification, the Staff will make a judgment on whether the safety significance of the remaining work with respect to

Open Item # 47 warrants delaying plant startup. The significance of what specifically remains outstanding will be a determinative factor. For example, if modifications are to be made at Shoreham it will have to be shown that operation at 5% power without those particular changes would not cause an undue risk to the public health and safety. The Staff cannot predict exactly what the facts might be (largely because modifications have not yet been found necessary on any BWR), but the standard for weighing a justification based on those facts is clear.

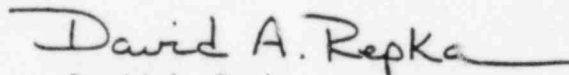
III. CONCLUSION

For the reasons stated above, the NRC Staff takes the position that the record on Contention 7B should be closed, SER Open Item #47 notwithstanding.

Respectfully submitted,



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Counsel for NRC Staff



David A. Repka
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 3rd day of January, 1983

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NUCLEAR REGULATORY COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that copies of NRC STAFF POSITION ON RESOLUTION OF SER OPEN ITEM # 47 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, by deposit in Express Mail or, as indicated by two asterisks, by deposit in the Nuclear Regulatory Commission's internal mail system, this 3rd day of January, 1983.

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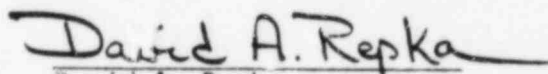
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