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September 14, 1984

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Commission

In the Matter of)	
)	
LONG ISLAND LIGHTING COMPANY	)	Docket 50-322-OL-4
	)	(Low Power)
(Shoreham Nuclear Power Station,)	
Unit 1))	

LILCO'S VIEWS IN SUPPORT
OF ISSUANCE OF A PHASE I AND
PHASE II LOW POWER TESTING LICENSE

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Having concluded that no AC power will be needed and, accordingly, that there will be no health or safety risk, the Atomic Safety and Licensing Board ordered that "LILCO should be permitted to conduct fuel loading and low power testing as proposed in Phases I and II, and it is so ordered." Order Reconsidering Summary Disposition of Phase I and Phase II Low Power Testing, at 10 (September 5, 1984) (hereinafter September 5 Order) (Attachment A).¹ That September 5 Order provides a basis for authorizing a license to conduct Phase I and Phase II

¹ Phases I and II of LILCO's low power testing program include fuel loading, precriticality testing and initial criticality (.0001% to .001% of rated power). A more complete description of the activities to be conducted during Phases I and II is contained in the summary disposition motions that were granted by the September 5 Order. (Attachments B and C).

testing and the Commission should pronounce its immediate effectiveness. In accordance with the Commission's September 7 Order, following are LILCO's views as to why such a license should be issued.

I. BACKGROUND

LILCO's application for a low power license is no stranger to the Commission; matters relating to a low power license for Shoreham have been before the Commission many times in the past two years and with increasing regularity in the past six months. Similarly, the issuance of fuel load and precriticality licenses have become commonplace so that the Commission is familiar with the activities authorized and the attendant low health and safety risks. There are, however, pertinent facts relating to the tortuous history of LILCO's low power license application that bear repeating here.

² See, e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-83-17, 17 NRC 1032 (1983); Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-84-9, 19 NRC ____ (June 6, 1984); Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-84-8, 19 NRC ____ (May 16, 1984); Request for Clarification of Commission's Order of May 16, 1984 (submitted by Suffolk County on May 21, 1984); Joint Motion of Suffolk County and the State of New York to Strike LILCO's Three Unauthorized Pleadings Entitled . . . (May 24, 1984); Suffolk County and State of New York Request for Recusal and, Alternatively, Motion for Disqualification of Chairman Palladino (June 5, 1984); Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), Commission Memorandum and Order (July 18, 1984); LILCO's Motion for Directed Certification of the Licensing Board's July 24, 1984 Order . . . (Aug. 2, 1984).

LILCO first requested a low power license on June 8, 1983. In response, the Licensing Board resolved favorably to LILCO all issues relevant to low power operation except for Suffolk County's then recently admitted diesel generator contention. The Licensing Board stated:

Even though we resolve all contentions which are the subject of this Partial Initial Decision favorably to LILCO, at least insofar as operation at levels up to 5% of rated power is concerned, we do not authorize the issuance of the license for fuel loading and low power operation which LILCO has requested at this time. No such license may be authorized until such time as that portion of Suffolk County's recently admitted emergency diesel generator contention may be resolved in LILCO's favor, at least insofar as necessary to support a finding of reasonable assurance that Shoreham can be operated at levels up to 5% of rated power without endangering the health and safety of the public.

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445, 634 (1983).

On March 20, 1984, LILCO filed a Supplemental Motion for Low Power Operating License contending that the pending diesel generator issues need not be resolved prior to granting a low power license for Shoreham. LILCO requested approval for the following discrete activities:

Phase I: fuel load and precriticality testing;

Phase II: cold criticality testing;

Phase III: heat up and low power testing to rated pressure/temperature conditions (approximately one percent rated power); and

Phase IV: low power testing (1-5% rated power).

After the Licensing Board's evidentiary hearings on LILCO's motion were temporarily interrupted by a federal court, the Commission engaged specific issues of substance and procedure regarding LILCO's March 20 motion.³ In addition to comments solicited by the Commission, LILCO submitted motions for summary disposition on Phases I and II of LILCO's low power testing program.⁴ Those motions asserted that no AC power was needed during Phases I and II even in the event of a postulated accident or transient. Accordingly, the onsite power capacity necessary to satisfy the safety functions of GDC 17 is zero and

³ The evidentiary process before the Licensing Board was interrupted on April 25, 1984, by a temporary restraining order. On the eve of argument over the validity of that order, the Commission vacated the procedural arrangements under which LILCO's March 20 request was being considered. In LILCO's judgment, the federal suit underlying the temporary restraining order would have been dismissed for reasons stated in LILCO's April 27 filings with the district court. The court lacked subject matter jurisdiction because (1) the suit was filed in the wrong court, (2) a scheduling order is not reviewable final agency action, (3) no agency action had been taken on the disqualification issue, and (4) as a matter of law, no deprivation of due process had occurred. The plaintiffs also failed to meet the standards for the issuance of a preliminary injunction.

⁴ For a complete chronology of events leading up to the Commission's May 7 meeting, see LILCO's Comments in Response to the Commission's Order of April 30, at 1-12 (May 4, 1984).

the incompleteness of licensing hearings concerning LILCO's onsite TDI diesel generators has no import.

Following oral argument on May 7, the Commission issued its May 16, 1984 Order (CLI-84-8) which held that 10 CFR § 50.57(c) should not be read to make GDC 17 inapplicable to low power operation. The Commission did not say how GDC 17 was to be applied and, particularly, did not address its application to fuel load and initial criticality testing. The order did, however, recognize LILCO's intent to seek an exemption under 10 CFR § 50.12(a). LILCO applied for such an exemption on May 22, 1984. Because the Commission had not ruled on LILCO's summary disposition motions and the intent of its May 16 Order as to Phases I and II activities was, at best, unclear, LILCO also refiled these motions with the Licensing Board. (Attachments B and C). The motions were supported by citation to testimony before the Licensing Board on April 24 and 25, 1984 and, unlike mere affidavits, subject to cross-examination by the Intervenors.

There followed a series of bizarre attempts by Suffolk County and New York State to avert or delay further proceedings by the Licensing Board. On May 21, the County requested clarification of the Commission's May 16 Order. On May 22, the State requested clarification of the same Order raising no new issues. On May 24, the County and State moved the Commission

to strike LILCO's motions for summary disposition pending before the Licensing Board. They attacked LILCO's motions as being inconsistent with the Commission's May 16 Order -- in essence, another request for clarification of that order. On May 30, they "requested clarification" from the Commission again. On May 31, they filed yet another request for "prompt clarification" simply rehashing the same issues. Finally, on June 1, they filed a Joint Motion of Suffolk County and State of New York for the Commission's Prompt Attention to and Ruling on Pending County and State Motions and for Stay of Inconsistent ASLB Orders in the Interim.⁵ None of these voluminous papers suggested any health or safety risk attendant to Phases I and II of low power testing as proposed by LILCO.

Suffolk County and New York State filed a response in opposition to LILCO's summary disposition motions before the Licensing Board on June 13, 1984. The Intervenors principally

⁵ The County and State also proceeded indirectly. On June 5, they moved for disqualification of Chairman Palladino; on June 18, they moved for disqualification of Judges Miller, Bright and Johnson (which was dismissed without prejudice and refiled on June 21); and on June 22, they moved for disqualification of Chief Administrative Judge Cotter. The Licensing Board held that the County's motion with respect to them was untimely and without merit. This conclusion was upheld by the Appeal Board. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-777, 20 NRC ____ (July 20, 1984). Judge Cotter has also denied the County's and the State's motion as to him. Chairman Palladino has yet to rule on the motion with respect to him.

argued with support that the NRC had no legal authority to issue a license to conduct only fuel load and initial criticality testing and that an exemption from GDC 17 was required for any one of LILCO's four phases of low power testing. Importantly, the Intervenor raised no factual disputes by affidavit or citation to testimony, though they did perfunctorily and summarily contend that there were material facts in dispute.⁶

The Staff's June 18 response to LILCO's summary disposition motions was supported by affidavits and agreed with LILCO's factual assertions. The Staff urged the Board to grant the motions with respect to their material facts (as modified slightly by the Staff). Yet, the Staff contended that the motions should not be granted in full because authorization to conduct Phase I and Phase II testing, in the Staff's view, required an exemption from GDC 17, despite the absence of need for any AC power.

⁶ The alleged "factual" dispute was essentially a legal argument. The Intervenor claimed that exemptions were needed from General Design Criteria other than GDC 17 and that LILCO had failed to meet the requirements of 10 CFR § 50.57 because (a) construction of facilities for Colt diesel generators, obtained by LILCO as a precaution and eventually to replace the TDI diesel generators, was in progress, (b) the facility would not meet all of the regulations during Phases I and II, (c) LILCO was not financially qualified to conduct low power testing, and (d) low power testing would be inimical to the security of the public. Significantly, the County did not dispute any of the facts relating to safety of plant operations during Phases I and II of low power testing.

On July 24, the Licensing Board issued its Order Granting In Part and Denying In Part LILCO's Motions for Summary Disposition on Phase I and Phase II Low Power Testing (July 24 Order) (Attachment D). The Board found that there was no dispute concerning material facts associated with Phases I and II of the low power testing program. Among the material facts conclusively established by the July 24 Order are the following:

[Phase I]

- (7) During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible
.
- (8) Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required
- (9) No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core
.

[Phase II]

- (8) Because of the extremely low power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR.

- (9) If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 CFR § 50.46 even after months without restoring coolant and without a source of AC power. Thus, there is no need to rely on the TDI diesel generators or any other source of AC power.
- (10) During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event for the feedwater system piping break event
- (12) None of the events analyzed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety
- (13) Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident

July 24 Order at 11-13. The Board, however, declined to grant LILCO authorization to conduct Phase I and Phase II testing because it believed the Commission's May 16 Order required LILCO to seek an exemption under 10 CFR § 50.12(a) for all portions of LILCO's low power testing program.

LILCO then moved the Board to refer its denial of summary disposition on Phases I and II to the Commission for immediate review.⁷ LILCO's Motion for Referral of Order Granting In Part And Denying In Part LILCO's Motion for Summary Disposition on Phase I and Phase II Low Power Testing (August 2, 1984) (Attachment E). LILCO asked for the Commission's review because the May 16 Order does not clearly evidence the Commission's intent with regard to fuel loading and precriticality testing and, by extension, to cold criticality testing where no AC power is needed. This ambiguity arises both from the order's failure to address a fuel load, precriticality and initial criticality license and the Commission's granting of fuel load and precriticality testing licenses to other plants situated similarly to Shoreham.

The Staff supported LILCO's motions for directed certification and referral. NRC Staff Response to LILCO Motion for Referral of the Board's Order on Summary Disposition (August 17, 1984) (Attachment F); NRC Staff Response to LILCO's Motion for Directed Certification of the Licensing Board's Order Ruling on LILCO's Motions for Summary Disposition of

⁷ LILCO also asked the Commission itself to take up the issue. LILCO's Motion for Directed Certification of the Licensing Board's July 24, 1984 Order Granting In Part and Denying In Part LILCO's Motions for Summary Disposition on Phase I and Phase II Low Power Testing (August 2, 1984).

Phases I and II (August 17, 1984) (Attachment G). The Staff asserted that the public interest would be served by resolving "whether (or how) GDC 17 should be applied to fuel loading and low power testing" and that the issue might affect other plants as well. Id. at 5. Importantly, the Staff advised the Board that an exemption from GDC 17 had recently been granted the Catawba plant for fuel loading and precriticality testing "in a similar situation to that posed by LILCO." Id. at 5, n.4.

As a result of LILCO's motions and the Staff's response, the Licensing Board took a fresh look at the relationship of the Commission's May 16 Order to fuel loading and initial criticality testing (Phases I and II). The Board observed that "it has become increasingly clear that the Commission's Order (CLI-84-8) is not without serious ambiguities." September 5 Order at 3. Significantly, the Staff, having previously argued that CLI-84-8 required an exemption for Phases I and II, "rather abruptly and without adequate explanation again changed its position and now supported LILCO's motion because 'early Commission guidance would be helpful' in interpreting CLI-84-8." Id. at 4.

The Board also noted with interest that the Staff had been prompted to seek Commission guidance on how to apply CLI-84-8 to other license applications. SECY-84-290 (290).^{*}

^{*} SECY-84-290 requested "Commission guidance on the need and standard for exemptions from the regulations in light of the Commission's Shoreham decision, CLI-84-8." Id. at 1.

This request for guidance was included in a July 17, 1984 paper from the Executive Director for Operations to the Commission. The Board found portions of the Staff's paper particularly pertinent to its reconsideration of LILCO's summary disposition motions, including the following:

The Shoreham decision, involving compliance with NRC regulations during the early stages of operation, and the need for exemptions from the regulations and the standards for granting exemptions under 10 CFR § 50.12, establishes practices and requirements for licensing which differ significantly from prior regulatory interpretation and practice.

SECY-84-290, at 1 (emphasis added).

The Board also noted that the NRC's General Counsel had filed a paper, SECY-84-290A (July 24, 1984), discussing various aspects of the Shoreham decision. The Board found significant OGC's conclusion that "[s]ome regulations, including some GDC, may properly be considered inapplicable to fuel loading and low power testing if such a conclusion is fairly compelled by simple logic and common sense" SECY-84-290A at 26. Finally, the Board was aware that the Commission held a "discussion of Commission practice on granting exemptions" at an open meeting on July 25, 1984.⁹

⁹ The Board did not consider or rely upon matters discussed in the open meeting because of the disclaimer statement included in the transcript of the meeting and in the provisions of 10 CFR § 9.103.

In light of these developments, the Licensing Board decided that reconsideration of its previous decision on LILCO's summary disposition motions was appropriate:

Given this rich diversity of views regarding the Commission's intent and meaning in its order CLI-84-8, we conclude that the Staff's original advice to the Board regarding the summary disposition motions on Phases I and II, was not correct. We are also concerned that a court of law reviewing these orders might well conclude that LILCO was being discriminated against and treated differently than other utilities similarly situated, contrary to the equal protection of the laws and the due process requirements of the 5th Amendment to the United States Constitution. Accordingly, our Order of July 24, 1984, denying summary disposition of Phases I and II of LILCO's low power testing program, will be reconsidered and reversed.

September 5 Order at 7.

Consequently, the Board granted LILCO's summary disposition motions. It unequivocally stated "that LILCO should be permitted to conduct fuel loading and low power testing as proposed in Phases I and II, and it is so ordered." Id. at 10. As discussed below, the Licensing Board's decision is well founded and no valid reason for stay of the decision's effectiveness exists.

II. THE SEPTEMBER 5 ORDER IS
SUFFICIENT TO AUTHORIZE A LICENSE
FOR PHASE I AND PHASE II ACTIVITIES

Inherent in the Licensing Board's September 5 Order are two conclusions leading to its definitive pronouncement that a license ought to issue now authorizing LILCO's performance of Phases I and II activities at Shoreham. First, the Board recognized that the Commission's treatment of other plants situated similarly to Shoreham supports issuance of the license once it has been determined that there are no health and safety risks. Thus, having concluded that all health and safety questions have been resolved for Phases I and II, the Board adjudged that LILCO ought to be treated the same as other plants which have been granted licenses to load fuel and conduct precriticality testing. Second, the Board recognized that no exemption was necessary to conduct the requested activities given the ambiguities in the Commission's May 16 Order, the treatment of other facilities and, most importantly, the utter absence of any need for AC power to satisfy the safety functions of GDC 17.¹⁰ Accordingly, the Board

¹⁰ Even should the Commission determine that an exemption must be granted, the full evidentiary record below amply supports the absence of any danger to life and property and the existence of exigent circumstances. The lack of health and safety risk is discussed above. The exigent circumstances, as the considerations were set forth in the Commission's May 16 Order, are as follows:

(footnote continued)

- 1) The evidence shows without contradiction that Shoreham is complete and ready for fuel load.
- 2) The evidence shows without contradiction that LILCO is suffering economic and financial hardship which might be alleviated to a certain extent by granting an exemption.
- 3) The difference of opinion concerning the need to harmonize the general design criteria with 10 CFR § 50.57(c), as evidenced by the Staff's initial position and the Licensing Board's April 6 Memorandum and Order Scheduling Hearing on LILCO's Supplemental Motion for Low-Power Operating License demonstrates the internal inconsistencies in the Commission's regulations.
- 4) LILCO has made and continues to make a good faith effort to comply with GDC 17 by purchasing, testing, repairing and analyzing its onsite TDI diesel generators, by acquiring and installing Colt diesel generators and by providing for alternate power sources at the site during low power testing.
- 5) There is no public interest in adherence to the regulations given the lack of any impact on public health and safety. Similarly, there is no safety significance of the issue involved.

Thus, each of the equities weighs in LILCO's favor. Details and transcript citations supporting each of these findings are contained in Long Island Lighting Company's Post-Hearing Brief in Support of Application for Exemption at 43-56; Long Island Lighting Company's Proposed Findings of Fact, ¶¶ 158-185; Reply Brief of Long Island Lighting Company in Support of Application for Exemption at 32-39; and LILCO's Reply to Suffolk County and State of New York Proposed Findings of Fact at ¶¶ 98-112, all of which have been filed with the Licensing Board.

interpret[ed] the Commission's Order of May 16, 1984 (CLI-84-8) as implicitly containing a rule of reason in applying the requirements of GDC-17 to fuel loading and low-power testing. If no emergency AC power is required for core cooling during Phases I and II, then the proposed changes in the AC power source could have no effect on the "functioning of structures, systems, and components important to safety," as required by GDC-17. Accordingly, "simple logic and common sense" indicate that LILCO should be permitted to conduct fuel loading and low-power testing as proposed in Phases I and II

. . . .

September 5 Order at 10.

A. Granting A Phase I And Phase II
License Is Consistent With NRC Precedent

Granting LILCO a license to conduct low power testing as proposed in Phases I and II will be consistent with and is compelled by Commission precedent. Indeed, failure to allow such testing would illogically subject LILCO to treatment different from that afforded other licensees similarly situated.¹¹ September 5 Order at 7. Most recently, Duke Power

¹¹ LILCO has never consented to being judged by more stringent standards than other applicants despite suggestions to that effect concerning application of the "as safe as" standard. While the interpretation of that phrase is not at issue here, the Commission should be aware that it was never proposed by LILCO as a new legal standard. Instead, LILCO merely advised the Commission that by analyzing the effects of postulated accidents and transients as required by Chapter 15 of Shoreham's FSAR, LILCO would show that operation as proposed by LILCO would be as safe as low power testing at a plant with qualified onsite diesel generators, and, therefore, public health and safety would not be adversely affected.

Company was authorized to load fuel and conduct precriticality testing at its Catawba facility.¹² The similarity between Catawba and Shoreham is striking. Both plants intend to rely upon diesel generators manufactured by Transamerica Delaval Inc. (TDI) as their onsite power source during full power operation. Neither plant had been issued any type of operating license prior to discovery of problems with TDI diesel generators. Both plants have requested authorization to conduct low power testing notwithstanding incompletely resolved questions concerning the TDI diesel generators. And, for both plants, the fuel load and precriticality testing authorization is the initial operating license.¹³

¹² NRC Staff Response to LILCO's Motion for Directed Certification . . . at 5, n.4 (August 17, 1984). See NUREG-0954 (Catawba Safety Evaluation Report), Supplement No. 3, at 8-1 to 8-3. Presumably as a result of the confusion concerning the meaning of the Commission's May 16 Order, the Staff perfunctorily considered exigent circumstances in the Catawba SSER in order to grant a "partial exemption." The same considerations would support the grant of the same "partial exemption" to LILCO if any exemption were necessary. They are that the facility is completed, there will be delay costs if the license is not granted and that the applicant has made and continues to make a good faith effort to comply with GDC 17. Indeed, LILCO understands that Catawba, unlike Shoreham, has no alternate power sources at the site to compensate for questions concerning its unlicensed TDI diesel generators.

¹³ The Catawba plant was permitted to load fuel and conduct precriticality testing, activities which would be conducted at Shoreham during Phase I. Although Phase II of Shoreham's test program goes beyond what was authorized at Catawba to include initial criticality testing, the facts at Shoreham demonstrate that there is no difference in these phases with respect to the need for AC power. No AC power is needed in either Phase I or Phase II testing.

Approval of a Phase I and Phase II license for Shoreham is further compelled by the Commission's action with respect to Mississippi Power and Light's Grand Gulf plant. Grand Gulf also relies upon TDI diesel generators to fulfill the requirements of GDC 17. Despite the discovery of problems with TDI diesel generators, Grand Gulf was permitted to continue low power testing following the discovery of those problems. It was not until Grand Gulf was being considered for full power operation that any exemption from the NRC's regulations was issued. See Mississippi Power and Light (Grand Gulf Nuclear Station, Unit 1), Exemptions for Full Power Operation, 49 Fed. Reg. 35448 (1984).¹⁴

Finally, authorization of Phases I and II of low power testing for Shoreham would be consistent with the Commission's decision in Diablo Canyon. Although reliability of onsite power sources was not at issue in Diablo Canyon, there were outstanding questions concerning quality assurance at the Diablo Canyon plant when the Commission permitted fuel load and precriticality testing. As the Commission noted in that decision:

¹⁴ Although Grand Gulf has one non-TDI diesel generator powering its HPCI system, without the TDI diesels, Grand Gulf does not have a qualified onsite diesel generator set in full compliance with GDC 17.

The risk to public health and safety from fuel loading and precriticality testing is extremely low since no self-sustaining nuclear chain reaction will take place under the terms of the license and therefore no radioactive fission products will be produced.

Pacific Gas & Electric Co (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-83-27, 18 NRC 1146, 1149 (1983). The rationale for the Commission's grant of a license to Diablo Canyon is applicable to Phase I and Phase II activities at Shoreham. As already noted, there is no dispute that activities to be conducted during these phases present absolutely no risk to public health and safety, even absent a fully litigated onsite power source.¹⁵

Given the treatment of these plants and others, Suffolk County's previously repeated assertions that the NRC has no legal authority to issue a license for Phase I or Phase II defy both factual and legal precedent. See September 5 Order at 10;

¹⁵ On several occasions, Suffolk County has attempted to distinguish Diablo Canyon on procedural grounds. The County has claimed that because Diablo Canyon was an enforcement action rather than an initial licensing proceeding, the Commission's conclusions are somehow inapplicable to Shoreham. The procedural posture of the Diablo Canyon decision has no conceivable impact on the substantive conclusion reached -- the activities to be conducted present no risk to the public and, therefore, fuel loading and precriticality testing may proceed without resolving potentially significant safety issues not material to fuel loading and precriticality testing.

NRC Staff August 17 Response, at 5, n.4 (concerning Duke Power Company's Catawba Station); see also Diablo Canyon, 18 NRC at 1149; Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), LBP-77-64, 6 NRC 808, 814 (1977). The grant of a Phase I and Phase II license is also consistent with 10 CFR § 50.57(c) which authorizes "low power testing (operation at not more than 1% of full power for the purpose of testing the facility), and further operation short of full power operation" (emphasis added). Thus, there is absolutely no basis for claiming that the NRC does not have authority to issue such licenses.

Similarly, the Intervenor's frequent claim that fuel load, precriticality and initial criticality licenses are not "operating licenses" strains credulity. Fuel loading, precriticality, and initial criticality must be either part of "construction" or "operation." If not, this activity need not be licensed. Surely the Intervenor does not so contend. If, on the other hand, they contend that fuel loading and precriticality and initial criticality testing are simply part of the construction phase, those activities are authorized by LILCO's construction permit, no further license would be needed, and LILCO could engage in these activities now.

The Intervenor's have also argued in other contexts that their security concerns should delay issuance of a license for Phases I and II. They do not, and cannot, contend that LILCO's supplemental power sources (EMD diesel generators and 20 MW gas turbine) ought to be considered vital equipment for security purposes during Phases I and II, however. It has been conclusively established that the supplemental AC power sources are not needed for any purpose. Thus, any issue relating to security for these supplemental power sources is irrelevant and immaterial to Phases I and II. Although the September 5 Order did not expressly address security, the implications of that Order are clear. The Board unequivocally recommended issuance of a license now. Prior to issuance of that order, the Board had not only completed hearings on low power issues, but had received Suffolk County's proposed security contentions and had twice held argument on them (August 16 and 30).¹⁶ The inescapable inference is that the Board rejected any notion that security matters for the supplemental power sources were pertinent to Phases I and II.

¹⁶ The Board is still considering whether the Intervenor's have raised any admissible security contentions with respect to Phases III and IV of LILCO's low power testing program. A third conference of counsel is scheduled for September 14 to discuss the effect, if any, of a September 11, 1984 letter from the NRC Staff (A. Schwencer) to LILCO (J.D. Leonard) concerning the Staff's "re-evaluation" of LILCO's Security Plan to require making the EMD diesels a vital area.

In short, Commission precedent and the facts found by the Licensing Board establish that activities such as those proposed by LILCO during Phases I and II present essentially no risk to the public health and safety. The Commission has consistently granted applications to conduct these types of operations, even in the face of outstanding safety issues material to other phases of operation. At Catawba and Grand Gulf, these activities were permitted despite an outstanding issue identical to that at Shoreham, namely the reliability of the onsite TDI diesel generators. Thus, since all material health and safety issues have been resolved, consistency demands that the Commission find that the Licensing Board's September 5 Order forms a basis for authorizing the activities proposed during Phases I and II.¹⁷

¹⁷ The NRC may not apply different rules to different applicants. As a federal Court of Appeals judge stated in chiding uneven Federal Trade Commission action:

law does not permit an agency to grant to one person the right to do that which it denies to another similarly situated. There may not be a rule for Monday, another for Tuesday, a rule for general application, but denied outright in a specific case.

Mary Carter Paint Co. v. FTC, 333 F.2d 654, 660 (5th Cir. 1964) (concurring opinion).

B. No Exemption Is Needed To
Conduct Phase I And Phase II Activities

The Board's September 21, 1983 Partial Initial Decision established that resolution of diesel generator contentions precluded low power testing only insofar as they prevented reasonable assurance that Shoreham could be operated during low power testing without endangering public health and safety. Shoreham, 18 NRC at 634. The uncontroverted facts established by the July 24 Order in this proceeding demonstrate that none of the postulated accident and transient events have any consequences, even assuming no onsite AC power source during Phases I and II. No AC power is needed to perform the safety functions specified by GDC 17. September 5 Order at 7-10. Consequently, the pending diesel generator contentions are immaterial to reasonable assurance that Shoreham could be operated during Phases I and II without endangering public health and safety.

In other words, GDC 17 is met during Phases I and II of low power testing, notwithstanding the pending proceedings concerning the reliability of the TDI diesel generators. By its terms, GDC 17 requires that an onsite power source be

provided to permit functioning of structures, systems and components important to safety . . . [and providing] sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure

boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 CFR Part 50, Appendix A, General Design Criterion 17 (emphasis added). For Phases I and II, that necessary AC power is undisputedly zero. Therefore, the degree of reliability of LILCO's onsite power source is immaterial. Stated differently, there is no need for any degree of diesel generator reliability in order to meet the "sufficient capacity and capability" standard. It follows that if a regulation requires no performance by a required system, no exemption from that regulation is needed while the reliability of that system is subject to pending proceedings.¹⁸

This conclusion is consistent with the views of the General Counsel outlined in SECY-84-290A (July 24, 1984). OGC noted that "some regulations can be considered inapplicable as a matter of simple logic." Id. at 19. The Licensing Board

¹⁸ Even if the Commission were to place some talismanic significance on having an onsite power source in order to comply with GDC-17, no exemption would be necessary. LILCO has TDI diesels which were provided to meet the requirements of GDC-17. The only outstanding question on the TDIs is whether they have the "sufficient capacity and capability" required by the regulations. Since no AC power is necessary, the reliability of TDI diesel generators could be zero and yet there would still be sufficient onsite power to perform the functions required by GDC-17.

recognized that such "simple logic and common sense" must be employed here in applying GDC 17. September 5 Order at 10.

It is important to distinguish Phases I and II from Phases III and IV in this regard. When the Commission was considering whether any exemption was needed to conduct low power testing, its primary focus was upon the need to harmonize GDC 17 with 10 CFR § 50.57(c).¹⁹ Most of the factual discussion involved the amount of time available during low power testing to supply AC power and whether an enhanced offsite power system could provide reasonable assurance that power would be available within the specified time, thus rendering the strict requirements of GDC 17 inapplicable. The Commission was concerned about the precedential effect of allowing the Staff, or a Licensing Board, to exercise unbridled discretion in harmonizing the regulations without the applicant's invocation of a formal exemption process.²⁰ Here, however, if absolutely no AC power is needed, there is no

¹⁹ Commission Meeting (Argument on Shoreham), May 7, 1984, at Tr. 9, 13-16, 40-44, 49, 61-65, 71-75, 83-84, 87-89, 101-107, 119-129).

²⁰ Though LILCO believed it was appropriate to harmonize § 50.57(c) and GDC 17, comments of the General Counsel are instructive as to the Commission's thinking. OGC believed that such a harmonization as applied to all of low power testing "would have entailed highly judgmental and controvertible decisions about whether the level of safety associated with the application of the regulation to lower power can be deemed excessive." SECY-84-290A, at 19.

judgmental or discretionary application of the General Design Criterion. It is a straightforward exercise to conclude that if no AC power sources are required for the activities proposed, a regulation requiring onsite AC power sources for full power operation does not require resolution of questions concerning the reliability of these sources.²¹ Significantly, not only did the Licensing Board find that there were no controverted facts with respect to the safety of operation during Phases I and II as a result of LILCO's summary disposition motions, it also noted that it had the benefit of an evidentiary record concluded after nine days of hearings in which those conclusions were similarly undisputed. September 5 Order, at 8.

C. THE LICENSING BOARD'S DECISION SHOULD NOT BE STAYED

The Commission's September 7 Order requesting the views of the parties directed that any written submittals include a discussion of the factors specified in 10 CFR § 2.788(e). That provision states:

²¹ Again, the Commission's May 16 Order did not say how GDC 17 should be applied, only that it was not "inapplicable to low power." Thus, a plant with no onsite diesel generators would not comply with GDC 17 even for a fuel load and precriticality license. A plant such as Shoreham which has onsite diesel generators whose reliability has not been finally adjudicated, should be allowed to proceed with those activities for which the reliability of diesel generators is not material to achieve the safety functions of GDC 17.

(e) In determining whether to grant or deny an application for a stay, the Commission, Atomic Safety and Licensing Appeal Board, or presiding officer will consider:

(1) Whether the moving party has made a strong showing that is likely to prevail on the merits;

(2) Whether the party will be irreputably injured unless a stay is granted;

(3) Whether the granting of a stay would harm other parties; and

(4) Where the public interest lies.

10 CFR § 2.788(e). To date, no proper application for stay has been filed. Nevertheless, a consideration of the applicable factors dictates that effectiveness of the Licensing Board's September 5 Order should not be stayed.

A. Intervenors Cannot Prevail On The Merits

In order to justify a stay, the Intervenors must make a strong showing that they will prevail on the merits.²² The Intervenors cannot make any such strong showing. The facts relating to the need for any AC power during Phases I and II of

²² The requirement of a strong showing on the merits was deliberately chosen when the Commission promulgated the stay regulations. 42 Fed. Reg. 22128, 22129 (columns 2-3) (May 2, 1977). Without such a strong showing, even demonstrated irreparable injury may not justify a stay. Florida Power and Light Co. (Turkey Point Nuclear Generating, Units 3 and 4), LBP-81-30, 14 NRC 357, 359-60 (1981).

low power testing are uncontroverted despite the Intervenor's abundant opportunity to respond to LILCO's summary disposition motions before the Commission and the Licensing Board and twice to file testimony prior to the April 24 low power hearings and July 31 resumption of those hearings. It cannot be disputed that operation of Shoreham absent any AC power source during Phases I and II of low power testing presents no risk to the public health and safety. Thus, based on the available record, the County cannot even make a colorable argument that LILCO should not be granted a low power license for health and safety reasons.

Second, the County's anticipated arguments that the NRC has no authority to issue the license for Phases I and II border on frivolous. As demonstrated above, issuance of a license for Phases I and II would be wholly consistent with NRC practice and 10 CFR § 50.57(c).

Third, security issues relating to LILCO's supplemental power sources form no basis for concluding that there is a strong likelihood of success on the merits. As already noted, LILCO's supplemental power sources are totally unnecessary during Phases I and II. Therefore, the degree of protection provided for those power sources is immaterial.

B. The Intervenor Will Not Be Irreparably Injured

The Intervenor similarly cannot show any irreparable injury stemming from the conduct of low power testing in Phases I and II because there will be none.²³ To repeat, even without AC power, none of the accidents or transient events contained in Chapter 15 of the Shoreham FSAR would have any consequences for the public health and safety. Thus, there is no question that conduct of Phases I and II testing pursuant to the Board's September 5 Order would result in no irreparable harm to the Intervenor. Moreover, granting of such a license would have no prejudicial effect on the Intervenor's ability to continue their opposition to other phases of low power testing. The Commission made clear in Diablo Canyon that granting a fuel load and precriticality license would in no way prejudice the outcome of future decisions on additional plant operations. Diablo Canyon, 18 NRC at 1149.

²³ Irreparable injury has often been cited as the most critical element in determining whether a stay is warranted. United States Department of Energy (Clinch River Breeder Reactor Plant), ALAB-721, 17 NRC 539, 543 (1983); Texas Utilities Generating Co. (Comanche Peak Steam Electric Station, Units 1 and 2), ALAB-716, 17 NRC 341, 342 n.1 (1983); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-27, 6 NRC 715, 716 (1977). Absent a strong showing of likely success on the merits, an even stronger showing of irreparable harm must be made. See Washington Metropolitan Area Transit Comm. v. Holiday Tours, Inc., 559 F.2d 841, 843-44 (D.C. Cir. 1977).

Finally, the Intervenorors have argued in the past that irradiating the fuel will decrease its value and increase plant decommissioning costs should LILCO not be granted a full power license.²⁴ These arguments are not relevant to whether granting a Phase I and II license will cause irreparable harm to the Intervenorors. The Commission has already ruled at least twice that the possibility that the plant will not receive a full power license should not be considered in assessing an application for a low power license. E.g., Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), CLI-84-9, 19 NRC ____ (June 6, 1984); Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), CLI-83-17, 17 NRC 1032 (1983). Importantly, this question is but a "red herring." LILCO will have the right to load fuel and conduct low power testing once diesel generator issues are resolved. Thus, the only pertinent question here is whether advancing the fuel load date causes irreparable harm; it does not.²⁵

²⁴ The applicant assumes the risk of investments made in reliance on a license which is subject to review on appeal. This potential economic loss does not support a motion for a stay. Florida Power and Light Co. (St. Lucie Nuclear Power Plant, Unit No. 2) ALAB-404, 5 NRC 1185, 1188 (1977).

²⁵ To the extent any of the Intervenorors' claims may involve irreparable harm in the form of higher electric rates, they are without merit. Higher rates must be approved by the New York State Public Service Commission; the Intervenorors may raise their grievances about such higher rates before the PSC. Thus, financial harm, if any, is not irreparable. See Kansas Gas and

C. LILCO Would Be Harmed By A Stay

A stay of the Licensing Board's September 5 Order would be harmful to LILCO. Denying LILCO a license to load fuel and conduct limited low power testing would inflict different treatment upon LILCO than given other licensees in similar situations. As the Licensing Board found, denial of the license under these circumstances could be "contrary to the equal protection of the laws and due process requirements of the Fifth Amendment to the United States Constitution." September 5 Order at 7. LILCO agrees.

Additionally, stay of a low power license risks delay of Shoreham's commercial operation.²⁶ At present, two principal obstacles to full power operation of Shoreham remain: litigation concerning the reliability of TDI diesel generators and litigation concerning offsite emergency planning. Both of proceedings are well on their way to completion. Hearings on

(footnote continued)

Electric Co. (Wolf Creek Generating Station, Unit No. 1), ALAB-424, 6 NRC 122, 128 n.7 (1977) (in ruling on a stay, ratepayers interests not cognizable); Toledo Edison CO. (Davis-Besse Nuclear Station, Units 1, 2 and 3); ALAB-385, 5 NRC 621, 626-29 (1977) (substantial costs in terms of time, money and energy do not constitute irreparable harm).

²⁶ Delay in the operation of a nuclear plant is a cognizable harm in considering an application for a stay. St. Lucie, 5 NRC at 1188.

the reliability of Shoreham's TDI diesel generators started on September 10, 1984. The record in the emergency planning hearing for Shoreham closed on August 28, and the finding process will be completed on November 14 with LILCO's submission of reply findings. Consequently, as 8 1/2 years of Shoreham licensing proceedings are brought to a close, granting LILCO a license for Phases I and II may expedite Shoreham's ultimate ascension to full power operation. Normally, the power ascension testing process takes nine to ten months, of which three months is devoted to low power testing. To the extent some or all of the low power testing can be completed prior to issuance of a full power license, the power ascension schedule may be shortened.

D. The Public Interest

The public interest does not dictate the issuance of a stay. Even considering the interests of the citizens of Suffolk County and New York State as putatively represented by the Intervenor in this proceeding, there is no harm. As discussed above, Phases I and II activities pose no risk to the public health and safety. What is more, any alleged economic detriment in the form of higher rates can readily and, most appropriately, be engaged by the Public Service Commission when LILCO seeks to recover those costs from the public.

Conversely, the public has an interest in fairness, evenhandedness and rational application of the licensing process. Awarding a stay without any arguable factual or legal pretext would contravene that public interest.

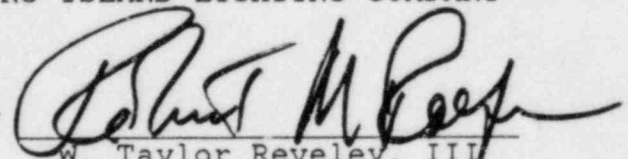
IV. CONCLUSION

The Licensing Board properly has applied GDC 17 given the uncontroverted resolution of all facts material to issuance of a Phases I and II license. The Board's findings and conclusions plus the Commission's treatment of plants similarly situated compel issuance of the license. Accordingly, the Licensing Board's September 5 Order authorizing loading of fuel and conducting Phases I and II of low power testing should be given immediate effect by the Commission, and any request for a stay of its effectiveness should be denied.

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY

BY



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DATED: September 14, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges
Marshall E. Miller, Chairman
Glenn O. Bright
Elizabeth B. Johnson

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In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Generating Plant,
Unit 1)

Docket No. 50-322-OL-4
(Low Power)
(ASLBP No. ~~77-347-OLC-OL~~)

SEP 5 1984

September 5, 1984

ORDER RECONSIDERING SUMMARY DISPOSITION OF PHASE I
AND PHASE II LOW-POWER TESTING

On July 24, 1984, we issued an Order granting in part and denying in part LILCO's motions for summary disposition on Phase I and Phase II of its low-power testing program.¹ LILCO's motions were based upon its assertion that even if the Shoreham facility lacks a qualified onsite source of emergency AC power, the activities to be performed in Phases I and II require no emergency AC power to perform any of the safety functions specified by the General Design Criteria (GDC), specifically

¹ Phase I: Fuel load and precriticality testing.
Phase II: Cold criticality testing.

GDC-17.² We granted the LILCO motions as to certain uncontroverted statements of material facts, but denied them as to the ultimate issues which would permit LILCO, prior to decision on LILCO's pending application for exemption from GDC requirements, to proceed with the fuel loading, precriticality testing, and limited low-power testing and activities of Phases I and II.

In reaching our decision on the motions we looked for guidance to the Commission's order of May 16, 1984 (CLI-84-8), in which the Commission held that GDC-17 is applicable to low-power operation and that, in the circumstances of this proceeding, LILCO would either have to demonstrate compliance with GDC-17³ or apply for and receive an

² Appendix A to 10 CFR Part 50.

³ GDC-17 states, in pertinent part, that:

"An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure" (10 CFR Part 50, Appendix A, Criterion A).

exemption to it pursuant to 10 CFR §50.12(a) before a low-power license could be issued.

However, it has become increasingly clear that the Commission's Order (CLI-84-8) is not without serious ambiguities. Although summary disposition motions regarding LILCO's Phases I and II were technically before the Commission when its Order was written, that Order does not consider or address permission for fuel loading or initial criticality, and it cannot be construed as even purporting to be dispositive of Phase I and II issues. We also looked to the NRC Staff, with its professed expertise in the interpretation and analysis of Commission regulations and rulings, for assistance in interpreting the Order in question.

Prior to the Commission's Order, the Staff had taken the position that the requirements of GDC-17 "should be applied with flexibility and dependent upon the nature of the activity sought to be licensed."⁴ However, the Staff in its June 13, 1984 response to LILCO's summary disposition motions, said that in arguing that no emergency AC power is needed during Phases I and II, LILCO was essentially arguing that GDC-17 did not apply at that level of operation. The Staff stated its belief that CLI-84-8 stands for the proposition that GDC-17 means the same for

⁴ NRC Staff Response To LILCO's Motion for Directed Certification of the Licensing Board's July 24, 1984 Order (August 17, 1984), at page 3. See also SECY-84-290 (July 17, 1984).

low-power operation as for full-power operation, and that in the absence of a fully approved onsite power system, an exemption from GDC-17 is needed before any low-power operating license may be issued (Staff's June 13 Response at page 4).

Subsequent to our decision on summary disposition, LILCO on August 2, 1984 moved for referral and/or for directed certification to the Commission of that decision. In its August 17 Response, the Staff rather abruptly and without adequate explanation again changed its position and now supported LILCO's motion because "early Commission guidance would be helpful" in interpreting CLI-84-8. The Staff did not explain why, if the Commission's Order was as clear as it originally contended, any further (presumably different) guidance would be helpful or necessary. Instead, it merely stated that "the question raised by LILCO here, whether (or how) GDC-17 should be applied to fuel loading and low-power testing, is an issue that may well involve other general design criteria and other license applications" (Staff's Response at page 4). The Staff further revealed that "in a similar situation to that posed by LILCO, the Staff recently granted an exemption from GDC-17 to Duke Power Company to permit fuel loading and precriticality testing at the Catawba facility" (Staff's Response at page 5, footnote 4).

It now appears that the Staff, subsequent to our original summary disposition Order, "has already met with the Commission once (on July 25, 1984) for guidance on how to apply CLI-84-8 to other license applications" (Staff's August 17 Response at pages 4-5). That meeting

with the Commission was apparently triggered by a July 17, 1984 paper or communication from the Executive Director for Operations to the Commission, to "request Commission guidance on the need and standard for exemptions from the regulations in light of the Commission's Shoreham decision, CLI-84-8 (SECY-84-290)." That Staff paper further stated in pertinent part:

"The Shoreham decision, involving compliance with NRC regulations during the early stages of operation, the need for exemptions from the regulations and the standards for granting exemptions under 10 CFR § 50.12, establishes practices and requirements for licensing which differ significantly from prior regulatory interpretation and practice. . . .

"Prior to the Commission's May 16, 1984 decision in Shoreham, the staff had viewed the requirements of the regulations as being reasonably flexible, with various regulatory requirements applicable or important from a health and safety standpoint only for certain modes of operation and operation at certain times and power levels. . . .

"In Shoreham, CLI-84-8, the Commission had occasion to examine the matter of the applicability of General Design Criteria (GDC) 17 to fuel loading and low power operation. Therein, the Commission ruled that GDC 17 does apply to such operations below full power and at least implicitly found that an exemption from GDC 17 must be granted if Shoreham is to be licensed for fuel loading or low power operation prior to compliance with GDC 17. . . .

"In the context of exemptions related to plant operations, these determinations regarding "exigent circumstances" and "as safe as" are wholly new requirements going beyond anything explicitly required by 10 CFR § 50.12. (The concept of "exigent circumstances" had previously been considered a factor only in exemptions granted pursuant to 10 CFR § 50.12(b), issuing limited work authorizations.). . . .

"(5) Does the Commission intend, by its Shoreham decision, to modify those regulatory standards for granting

exemptions set forth explicitly in 10 CFR § 50.12(a) by adding the standards on "exigent circumstances" and "as safe as" which are raised in CLI-84-8?

"(6) Is it the Commission's intent that the "as safe as" standard be read literally or is there some de minimus reduction in safety that would be acceptable in granting an exemption under the Commission's standards in Shoreham?" (At pages 1-3, 5).

As a result of the Staff's request for clarification of the Shoreham decision, the Commission held a Discussion of Commission Practice on Granting Exemptions at an open meeting on July 25, 1984.⁵ The General Counsel had filed a written discussion of various aspects of the ramifications of the Shoreham exemption decision. Among other things, it stated that "[s]ome regulations, including some GDC, may properly be considered inapplicable to fuel loading and low power testing if such a conclusion is fairly compelled by simple logic and common sense..."⁶

Finally, the Staff has recently modified and restated its interpretation of CLI-84-8 in the instant proceeding. During closing arguments on August 16, 1984, the Staff stated that the "as safe as"

⁵ Although a transcript of this open meeting is readily available, we have not considered or relied upon it in light of the Commission's Disclaimer statement and the provisions of 10 CFR § 9.103.

⁶ General Counsel's Discussion of Exemptions dated July 24, 1984 (SECY-84-290A) at page 26.

rule laid down in CLI-84-8 is a "comparable level of safety" rule.⁷ It further agreed that a comparable level of safety is "some kind of a rule of reason" (Id.). And the Staff also stated that its recommended comparable level of safety rule is the same as "substantially as safe as."⁸

Given this rich diversity of views regarding the Commission's intent and meaning in its Order CLI-84-8, we conclude that the Staff's original advice to the Board regarding the summary disposition motions on Phases I and II, was not correct. We are also concerned that a court of law reviewing these orders might well conclude that LILCO was being discriminated against and treated differently than other utilities similarly situated, contrary to the equal protection of the laws and the due process requirements of the Fifth Amendment to the United States Constitution. Accordingly, our Order of July 24, 1984, denying summary disposition of Phases I and II of LILCO's low-power testing program, will be reconsidered and reversed.

In its original summary disposition motion, LILCO argued that as to Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat. Therefore core cooling is not required, and with no fission product inventory, fission product

⁷ Tr. 3043.

⁸ Tr. 3045-47.

releases are not possible. Because no core cooling is required, no AC power (either onsite or offsite) is needed "to permit functioning of structures, systems, and components important to safety" (GDC-17).

As to Phase II cold criticality testing, LILCO asserted that any self-sustaining nuclear reaction will be conducted at extremely low power levels and for very short periods of time, and that radioactive fission products produced will be negligible. A review of the accident and transient events contained in Chapter 15 of the Shoreham FSAR shows that there are no consequences even assuming no onsite AC power source, and in fact no AC power is required to protect the core. In essence, LILCO seeks summary disposition as to Phases I and II, because no onsite or offsite AC power is necessary to perform the safety functions needed to protect the public health and safety. We believe that such summary disposition should be granted. In reconsidering Phases I and II summary disposition motions, we note that an evidentiary hearing has been concluded and that uncontroverted factual information is available to the Board. The following material facts were not controverted and were therefore admitted in this proceeding.

"

Phase I

(7) During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶ 11; Hodges Affidavit at ¶ 4.

" (8) Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. . . .

" (9) No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core.

"Rao, et al., Tr. 285; Sherwood Affidavit at ¶ 13; Hodges Affidavit at ¶ 3.

Phase II

" (8) Because of the extremely low-power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low-power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶ 17.

" (9) If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. . . . With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 CFR § 50.46 even after months without restoring coolant and without a source of AC power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶ 19; Hodges Affidavit at ¶ 8.

(10) During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. . . .

(12) None of the events analyzed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 296; Sherwood Affidavit at ¶ 17.

(13) Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational

occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶ 22." (Board Order entered July 24, 1984, pages 10-13.)

The Board interprets the Commission's Order of May 16, 1984 (CLI-84-8) as implicitly containing a rule of reason in applying the requirements of GDC-17 to fuel loading and low-power testing. If no emergency AC power is required for core cooling during Phases I and II, then the proposed changes in the AC power source could have no effect on the "functioning of structures, systems, and components important to safety," as required by GDC-17. Accordingly, "simple logic and common sense" indicate that LILCO should be permitted to conduct fuel loading and low-power testing as proposed in Phases I and II, and it is so ordered. This result is consistent with the recent action of the Staff in permitting Duke Power Company to load fuel and conduct precriticality testing at the Catawba facility.⁹ It is also consistent with the Commission's action regarding use of similar TDI diesel generators at the Grand Gulf facility.¹⁰ Such a result is compatible with the Commission's underlying reasoning and with the Staff's wide-spread practice over a number of years. It also gives the applicant the same

⁹ Staff's August 17, 1984 Response at page 5, footnote 4. See Catawba SSER No. 3, at 8-1 through 8-3, NUREG-0954.

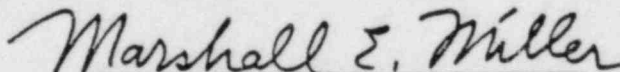
¹⁰ Safety is the paramount concern of the staff at whatever stage of operation or procedural posture.

treatment as that accorded other utilities under the same or similar circumstances, and hence complies with the constitutional requirement of nondiscrimination and equal protection of the laws.

Finally, in CLI-84-8 the Commission expressly reserved its power to conduct an immediate effectiveness review of any initial decision authorizing the grant of an exemption. Accordingly, this Order Reconsidering Summary Disposition of Phase I and Phase II Low-Power Testing is transmitted herewith directly to the Commission for its appropriate action.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD


Marshall E. Miller, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 5th day of September 1984.

LILCO, May 22, 1984

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-4
	)	(Low Power)
(Shoreham Nuclear Power Station,)	
Unit 1))	

LILCO'S MOTION FOR SUMMARY
DISPOSITION ON PHASE I LOW POWER TESTING

On March 20, 1984, LILCO filed its Supplemental Motion for Low Power Operating License which requested the approval of a license to conduct four phases of low power testing. LILCO renewed its March 20 motion and, pursuant to 10 CFR § 2.749, sought summary disposition with respect to Phase I of the low power testing program in a motion filed with the Commission on May 4, 1984. Subsequently, the Commission's May 16 Order vacated the Licensing Board's April 6 Memorandum and Order to the extent it was inconsistent with the Commission's view that 10 CFR § 50.57(c) did not make GDC 17 inapplicable to low power operation. The Commission did not rule on LILCO's summary disposition motions. LILCO, in a continuing effort to have the merits of its case engaged, renews its motion for summary disposition on Phase I.

I. Basis for Summary Disposition

Phase I fuel load and precriticality testing involve both fuel loading and core verification prior to the reactor's going critical. See attached Statement of Material Facts, Material Facts 1, 5. Initial core loading involves the placement of fuel bundles in specified locations within the reactor vessel. Material Fact 2. The following testing is associated with initial core loading:

- (a) water chemistry surveillance testing
- (b) control rod drive stroke time and friction tests
- (c) installation, calibration, and utilization of special startup neutron instrumentation
- (d) core verification instrument operability check

Material Fact 3. Following placement of the fuel in the vessel, the following testing must be conducted:

- (a) local power range monitor (LPRM) sensitivity data
- (b) zero power radiation survey for background readings
- (c) recirculation system instrument calibration checks
- (d) control rod drive scram time testing
- (e) cold main steam isolation valve (MSIV) timing

Material Fact 4.

For these precriticality activities, reliable diesel generators are not necessary to satisfy the Commission's

regulations. The legal requirement for diesel generators derives from GDC 17, which states in pertinent part:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 C.F.R. Part 50, Appendix A, Criterion 17 (emphasis added). In other words, the onsite AC power source must be of sufficient capacity and capability to assure the performance of the specified safety functions.

During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat. Therefore, core cooling is not required and, with no fission product inventory, fission product releases are not possible. Material Fact 7. In fact, during Phase I activities, most of the anticipated operational occurrences and postulated accidents covered in Chapter 15 of the Final Safety Analysis Report (FSAR) simply could not occur. Even those Chapter 15 events that are possible would have no impact on public health and safety, if they were in fact to occur. Material Facts 6-8. Because no core cooling is required during

Phase I, no AC power, either onsite or offsite, is needed. Material Fact 9. Thus the reliability of LILCO's onsite diesel generators is not material.

The license LILCO seeks with respect to Phase I testing (fuel load and precriticality testing) is identical to the low power approval recently authorized by the Commission for the Diablo Canyon plant. As the Commission noted in that decision:

The risk to public health and safety from fuel loading and pre-criticality testing is extremely low since no self-sustaining nuclear chain reaction will take place under the terms of the license and therefore no radioactive fission products will be produced.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-83-27, 18 NRC 1146, 1149 (1983). Indeed, fuel loading and precriticality testing present no significant safety issue. Id.

The rationale for the Commission's grant of a license to Diablo Canyon applies with even greater force with respect to Shoreham. At the time the Commission granted Diablo Canyon a low power testing license, quality assurance litigation concerning Diablo Canyon was still ongoing. In contrast, Shoreham has already been the subject of a lengthy, favorable Partial Initial Decision on all safety issues except those concerning those its existing diesel generators. See Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445 (1983)

(Opinion) and unpublished Board Findings of Fact and Appendices. Since there is no need for diesel generators or any AC power during Phase I, the assurance of no risk to public health and safety from Phase I activities is even greater at Shoreham than at Diablo Canyon because all quality assurance issues at Shoreham have been favorably resolved.

II. Conclusion

Consistent with the Commission's May 16 Order, GDC 17 requires an onsite power source during low power testing with sufficient capacity and capability to perform certain safety functions specified in the GDC. During fuel loading and precriticality testing conducted during Phase I low power testing, no AC power is required to perform these safety functions. Thus, even assuming that LILCO's onsite diesel generators do not operate, the requirements of GDC 17 are met. For the above stated reasons, LILCO's Motion for Summary Disposition on Phase I Low Power Testing should be granted.^{1/}

^{1/} If the Licensing Board believes the Commission's May 16 Order requires an exemption from the regulations for all four phases of the low power testing, then the Board should treat this motion as a motion for summary disposition of all health and safety issues with respect to Phase I.

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY

Anthony F. Earley, Jr.

Robert M. Wolfe

Anthony F. Earley, Jr.

Jessine A. Monaghan

Hunton & Williams
Post Office Box 1535
Richmond, Virginia 23212

DATED: May 22, 1984

STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE
ISSUE TO BE HEARD ON PHASE I LOW POWER TESTING

The following is the statement of material facts as to which LILCO contends there is no genuine issue to be heard concerning Phase I low power testing:^{2/}

1. Phase I Fuel Loading and Precriticality Testing involves placing fuel in the reactor vessel and conducting tests of reactor systems and support systems. Gunther, Tr. 201-02; Notaro Affidavit at ¶ 6.

2. Initial core loading involves the placement of 560 fuel bundles in specified locations within the reactor vessel. Id.

3. The following testing is associated with initial core loading:

- (a) water chemistry surveillance testing
- (b) control rod drive stroke time and friction tests
- (c) installation, calibration, and utilization of special startup neutron instrumentation
- (d) core verification instrument operability check

^{2/} These facts appear in the record in the affidavits filed with LILCO's Supplemental Motion for Low Power License dated March 20 and in the testimony of the seven witnesses who testified on April 24 and 25 before the Licensing Board. Since these documents are readily available, copies have not been attached. Facts also appear in an affidavit of Wayne W. Hodges, dated April 4, 1984, which is attached.

Gunther, Tr. 202; Notaro Affidavit at ¶ 6.

4. Following placement of fuel in the vessel, tests are performed to verify the operability of systems. This precriticality testing includes the following:

- (a) local power range monitor (LPRM) sensitivity data
- (b) zero power radiation survey for background readings
- (c) recirculation system instrument to calibration check
- (d) control rod drive scram time testing
- (e) cold main steam isolation valves (MSIV) timing

Gunther, Tr. 202; Notaro Affidavit at ¶ 7.

5. During all of the activities in Phase I, the reactor will remain at essentially ambient temperature and atmospheric pressure. The reactor will not be taken critical. Any increase in temperature beyond ambient conditions will be due only to external heat sources such as recirculation pump heat. There will be no heat generation in the core. Rao, et al., Tr. 279; Sherwood Affidavit at ¶ 7; Hodges Affidavit at ¶ 3.

6. Of the 38 accident or transient events addressed in FSAR Chapter 15, 18 of the events could not occur during Phase I because of the operating conditions of the plant. An additional 6 events could physically occur, but given the plant conditions, would not cause the phenomena of interest in the Chapter 15 safety analysis. The remaining 14 events could possibly occur, although

occurrence is highly unlikely given the plant conditions. The potential consequences of these 14 events would be trivial. Rao, et al., Tr. 279-84; Sherwood Affidavit at ¶¶ 8-11; Hodges Affidavit at ¶ 4.

7. During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶ 11; Hodges Affidavit at ¶ 4.

8. Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. No fission products exist and therefore no decay heat is available to heat up the core. The fuel simply would not be challenged even by a complete drain down of the reactor vessel for an unlimited period of time. Rao, et al., Tr. 284; Sherwood Affidavit at ¶ 9; Hodges Affidavit at ¶ 4.

9. No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core. Rao, et al., Tr. 285; Sherwood Affidavit at ¶ 13; Hodges Affidavit at ¶ 3.

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Docket No. 50-322

I, Marvin W. (Wayne) Hodges, being duly sworn, state as follows:

1. I am a Section Leader in the Reactor Systems Branch of the Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.
2. Long Island Lighting Company (LILCO) filed a Supplemental Motion for Low Power Operating License dated March 20, 1984. In that motion, LILCO proposed a phased program for low power operation at Shoreham. The four phases proposed are:
 - a) Phase I: fuel load and precriticality testing,
 - b) Phase II: cold criticality testing,
 - c) Phase III: heatup and low power testing to rated pressure/temperature conditions (approximately 1% rated power); and
 - d) Phase IV: low power testing (1-5% rated power)

The purpose of this affidavit is to address the impact on the health and safety of the public of operation in Phases I and II.

3. In Phase I, fuel loading and precriticality testing, the reactor will not be taken critical. There will be no heat generation in the core. There will be no fission products. Because there will have been no power generation and, consequently, no decay heat, there will be no need for cooling systems to remove decay heat.
4. In its supplemental motion, LILCO examined the 38 accident and transient events addressed in Chapter 15 of the FSAR. I have reviewed the 38 transients and accidents listed and I agree with LILCO that many of the events could not occur because of the operating conditions of the plant (e.g., a turbine trip or a load rejection transient cannot occur when the turbine is not in operation and there is no load on the generator). Of the events that could occur (e.g., loss of AC power), there are no safety concerns because of the absence of power generation.
5. Phase II, cold criticality testing, will involve testing in the power range of .0001% to .001% of rated power at essentially ambient temperature and atmospheric pressure. Because of the low power level and the limited duration of testing, fission product inventory and decay heat will be very low.

6. As for Phase I, many of the Phase II transients and accident analyzed in Chapter 15 of the FSAR cannot occur. For those transients and accident which can occur, other than a loss-of-coolant accident, core cooling can be achieved, even without AC power, using the existing core water inventory and passive heat loss to the environment. Therefore, there would be no threat to the health and safety of the public.
7. Because of the low pressure conditions, it is not reasonable to postulate a loss-of-coolant accident during Phases I and II operation. The NRC normally postulates breaks only in high energy lines; for Phases I and II, there are no high energy lines. However, even if a loss-of-coolant accident should occur during Phase II operation, there is plenty of time available for restoring offsite power should onsite power not be available.
8. If a loss-of-coolant accident should occur during Phase II testing, LILCO states that there would be time on the order of months available to restore make-up water for core cooling. At the decay heat levels which would exist under these conditions, heat transfer to the environment would remove a significant fraction of the decay heat. However, even if no heat transfer from the fuel rods is assumed and equilibrium fission products are assumed (i.e.,

infinite operation at .001% power), then more than 9 days are available to restore cooling prior to exceeding a temperature of 2200°F. Therefore, even assuming the unavailability of onsite power sources, there is a high probability of restoring AC power and cooling the core.

Marvin W. Hodges

Marvin W. (Wayne) Hodges

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

Claire A. Shivers

Notary Public

My Commission Expires: July 1, 1986

Marvin W. (Wayne) Hodges
Professional Qualifications
Reactor Systems Branch
Division of Systems Integration
U. S. Nuclear Regulatory Commission

I am employed as a Section Leader in Section B of the Reactor Systems Branch, DSI.

I graduated from Auburn University with a Mechanical Engineering Degree in 1965. I received a Master of Science degree in Mechanical Engineering from Auburn University in 1967. I am a registered Professional Engineer in the state of Maryland (#13446).

In my present work assignment at the NRC, I supervise the work of 6 graduate engineers; my section is responsible for the review of primary and safety systems for BWRs. I have served as principal reviewer in the area of boiling water reactor systems. I have also participated in the review of analytical models use in the licensing evaluations of boiling water reactors and I have the technical review responsibility for many of the modifications and analyses being implemented on boiling water reactors post the Three Mile Island, Unit-2 accident.

As a member of the Bulletin and Orders Task Force which was formed after the TMI-2 accident, I was responsible for the review of the capability of BWR systems to cope with loss of feedwater transient and small break loss-of-coolant accidents.

I have also served at the NRC as a reviewer in the Analysis Branch of the NRC in the area of thermal-hydraulic performance of the reactor core. I served as a consultant to the RES representative to the program management group for the BWR Blowdown/Emergency Core Cooling Program.

Prior to joining the NRC staff in March, 1974, I was employed by E. I. DuPont at the Savannah River Laboratory as a research engineer. At SRL, I conducted hydraulic and heat transfer testing to support operation of the reactors at the Savannah River Plant. I also performed safety limit calculations and participated in the development of analytical models for use in transient analyses at Savannah River. My tenure at SRL was from June 1967 to March 1974.

From September 1965 to June 1967, while in graduate school, I taught courses in thermodynamics, statics, mechanical engineering measurements, computer programming and assisted in a course in the history of engineering. During the summer of 1966, I worked at the Savannah River Laboratory doing hydraulic testing.

LILCO, May 22, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBefore the Atomic Safety and Licensing Board

In the Matter of)	
)	
LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322-OL-4
	)	(Low Power)
(Shoreham Nuclear Power Station,)	
Unit 1))	

MOTION FOR SUMMARY
DISPOSITION ON PHASE II LOW POWER TESTING

On March 20, 1984, LILCO filed its Supplemental Motion for Low Power Operating License which requested the approval of a license to conduct four phases of low power testing. LILCO renewed its March 20 motion and, pursuant to 10 CFR § 2.749, sought summary disposition with respect to Phase II of the low power testing program in a motion filed with the Commission on May 4, 1984. Subsequently, the Commission's May 16 Order vacated the Licensing Board's April 6 Memorandum and Order to the extent it was inconsistent with the Commission's view that 10 CFR § 50.57(c) did not make GDC 17 inapplicable to low power operation. The Commission did not rule on LILCO's summary disposition motions. LILCO, in a continuing effort to have the merits of its case engaged, renews its motion for summary disposition on Phase II.

I. Basis for Summary Disposition

Phase II of low power testing includes cold criticality testing of the plant at essentially ambient temperature and atmospheric pressure. See attached Statement of Material Facts, Material Fact 1. The testing involves a specified control rod withdrawal sequence that results in achieving reactor criticality at extremely low power levels, in the range of 0.0001% to 0.001% of rated thermal power. Material Fact 2. The primary purpose of Phase II testing is to verify the shutdown margin calculations. Material Fact 4. In order to accomplish this, plant personnel must first install vessel internals and initiate all refuel floor constraints. Expansion and vibration instrumentation is installed and cold baseline data are obtained for later comparison to data obtained during heatup. Material Fact 3.

To obtain the shutdown margin test data, control rods are withdrawn in the proper sequence until criticality is achieved. The necessary test data can be taken within 5 minutes of reaching criticality. The control rods are then reinserted and the reactor is shut down. Material Fact 4.

The extremely low risk of conducting Phase II activities, even without onsite AC power sources available, is demonstrated by a review of the accident and transient events contained in Chapter 15 of the Shoreham FSAR. Under plant conditions during Phase II, 23 of the 38 Chapter 15 events are possible. Material Fact 5-6.

Of the 23 possible events, the standard safety analysis does not require the assumption of loss or unavailability of offsite AC power for 20 of them. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Material Fact 6.

For the three events that do assume loss or unavailability of offsite power (pipe breaks inside containment (loss of coolant accident or LOCA), feedwater system piping break and the loss of AC power event), there are no consequences even assuming no onsite AC power source. Material Facts 7-10, 12.

As in Phase I, the lack of any accident consequences is attributable to the level of fission products in the core. The extremely low power levels achieved during Phase II, and the extremely short amount of time at those power levels result in essentially no fission products in the core and very little decay heat. Material Facts 4, 8-9. Accordingly, in the event a LOCA occurs,^{1/} only a small amount of decay heat is present to heat up the core. Essentially unlimited time is available before core cooling would have to be restored. Thus, there is no need for any AC power, including the TDI diesels. Material Fact 9.

^{1/} Pipe breaks of the sort postulated in the LOCA or feedwater system break events are highly unlikely under Phase II conditions. Material Fact 11.

With respect to the feedwater system break event and the loss of offsite power event, the reactor coolant inventory is not lost. This provides additional cooling capability and further ensures that no AC power is needed for core cooling. Material Fact 10.

As in Phase I, reliable diesel generators are not necessary to satisfy the Commission's regulations. The legal requirement for diesel generators derives from GDC 17, which states in pertinent part:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 C.F.R. Part 50, Appendix A, Criterion 17 (emphasis added). In other words, the onsite AC power source must be of sufficient capacity and capability to assure the performance of specified safety functions.

As demonstrated above, the Chapter 15 accident and transient events do not have any consequences, even assuming the unavailability of the TDI diesels. In fact, no AC power is required to protect the core. Material Fact 13.

Thus, the Commission's analysis with respect to fuel load and precriticality testing for the Diablo Canyon plant is useful here. As the Commission noted in that decision:

The risk to public health and safety from fuel loading and pre-criticality testing is extremely low since no self-sustaining nuclear chain reaction will take place under the terms of the license and therefore no radioactive fission products will be produced.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-83-27, 18 NRC 1146, 1149 (1983). As already noted, self-sustaining nuclear reaction will be conducted at extremely low power levels and for very short periods of time. The radioactive fission products produced under these circumstances are negligible. Thus, operation of the plant during Phase II presents no significant safety issue. See id.

The rationale for the Commission's grant of a license to Diablo Canyon also applies with respect to Phase II activities at Shoreham. At the time the Commission granted Diablo Canyon a low power testing license, quality assurance litigation concerning Diablo Canyon was still ongoing. In contrast, Shoreham has already been the subject of a lengthy, favorable Partial Initial Decision on all safety issues except those concerning those its existing diesel generators. See Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445 (1983) (Opinion), and unpublished Board Findings of Fact and Appendices.

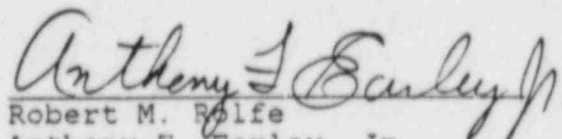
Since there is no need for reliable diesel generators during Phase II, the assurance of no risks to public health and safety from Phase II activities is even greater at Shoreham than at Diablo Canyon because all quality assurance issues at Shoreham have been favorably resolved.

II. Conclusion

Consistent with the Commission's May 16 Order, GDC 17 requires an onsite power source during low power testing with sufficient capacity and capability to perform certain safety functions specified in the GDC. During cold criticality testing conducted during Phase II, no AC power is required to perform these safety functions. Thus, even assuming that LILCO's onsite diesel generators do not operate, the requirements of GDC 17 are met. For the above stated reasons, LILCO's Motion for Summary Disposition on Phase II Low Power Testing should be granted.^{2/}

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY


Robert M. Rolfe
Anthony F. Earley, Jr.
Jessine A. Monaghan

^{2/} If the Licensing Board believes the Commission's May 16 order requires an exemption from the regulations for all four phases of low power testing, then the Board should treat this motion as a motion for summary disposition of all health and safety issues with respect to Phase II.

Hunton & Williams
Post Office Box 1535
Richmond, Virginia 23212

DATED: May 22, 1984

STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE ISSUE
TO BE HEARD ON PHASE II LOW POWER TESTING

The following is the Statement of Material Facts as to which LILCO contends there is no genuine issue to be heard concerning Phase II low power testing:^{3/}

1. Phase II of low power testing includes cold criticality testing of the plant at essentially ambient temperature and atmospheric pressure. Rao, et al., Tr. 285-86; Sherwood Affidavit at ¶ 14; Hodges Affidavit at ¶ 15.

2. Phase II testing involves a specified control rod withdrawal sequence that results in achieving reactor criticality at extremely low power levels, in the range of 0.0001% to 0.001% of rated thermal power. During this phase, reactor operators withdraw each of the 137 control rods and monitor the effect of its withdrawal in terms of neutron flux. By analysis and calculation, Reactor Engineering personnel are able to assign a "worth to each control rod, that is, the effectiveness of each rod in controlling reactivity." Gunther, Tr. 204-06; Notaro Affidavit at ¶ 8; Hodges Affidavit at ¶ 5.

3/ These facts appear in the record in the affidavits filed with LILCO's Supplemental Motion for Low Power License dated March 20 and in the testimony of the seven witnesses who testified on April 24 and 25 before the Licensing Board. Since these documents are readily available, copies have not been attached. Facts also appear in an affidavit of Wayne W. Hodges, dated April 4, 1984, which is attached.

3. Cold criticality testing requires plant maintenance personnel to install vessel internals in accordance with station procedure and with all refuel floor constraints in place. Expansion and vibration instrumentation is also installed. Cold baseline data are obtained to determine pipe movement as heatup occurs later in the low power test program. Gunther, Tr. 205; Notaro Affidavit at ¶ 8.

4. The primary purpose of Phase II testing is to verify shutdown margin calculations. The shutdown margin is measured by withdrawing the analytically strongest rod or the equivalent and one or more additional rods until criticality is reached. This procedure is completed and the necessary data obtained within 5 minutes after going critical. After the conclusion of the procedure, the control rods are reinserted into the core, thereby stopping the reaction and returning the core to subcritical status. Gunther, Tr. 205-06.

5. Under the plant conditions present in Phase II, many events analyzed in FSAR Chapter 15 could not occur or would be very unlikely. Even the possible Chapter 15 events would have no impact on public health and safety regardless of the availability of the TDI diesels. Rao, et al., Tr. 286-89, 295; Sherwood Affidavit at ¶¶ 15-17, 22; Hodges Affidavit at ¶ 6.

6. Of the 23 possible Chapter 15 events reviewed, 20 do not require the assumption of loss or unavailability of off-site AC

power. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Rao, et al., Tr. 291; Sherwood Affidavit at ¶ 18.

7. The three events that do assume loss or the unavailability of off-site AC power are: pipe breaks inside the primary containment, feedwater system pipe break, and the loss of AC power event. Rao, et al., Tr. 292; Sherwood Affidavit at ¶ 19.

8. Because of the extremely low power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶ 17.

9. If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. At the power levels achieved during Phase II, fission product inventory is very low. At most, the average power output will be a fraction of a watt-per-rod, with no single rod exceeding approximately two watts. With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 C.F.R. § 50.46 even after months without restoring coolant and without a source of AC

power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶ 19; Hodges Affidavit at ¶ 8.

10. During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. For these events, no loss of coolant occurs and the decay heat is minimal. Core cooling can be achieved for unlimited periods of time without AC power using the existing core water inventory and heat losses to ambient. Rao, et al., Tr. 293-94; Sherwood Affidavit at ¶ 20; Hodges Affidavit at ¶ 6.

11. The LOCA and the feedwater system piping break postulate the double-ended ruptures of a piping system. Because the reactor will be at essentially ambient temperature and atmospheric pressure during Phase II, it is extremely unlikely that such a pipe break would ever occur. The NRC Staff does not require double-ended ruptures to be postulated for low temperature and low pressure systems in safety analyses. Rao, et al., Tr. 294; Sherwood Affidavit at ¶ 21; Hodges Affidavit at ¶ 7.

12. None of the events analysed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 305; Sherwood Affidavit at ¶ 17.

13. Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶ 22.

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Docket No. 50-322

I, Marvin W. (Wayne) Hodges, being duly sworn, state as follows:

1. I am a Section Leader in the Reactor Systems Branch of the Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.
2. Long Island Lighting Company (LILCO) filed a Supplemental Motion for Low Power Operating License dated March 20, 1984. In that motion, LILCO proposed a phased program for low power operation at Shoreham. The four phases proposed are:
 - a) Phase I: fuel load and precriticality testing,
 - b) Phase II: cold criticality testing,
 - c) Phase III: heatup and low power testing to rated pressure/temperature conditions (approximately 1% rated power); and
 - d) Phase IV: low power testing (1-5% rated power)

The purpose of this affidavit is to address the impact on the health and safety of the public of operation in Phases I and II.

3. In Phase I, fuel loading and precriticality testing, the reactor will not be taken critical. There will be no heat generation in the core. There will be no fission products. Because there will have been no power generation and, consequently, no decay heat, there will be no need for cooling systems to remove decay heat.
4. In its supplemental motion, LILCO examined the 38 accident and transient events addressed in Chapter 15 of the FSAR. I have reviewed the 38 transients and accidents listed and I agree with LILCO that many of the events could not occur because of the operating conditions of the plant (e.g., a turbine trip or a load rejection transient cannot occur when the turbine is not in operation and there is no load on the generator). Of the events that could occur (e.g., loss of AC power), there are no safety concerns because of the absence of power generation.
5. Phase II, cold criticality testing, will involve testing in the power range of .0001% to .001% of rated power at essentially ambient temperature and atmospheric pressure. Because of the low power level and the limited duration of testing, fission product inventory and decay heat will be very low.

6. As for Phase I, many of the Phase II transients and accident analyzed in Chapter 15 of the FSAR cannot occur. For those transients and accident which can occur, other than a loss-of-coolant accident, core cooling can be achieved, even without AC power, using the existing core water inventory and passive heat loss to the environment. Therefore, there would be no threat to the health and safety of the public.
7. Because of the low pressure conditions, it is not reasonable to postulate a loss-of-coolant accident during Phases I and II operation. The NRC normally postulates breaks only in high energy lines; for Phases I and II, there are no high energy lines. However, even if a loss-of-coolant accident should occur during Phase II operation, there is plenty of time available for restoring offsite power should onsite power not be available.
8. If a loss-of-coolant accident should occur during Phase II testing, LILCO states that there would be time on the order of months available to restore make-up water for core cooling. At the decay heat levels which would exist under these conditions, heat transfer to the environment would remove a significant fraction of the decay heat. However, even if no heat transfer from the fuel rods is assumed and equilibrium fission products are assumed (i.e.,

inifinite operation at .001% power), then more than 9 days are available to restore cooling prior to exceeding a temperature of 2200°F. Therefore, even assuming the unavailability of onsite power sources, there is a high probability of restoring AC power and cooling the core.

Marvin W. Hodges

Marvin W. (Wayne) Hodges

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

Claire A. Thacker

Notary Public

My Commission Expires: July 1, 1986

Marvin W. (Wayne) Hodges
Professional Qualifications
Reactor Systems Branch
Division of Systems Integration
U. S. Nuclear Regulatory Commission

I am employed as a Section Leader in Section B of the Reactor Systems Branch, DSI.

I graduated from Auburn University with a Mechanical Engineering Degree in 1965. I received a Master of Science degree in Mechanical Engineering from Auburn University in 1967. I am a registered Professional Engineer in the state of Maryland (#13446).

In my present work assignment at the NRC, I supervise the work of 6 graduate engineers; my section is responsible for the review of primary and safety systems for BWRs. I have served as principal reviewer in the area of boiling water reactor systems. I have also participated in the review of analytical models use in the licensing evaluations of boiling water reactors and I have the technical review responsibility for many of the modifications and analyses being implemented on boiling water reactors post the Three Mile Island, Unit-2 accident.

As a member of the Bulletin and Orders Task Force which was formed after the TMI-2 accident, I was responsible for the review of the capability of BWR systems to cope with loss of feedwater transient and small break loss-of-coolant accidents.

I have also served at the NRC as a reviewer in the Analysis Branch of the NRC in the area of thermal-hydraulic performance of the reactor core. I served as a consultant to the RES representative to the program management group for the BWR Blowdown/Emergency Core Cooling Program.

Prior to joining the NRC staff in March, 1974, I was employed by E. I. DuPont at the Savannah River Laboratory as a research engineer. At SRL, I conducted hydraulic and heat transfer testing to support operation of the reactors at the Savannah River Plant. I also performed safety limit calculations and participated in the development of analytical models for use in transient analyses at Savannah River. My tenure at SRL was from June 1967 to March 1974.

From September 1965 to June 1967, while in graduate school, I taught courses in thermodynamics, statics, mechanical engineering measurements, computer programming and assisted in a course in the history of engineering. During the summer of 1966, I worked at the Savannah River Laboratory doing hydraulic testing.

LILCO, May 22, 1984

CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322-OL-4 (Low Power)

I hereby certify that copies of LILCO's Motion for Prompt Responses to Summary Disposition Motions, Motion for Summary Disposition on Phase I Low Power Testing and Motion for Summary Disposition on Phase II Low Power Testing were served this date upon the following by first-class mail, postage pre-paid, or by Federal Express, as indicated by an asterisk:

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U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

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DATED: May 22, 1984

Attachment D

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges
Marshall E. Miller, Chairman
Glenn O. Bright
Elizabeth B. Johnson

In the Matter of

LONG ISLAND LIGHTING COMPANY

(Shoreham Nuclear Power Station,
Unit 1)

Docket No. 50-322-OL-4
(Low Power)

July 24, 1984

ORDER GRANTING IN PART AND DENYING IN PART LILCO'S MOTIONS
FOR SUMMARY DISPOSITION ON PHASE I AND PHASE II LOW-POWER TESTING

LILCO filed its supplemental application for a low-power license on March 20, 1984. That application relies upon supplemental emergency power sources to compensate for the absence of an acceptable onsite emergency power source. However, the Commission issued an Order (CLI-84-8) on May 16, 1984 holding that GDC-17¹ applied to low power

¹ GDC-17 states, in pertinent part, that:

"An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability
(Footnote Continued)

operation and that if LILCO's application did not demonstrate compliance with GDC-17, LILCO would have to seek an exemption pursuant to 10 CFR §50.12. LILCO subsequently filed an exemption request with the Licensing Board.

On May 23, 1984, LILCO filed its "Motion for Summary Disposition on Phase I Low-Power Testing", and "Motion for Summary Disposition on Phase II Low-Power Testing", pursuant to 10 CFR §2.749. This Board denied LILCO's motion for expedited responses to its motions for summary disposition, instead directing the parties to file answers within the time limits prescribed by regulations. Suffolk County, the State of New York, and the NRC Staff filed answers to the summary disposition motions on June 13, 1984.

LILCO's motions are based upon its assertion that even if the Shoreham facility lacks a qualified source of onsite AC power, the

(Footnote Continued)

to assure that (1) specified acceptable fuel design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure" (10 CFR Part 50, Appendix A, Criterion A).

activities which would be performed during Phases I and II² of its Low-Power testing program require no such power to perform the safety functions specified by the General Design Criteria (GDC), specifically GDC-17.

LILCO argues that as to Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat. Thus no core cooling is required, and hence no AC power (either onsite or offsite) is needed "to permit functioning of structures, systems, and components important to safety" (GDC-17). As to Phase II cold criticality testing, LILCO asserts that any self-sustaining nuclear reaction will be conducted at extremely low power levels and for very short periods of time, and that radioactive fission products produced will be negligible. A review of the accident and transient events contained in Chapter 15 of the Shoreham FSAR allegedly shows that there are no consequences even assuming no onsite AC power source, and in fact no AC power is required to protect the core.

In essence, LILCO seeks summary disposition as to Phases I and II, because (a) no onsite or offsite AC power is necessary to perform the safety functions needed to protect the public health and safety, and

² Phase I: Fuel load and precriticality testing.
Phase II: Cold criticality testing.

(b) since no AC power is needed, GDC-17 is said to be satisfied at Phases I and II without an approved (or indeed any) onsite power source.

The Staff in its June 13 response to LILCO's motions for summary disposition submitted that the motions should be granted in part and denied in part. It stated that the Commission's May 16 Order (CLI-84-8) stands for the proposition that GDC-17 means the same for low-power operation as for full-power operation and must be completely satisfied before any license (including low-power) may be issued. It therefore follows that, in the absence of a fully approved onsite power system, an exemption from GDC-17 is needed before any license can be issued pursuant to 10 CFR §50.57(c). LILCO did not seek summary disposition of its exemption request nor address factual issues involved therein, and accordingly the ultimate issues involved in Phases I and II could not be summarily disposed of. However, the Staff stated that partial summary disposition should be made as to some of the statements of material facts appended to the Phase I motion (Statements 5-9) and to the Phase II motion (Statements 5, 8, 9, 10, 11, 12 and 13, and reworded 6 and 7),³ and that such statements should be deemed admitted unless properly controverted.

³ These Statements of Material Facts are described and discussed infra, at pages 9-14.

The Response of Suffolk County and the State of New York (with attached affidavits and statement of material issues as to which it is alleged that there are facts in dispute) submits that the LILCO motion may not be granted because, first, the NRC allegedly lacks authority to grant what is characterized as a "no power" license. Second, because the LILCO low-power license application which was considered by the Commission in its Order of May 16, 1984 (CLI-84-8, 19 NRC ____) included Phases I and II, that are the subjects of the pending summary disposition motions, they argue that the Commission's statement that LILCO must obtain an exemption from applicable General Design Criteria (expressly GDC-17) prior to the grant of its low-power proposal, includes the grant of any portion thereof. They further argue that LILCO's position that the requirements of GDC-17 would be met during Phases I and II ignores the plain language of that criterion. Lastly, the Intervenor's set forth issues of material fact which they say remain in dispute.

I. LEGAL STANDARDS FOR SUMMARY DISPOSITION

The Commission's Rules of Practice provide for summary disposition of certain issues where "the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law" (10 CFR §2.749(d)). The Rules also provide for summary disposition as to any portions of a

matter involved in a proceeding as to which there is no genuine issue of material fact (10 CFR §2.749(a)).

The Commission and Appeal Board have encouraged the use of summary disposition to resolve contentions where an intervenor has failed to establish that a genuine issue exists.⁴ The "summary disposition rule (10 CFR §2.749) provides an ample safeguard against an applicant or the...staff being required to expend time and effort at a hearing on any contention advanced by an intervenor which is manifestly unworthy of exploration."⁵

The Commission's policy is to encourage the use of summary disposition where no genuine issue of material fact exists "so that evidentiary hearing time is not unnecessarily devoted to such issues." Statement of Policy in Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 457 (1981). Thus, a hearing on the questions raised by an intervenor is not inevitable. See Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-654, 14 NRC 632 (1981). The purpose of summary disposition is to avoid hearings,

⁴ Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 & 2), CLI-73-12, 6 AEC 241, 242 (1973), aff'd sub nom. BPI v. AEC, 502 F.2d 424 (D.C. Cir. 1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550-51 (1980); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424-25 (1973).

⁵ Gulf States Utilities Co. (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 228 (1974).

unnecessary testimony and cross-examination in areas where there are not material issues to be tried.⁶

The Supreme Court has very clearly stated that there is no right to a trial except so far as there are issues of fact in dispute to be determined. Ex parte Peterson, 253 U.S. 300, 310 (1920). Under the Federal Rules the motion is designed to pierce the general allegations in the pleadings, separating the substantial from the insubstantial by utilizing depositions, interrogatories or other material of evidentiary value. 6 J. Moore, Moore's Federal Practice ¶56.04[1] (2d ed. 1976). Mere allegations in the pleadings will not create an issue as against a motion for summary disposition supported by affidavits (10 CFR §2.749(b); Fed. R. Civ. P. 56(c)).

The Commission's summary disposition procedures have been analogized to Rule 56 of the Federal Rules of Civil Procedure.⁷ Decisions arising under the Federal Rules thus may serve as guidelines to licensing boards in applying 10 CFR §2.749.⁸ Under both Federal and

⁶ A material fact is one that may affect the outcome of the litigation. Mutual Fund Investors Inc. v. Putnam Management Co., 553 F.2d 620, 624 (9th Cir. 1977).

⁷ Cleveland Electric Illuminating Co., et al. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977); Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 217 (1974).

⁸ Perry, ALAB-443, supra at 754; Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-74-36, 7 AEC 877, 878-79 (1974).

NRC rules, the record is to be reviewed in the light most favorable to the party opposing the motion.⁹

To draw on federal practice, the Supreme Court has pointed out that Rule 56 of the Federal Rules of Civil Procedure does not permit plaintiffs to get to a trial on the basis of the allegations in the complaint coupled with the hope that something can be developed at trial in the way of evidence to support the allegations.¹⁰ Similarly, a party may not defeat a motion for summary judgment on the hope that on cross-examination the defendants will contradict their respective affidavits. To permit trial on such a basis would nullify the purpose of Rule 56 which permits the elimination of unnecessary and costly litigation where no genuine issues of material fact exist.¹¹

All material facts adequately set forth in a motion and not adequately controverted by the responses thereto are deemed to be

⁹ Poller v. Columbia Broadcasting System, Inc., 368 U.S. 464, 473 (1962); Crest Auto Supplies, Inc. v. Ero Manufacturing Co., 360 F.2d 896, 899 (7th Cir. 1966); United Mine Workers of America, Dist. 22 v. Roncco, 314 F.2d 186, 188 (10th Cir. 1963); Pennsylvania Power & Light Co. and Allegheny Electric Cooperative, Inc. (Susquehanna Steam Electric Station, Units 1 and 2), LBP-81-8, 13 NRC 335, 337 (1981), directed certification denied, ALAB-641, 13 NRC 550 (1981); Seabrook, LBP-74-36, supra, 7 AEC at 879.

¹⁰ First National Bank of Arizona v. Cities Service Co., 391, U.S. 253, 289-90 (1968), rehearing den., 393 U.S. 901 (1968).

¹¹ See Orvis v. Brickman, 95 F. Supp 605, 607 (1951), aff'd 196 F.2d 762 (D.C. Cir. 1952), cited with approval in Gulf States Utilities Co. (River Bend Station, Units 1 and 2), 1 NRC 246, 248 (1975).

admitted (10 CFR §2.749(a)). A party opposing the motion may not rely upon a simple denial of the material facts stated by the movant, but must set forth specific facts showing that there is a genuine issue of fact remaining.¹² However, the proponent of a motion must meet the burden of proof in establishing that there is no genuine issue of material fact, even if the opponent fails to controvert the conclusions reached in the motions' supporting papers.

II. DENIAL AS TO ULTIMATE ISSUES

The Commission's May 16 Order (CLI-84-8) stated that it "has determined that 10 CFR 50.57(c) should not be read to make General Design Criterion 17 inapplicable to low-power operation" (slip opinion, page 1). That order therefore stands for the proposition that GDC-17 means the same for low-power operations as for full-power operation, and it must be completely satisfied before any license (including low-power) may be issued. Accordingly, the only recourse available to LILCO in this proceeding is to seek an exemption under the provisions of 10 CFR §50.12(a), which is the subject of the instant evidentiary hearing.

The Board does not have the power or jurisdiction to grant LILCO's motion for summary disposition of Phases I and II of its low-power testing program, even though such activities do not require a qualified

¹² 10 CFR §2.749(b), Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453 (1980).

source of onsite AC power in order to perform the safety functions specified by GDC-17. The Commission's order requires that the GDC-17 requirements be completely satisfied even for fuel loading and precriticality testing. In its motion LILCO did not seek summary disposition of its exemption request, nor did it even address the factual issues involved therein. Accordingly, the ultimate issues involved in Phase I and II activities cannot be disposed of summarily, and that portion of the summary disposition motion is denied.

III. GRANTED AS TO CERTAIN STATEMENTS OF MATERIAL FACTS

Some of the statements of material facts appended to LILCO's Phase I motion (Statements 5-9) and to the Phase II motion (Statements 5, 8-13, and reworded 6 and 7) were not controverted and should be deemed to be admitted. Accordingly, the following statements of material fact are held to be admitted in this proceeding.

Phase I Statements 5-9:

(5) During all of the activities in Phase I, the reactor will remain at essentially ambient temperature and atmospheric pressure. The reactor will not be taken critical. Any increase in temperature beyond ambient conditions will be due only to external heat sources such as recirculation pump heat. There will be no heat generation by the core. Rao, et al., Tr. 279; Sherwood Affidavit at ¶7; Hodges Affidavit at ¶3.

(6) Of the 38 accident or transient events addressed in FSAR Chapter 15, 18 of the events could not occur during Phase I because of the operating conditions of the plant. An additional six events could

physically occur, but given the plant conditions, would not cause the phenomena of interest in the Chapter 15 safety analysis. The remaining 14 events could possibly occur, although occurrences are highly unlikely given the plant conditions. The potential consequences of these 14 events would be trivial. Rao, et al., Tr. 279-84; Sherwood Affidavit at ¶¶8-11; Hodges Affidavit at ¶4.

(7) During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶11; Hodges Affidavit at ¶4.

(8) Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. No fission products exist and therefore no decay heat is available to heat up the core. The fuel simply would not be challenged even by a complete drain down of the reactor vessel for an unlimited period of time. Rao, et al., Tr. 284; Sherwood Affidavit at ¶9; Hodges Affidavit at ¶4.

(9) No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core. Rao, et al., Tr. 285; Sherwood Affidavit at ¶13; Hodges Affidavit at ¶3.

Phase II Statements 5, 8-13:

(5) Under the plant conditions present in Phase II, many events analyzed in FSAR Chapter 15 could not occur or would be very unlikely. Even the possible Chapter 15 events would have no impact on public

health and safety regardless of the availability of the TDI diesels.

Rao, et al., Tr. 286-89, 295; Sherwood Affidavit at ¶¶15-17, 22; Hodges Affidavit at ¶6.

(8) Because of the extremely low-power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low-power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶17.

(9) If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. At the power levels achieved during Phase II, fission product inventory is very low. At most, the average power output will be a fraction of a watt-per-rod, with no single rod exceeding approximately two watts. With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 CFR §50.46 even after months without restoring coolant and without a source of AC power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶19; Hodges Affidavit at ¶8.

(10) During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. For these

events, no loss of coolant occurs and the decay heat is minimal. Core cooling can be achieved for unlimited periods of time without AC power using the existing core water inventory and heat losses to ambient. Rao, et al., Tr. 293-94; Sherwood Affidavit at ¶20; Hodges Affidavit at ¶6.

(11) The LOCA and the feedwater system piping break postulate the double-ended ruptures of a piping system. Because the reactor will be at essentially ambient temperature and atmospheric pressure during Phase II, it is extremely unlikely that such a pipe break would ever occur. The NRC Staff does not require double-ended ruptures to be postulated for low temperature and low pressure systems in safety analyses. Rao, et al., Tr. 294; Sherwood Affidavit at ¶21; Hodges Affidavit at ¶7.

(12) None of the events analyzed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 296; Sherwood Affidavit at ¶17.

¶(13) Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶22.

Phase II Statements 6 and 7:

(6) Of the 23 possible Chapter 15 events reviewed, 20 would not be adversely affected by the loss or unavailability of offsite AC power. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Hodges Affidavit at ¶10.

(7) The three events that are adversely affected by the loss or unavailability of offsite AC power are: pipe breaks inside the primary containment, feedwater system pipe break, and the loss of AC power event. Hodges Affidavit at ¶10.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Marshall E. Miller
Marshall E. Miller, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 24th day of July, 1984.

Attachment E

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-4
	)	(Low Power)
(Shoreham Nuclear Power)	
Station, Unit 1))	

LILCO'S MOTION FOR REFERRAL OF ORDER
GRANTING IN PART AND DENYING IN PART
LILCO'S MOTIONS FOR SUMMARY DISPOSITION
ON PHASE I AND PHASE II LOW POWER TESTING

On July 23, 1984, this Licensing Board granted in part and denied in part LILCO's Motion for Summary Disposition on Phase I Low-Power Testing and Motion for Summary Disposition on Phase II Low-Power Testing (the Summary Disposition Motions). In those motions, LILCO contended that there was no genuine issue as to any material fact necessary to establish that no AC power would be needed to accomplish the functions specified in GDC 17 during Phases I and II of low power testing. Therefore, LILCO asserted, no exemption for these two phases of low power testing was necessary inasmuch as LILCO has onsite TDI diesel generators and the reliability of those TDI diesel generators is immaterial.^{1/}

^{1/} LILCO included Phases I and II of low power testing in its Application for Exemption. That inclusion does not,

(footnote continued)

In its July 24, 1984 Order Granting in Part and Denying in Part LILCO's Motion for Summary Disposition on Phases I and II of Low Power Testing (Attachment A), the Board substantially agreed with LILCO as to all facts material to the health and safety issues pertinent to Phases I and II. Among the material facts which the Board held to be admitted in this proceeding are the following:

[Phase I]

(7) During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶ 11; Hodges Affidavit at ¶ 4.

(8) Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. . . .

(9) No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core. Rao, et al., Tr. 285; Sherwood Affidavit at ¶ 13; Hodges Affidavit at ¶ 3.

(footnote continued)

however, indicate LILCO's belief that an exemption is necessary during these phases. In short, LILCO has exercised an abundance of caution in the event that the Licensing Board and, ultimately, the Commission, disagree with LILCO and believe that such an exemption is necessary.

[Phase II]

(8) Because of the extremely low-power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low-power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶ 17.

(9) If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. . . . With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 CFR § 50.46 even after months without restoring coolant and without a source of AC power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶ 19; Hodges Affidavit at ¶ 8.

(10) During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. . . .

(12) None of the events analyzed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 296; Sherwood Affidavit at ¶ 17.

(13) Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would

not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶ 22.

Board Order at 11-13.

The Board, nevertheless, denied the Summary Disposition Motions based on its interpretation of the Commission's May 16, 1984 Order (CLI-84-8) that:

GDC 17 means the same for low-power operations as for full-power operation, and it must be completely satisfied before any license (including low power) may be issued. Accordingly, the only recourse available to LILCO in this proceeding is to seek an exemption under the provisions of 10 CFR § 50.12(a), which is the subject of the instant evidentiary hearing.

Board Order at 9. Thus, the Board concluded that it had no power or jurisdiction to grant LILCO's Summary Disposition Motions "even though such activities do not require a qualified source of onsite AC power in order to perform the safety functions specified by GDC 17." Board Order at 9-10.

LILCO now moves the Board, pursuant to 10 CFR § 2.730(f), immediately to refer to the Commission the question of law, as described above, upon which the Board's denial of

LILCO's Summary Disposition Motions is predicated.^{2/} Simply, the Commission's May 16 Order does not clearly state whether the Commission intended its ruling to apply to fuel loading and precriticality testing and, by extension, to cold criticality testing where no AC power is needed.

This ambiguity arises from a number of factors. First, the Commission in its Order pointedly did not address a fuel load and precriticality license. Second, LILCO filed with the Commission Summary Disposition Motions for Phases I and II similar to those filed with the Licensing Board. The Commission did not address those Summary Disposition Motions in any fashion. Had the Commission intended to apply its requirement of an exemption to Phases I and II, it could have, and likely would have, explicitly denied the Summary Disposition Motions on the grounds embodied in this Board's July 24, 1984 Order.

2/ Concurrently with this motion, LILCO has filed a Motion for Directed Certification with the Commission. Ordinarily, LILCO would not endorse this dual approach. Nevertheless, in view of the Commission's response to Suffolk County's employment of this procedure concerning security issues (Memorandum and Order, July 18, 1984), the Commission's apparent belief that its immediate intervention and guidance was necessary and appropriate to assure expeditious handling of this proceeding, and this Board's immediate involvement in hearings expected to last an additional several days, LILCO believes such concurrent filing is warranted in this limited instance.

Third, and perhaps most importantly, the argument before the Commission on May 7, 1984, which together with preceding filings precipitated the Commission's May 16 Order, primarily focused upon the need to harmonize GDC 17 with 10 CFR § 50.57(c).^{3/} The gist of much of that discussion was that a lower level of AC power would be needed much less quickly during low power testing up to 5% power than at full power operation. LILCO further argued there that by permitting interim low power licensing, the Commission intended to take that lesser need for power into account. The Commission, in turn, expressed concern about the precedential effect of allowing the Staff, or a Licensing Board, to exercise unbridled discretion in applying such a standard without the invocation of a formal exemption process.

In contrast, during the May 7 argument, the Commission did not focus upon the lack of any need for AC power during Phases I and II. Obviously, if no AC power is needed, there is no discretionary application of the General Design Criterion involved. Indeed, GDC 17 is actually met because LILCO has TDI diesels

3/ Commission Meeting; Oral Argument on Shoreham, May 7, 1984, at Tr. 9, 13-16, 40-44, 49, 61-65, 71-75, 83-84, 87-89, 101-107, 119-129.

provided to permit functioning of structures, systems, and components important to safety . . . [and providing] sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 CFR Part 50, Appendix A, General Design Criterion 17 (emphasis added). For Phases I and II, that necessary AC power is zero. Therefore, the reliability of LILCO's onsite diesel generators is immaterial. There is no need for any diesel generator reliability to meet the "sufficient capacity and capability" standard.^{4/}

The issue of whether an exemption is needed for Phases I and II in these circumstances should be resolved quickly. Referral pursuant to Section 2.730(f) is governed by the following standard:

^{4/} Similarly, since there is no need for AC power and no need for an exemption, there is no need to await any subsequent proceedings concerning potential security issues. By definition, such security contentions could not "arise from the changes in configuration of the emergency electrical power system" or be "applicable to low power operation." Commission Memorandum and Order, June 18, 1984 at 3.

Whether review should be undertaken on "certification" or by referral before the end of the case turns on whether a failure to address the issue would seriously harm the public interest, result in unusual delay or expense, or affect the basic structure of the proceeding in some pervasive or unusual manner.

Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), LBP-83-21, 17 NRC 593, 598 (1983); Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 464 (1982); Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-634, 13 NRC 96, 99 (1981).^{5/} Although only one of these criteria need be satisfied to support referral, all three are satisfied here.

First, the public interest may be seriously harmed by permitting the ambiguity in the Commission's May 16 Order to remain. The NRC Staff has already indicated its discomfort with this ambiguity, as to this issue and in other respects, and a special Commission meeting has been held on the subject.^{6/} The public interest would be furthered by affording

5/ This standard also applies to referral pursuant to 10 CFR § 2.718(i).

6/ The Commission ordered that the transcript of its July 25, 1984 proceeding not be cited for any purpose. Therefore, the substance of that meeting will not be discussed here. It is sufficient to note, however, that a meeting was held to address concerns which exist.

the Commission an opportunity formally to eliminate the ambiguity in its Order.

Second, failure to clear up this ambiguity will result in undue delay and expense. At a minimum, immediate referral may afford LILCO the opportunity to gain a license for Phases I and II without having to await conclusion of the present exemption proceeding and any subsequent proceeding concerning security issues, though LILCO believes there are no legitimate security issues. As a result, the parties and the Licensing Board may be spared the expense and delay of litigating further over Phases I and II when LILCO's request for a license for those phases may properly be summarily granted.

Third, resolution of this ambiguity will affect the basic structure of this proceeding in a pervasive manner. Issues pertaining to Phases I and II will be removed from this proceeding and a license for those phases may be issued without additional licensing proceedings.

Accordingly, the question of law presented by this Board's July 24 Order, which is the sole impediment to this Board's granting of summary disposition to LILCO for Phases I

LILCO, August 2, 1984

CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322-OL-4 (Low Power)

I hereby certify that copies of LILCO'S MOTION FOR DIRECTED CERTIFICATION OF THE LICENSING BOARD'S JULY 24, 1984 ORDER GRANTING IN PART AND DENYING IN PART LILCO'S MOTIONS FOR SUMMARY DISPOSITION ON PHASE I AND PHASE II LOW POWER TESTING were served this date upon the following by U.S. mail, first-class, postage prepaid or by hand as indicated by an asterisk.

Chairman Nunzio J. Palladino*
U.S. Nuclear Regulatory
Commission
1717 H Street
Washington, D.C. 20555

Judge Marshall E. Miller*
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Commissioner James K. Asselstine*
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DATED: August 2, 1984

Robert M. Rolfe
Robert M. Rolfe (by *John*)

LILCO, May 22, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBefore the Atomic Safety and Licensing Board

In the Matter of)	
LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322-OL-4
(Shoreham Nuclear Power Station,	)	(Low Power)
Unit 1))	

LILCO'S MOTION FOR SUMMARY
DISPOSITION ON PHASE I LOW POWER TESTING

On March 20, 1984, LILCO filed its Supplemental Motion for Low Power Operating License which requested the approval of a license to conduct four phases of low power testing. LILCO renewed its March 20 motion and, pursuant to 10 CFR § 2.749, sought summary disposition with respect to Phase I of the low power testing program in a motion filed with the Commission on May 4, 1984. Subsequently, the Commission's May 16 Order vacated the Licensing Board's April 6 Memorandum and Order to the extent it was inconsistent with the Commission's view that 10 CFR § 50.57(c) did not make GDC 17 inapplicable to low power operation. The Commission did not rule on LILCO's summary disposition motions. LILCO, in a continuing effort to have the merits of its case engaged, renews its motion for summary disposition on Phase I.

I. Basis for Summary Disposition

Phase I fuel load and precriticality testing involve both fuel loading and core verification prior to the reactor's going critical. See attached Statement of Material Facts, Material Facts 1, 5. Initial core loading involves the placement of fuel bundles in specified locations within the reactor vessel. Material Fact 2. The following testing is associated with initial core loading:

- (a) water chemistry surveillance testing
- (b) control rod drive stroke time and friction tests
- (c) installation, calibration, and utilization of special startup neutron instrumentation
- (d) core verification instrument operability check

Material Fact 3. Following placement of the fuel in the vessel, the following testing must be conducted:

- (a) local power range monitor (LPRM) sensitivity data
- (b) zero power radiation survey for background readings
- (c) recirculation system instrument calibration checks
- (d) control rod drive scram time testing
- (e) cold main steam isolation valve (MSIV) timing

Material Fact 4.

For these precriticality activities, reliable diesel generators are not necessary to satisfy the Commission's

regulations. The legal requirement for diesel generators derives from GDC 17, which states in pertinent part:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 C.F.R. Part 50, Appendix A, Criterion 17 (emphasis added). In other words, the onsite AC power source must be of sufficient capacity and capability to assure the performance of the specified safety functions.

During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat. Therefore, core cooling is not required and, with no fission product inventory, fission product releases are not possible. Material Fact 7. In fact, during Phase I activities, most of the anticipated operational occurrences and postulated accidents covered in Chapter 15 of the Final Safety Analysis Report (FSAR) simply could not occur. Even those Chapter 15 events that are possible would have no impact on public health and safety, if they were in fact to occur. Material Facts 6-8. Because no core cooling is required during

Phase I, no AC power, either onsite or offsite, is needed. Material Fact 9. Thus the reliability of LILCO's onsite diesel generators is not material.

The license LILCO seeks with respect to Phase I testing (fuel load and precriticality testing) is identical to the low power approval recently authorized by the Commission for the Diablo Canyon plant. As the Commission noted in that decision:

The risk to public health and safety from fuel loading and pre-criticality testing is extremely low since no self-sustaining nuclear chain reaction will take place under the terms of the license and therefore no radioactive fission products will be produced.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-83-27, 18 NRC 1146, 1149 (1983). Indeed, fuel loading and precriticality testing present no significant safety issue. Id.

The rationale for the Commission's grant of a license to Diablo Canyon applies with even greater force with respect to Shoreham. At the time the Commission granted Diablo Canyon a low power testing license, quality assurance litigation concerning Diablo Canyon was still ongoing. In contrast, Shoreham has already been the subject of a lengthy, favorable Partial Initial Decision on all safety issues except those concerning those its existing diesel generators. See Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445 (1983)

(Opinion) and unpublished Board Findings of Fact and Appendices. Since there is no need for diesel generators or any AC power during Phase I, the assurance of no risk to public health and safety from Phase I activities is even greater at Shoreham than at Diablo Canyon because all quality assurance issues at Shoreham have been favorably resolved.

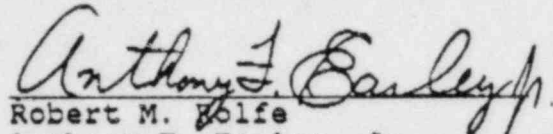
II. Conclusion

Consistent with the Commission's May 16 Order, GDC 17 requires an onsite power source during low power testing with sufficient capacity and capability to perform certain safety functions specified in the GDC. During fuel loading and precriticality testing conducted during Phase I low power testing, no AC power is required to perform these safety functions. Thus, even assuming that LILCO's onsite diesel generators do not operate, the requirements of GDC 17 are met. For the above stated reasons, LILCO's Motion for Summary Disposition on Phase I Low Power Testing should be granted.^{1/}

^{1/} If the Licensing Board believes the Commission's May 16 Order requires an exemption from the regulations for all four phases of the low power testing, then the Board should treat this motion as a motion for summary disposition of all health and safety issues with respect to Phase I.

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY


Robert M. Wolfe
Anthony F. Earley, Jr.
Jessine A. Monaghan

Hunton & Williams
Post Office Box 1535
Richmond, Virginia 23212

DATED: May 22, 1984

STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE
ISSUE TO BE HEARD ON PHASE I LOW POWER TESTING

The following is the statement of material facts as to which LILCO contends there is no genuine issue to be heard concerning Phase I low power testing:^{2/}

1. Phase I Fuel Loading and Precriticality Testing involves placing fuel in the reactor vessel and conducting tests of reactor systems and support systems. Gunther, Tr. 201-02; Notaro Affidavit at ¶ 6.

2. Initial core loading involves the placement of 560 fuel bundles in specified locations within the reactor vessel. Id.

3. The following testing is associated with initial core loading:

- (a) water chemistry surveillance testing
- (b) control rod drive stroke time and friction tests
- (c) installation, calibration, and utilization of special startup neutron instrumentation
- (d) core verification instrument operability check

^{2/} These facts appear in the record in the affidavits filed with LILCO's Supplemental Motion for Low Power License dated March 20 and in the testimony of the seven witnesses who testified on April 24 and 25 before the Licensing Board. Since these documents are readily available, copies have not been attached. Facts also appear in an affidavit of Wayne W. Hodges, dated April 4, 1984, which is attached.

Gunther, Tr. 202; Notaro Affidavit at ¶ 6.

4. Following placement of fuel in the vessel, tests are performed to verify the operability of systems. This precriticality testing includes the following:

- (a) local power range monitor (LPRM) sensitivity data
- (b) zero power radiation survey for background readings
- (c) recirculation system instrument to calibration check
- (d) control rod drive scram time testing
- (e) cold main steam isolation valves (MSIV) timing

Gunther, Tr. 202; Notaro Affidavit at ¶ 7.

5. During all of the activities in Phase I, the reactor will remain at essentially ambient temperature and atmospheric pressure. The reactor will not be taken critical. Any increase in temperature beyond ambient conditions will be due only to external heat sources such as recirculation pump heat. There will be no heat generation in the core. Rao, et al., Tr. 279; Sherwood Affidavit at ¶ 7; Hodges Affidavit at ¶ 3.

6. Of the 38 accident or transient events addressed in FSAR Chapter 15, 18 of the events could not occur during Phase I because of the operating conditions of the plant. An additional 6 events could physically occur, but given the plant conditions, would not cause the phenomena of interest in the Chapter 15 safety analysis. The remaining 14 events could possibly occur, although

occurrence is highly unlikely given the plant conditions. The potential consequences of these 14 events would be trivial. Rao, et al., Tr. 279-84; Sherwood Affidavit at ¶¶ 8-11; Hodges Affidavit at ¶ 4.

7. During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶ 11; Hodges Affidavit at ¶ 4.

8. Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. No fission products exist and therefore no decay heat is available to heat up the core. The fuel simply would not be challenged even by a complete drain down of the reactor vessel for an unlimited period of time. Rao, et al., Tr. 284; Sherwood Affidavit at ¶ 9; Hodges Affidavit at ¶ 4.

9. No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core. Rao, et al., Tr. 285; Sherwood Affidavit at ¶ 13; Hodges Affidavit at ¶ 3.

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
}

AFFIDAVIT OF MARVIN W. HODGES
CONCERNING THE SUPPLEMENTAL MOTION FOR
LOW POWER OPERATION, PHASE I AND II, AT SHOREHAM

I, Marvin W. (Wayne) Hodges, being duly sworn, state as follows:

1. I am a Section Leader in the Reactor Systems Branch of the Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.
2. Long Island Lighting Company (LILCO) filed a Supplemental Motion for Low Power Operating License dated March 20, 1984. In that motion, LILCO proposed a phased program for low power operation at Shoreham. The four phases proposed are:
 - a) Phase I: fuel load and precriticality testing,
 - b) Phase II: cold criticality testing,
 - c) Phase III: heatup and low power testing to rated pressure/temperature conditions (approximately 1% rated power); and
 - d) Phase IV: low power testing (1-5% rated power)

The purpose of this affidavit is to address the impact on the health and safety of the public of operation in Phases I and II.

3. In Phase I, fuel loading and precriticality testing, the reactor will not be taken critical. There will be no heat generation in the core. There will be no fission products. Because there will have been no power generation and, consequently, no decay heat, there will be no need for cooling systems to remove decay heat.
1. In its supplemental motion, LILCO examined the 38 accident and transient events addressed in Chapter 15 of the FSAR. I have reviewed the 38 transients and accidents listed and I agree with LILCO that many of the events could not occur because of the operating conditions of the plant (e.g., a turbine trip or a load rejection transient cannot occur when the turbine is not in operation and there is no load on the generator). Of the events that could occur (e.g., loss of AC power), there are no safety concerns because of the absence of power generation.
5. Phase II, cold criticality testing, will involve testing in the power range of .0001% to .001% of rated power at essentially ambient temperature and atmospheric pressure. Because of the low power level and the limited duration of testing, fission product inventory and decay heat will be very low.

Marvin W. (Wayne) Hodges

Professional Qualifications

Reactor Systems Branch

Division of Systems Integration

U. S. Nuclear Regulatory Commission

I am employed as a Section Leader in Section B of the Reactor Systems Branch, DSI.

I graduated from Auburn University with a Mechanical Engineering Degree in 1965. I received a Master of Science degree in Mechanical Engineering from Auburn University in 1967. I am a registered Professional Engineer in the state of Maryland (#13446).

In my present work assignment at the NRC, I supervise the work of 6 graduate engineers; my section is responsible for the review of primary and safety systems for BWRs. I have served as principal reviewer in the area of boiling water reactor systems. I have also participated in the review of analytical models use in the licensing evaluations of boiling water reactors and I have the technical review responsibility for many of the modifications and analyses being implemented on boiling water reactors post the Three Mile Island, Unit-2 accident.

As a member of the Bulletin and Orders Task Force which was formed after the TMI-2 accident, I was responsible for the review of the capability of BWR systems to cope with loss of feedwater transient and small break loss-of-coolant accidents.

I have also served at the NRC as a reviewer in the Analysis Branch of the NRC in the area of thermal-hydraulic performance of the reactor core. I served as a consultant to the RES representative to the program management group for the BWR Blowdown/Emergency Core Cooling Program.

Prior to joining the NRC staff in March, 1974, I was employed by E. I. DuPont at the Savannah River Laboratory as a research engineer. At SRL, I conducted hydraulic and heat transfer testing to support operation of the reactors at the Savannah River Plant. I also performed safety limit calculations and participated in the development of analytical models for use in transient analyses at Savannah River. My tenure at SRL was from June 1967 to March 1974.

From September 1965 to June 1967, while in graduate school, I taught courses in thermodynamics, statics, mechanical engineering measurements, computer programming and assisted in a course in the history of engineering. During the summer of 1966, I worked at the Savannah River Laboratory doing hydraulic testing.

6. As for Phase I, many of the Phase II transients and accident analyzed in Chapter 15 of the FSAR cannot occur. For those transients and accident which can occur, other than a loss-of-coolant accident, core cooling can be achieved, even without AC power, using the existing core water inventory and passive heat loss to the environment. Therefore, there would be no threat to the health and safety of the public.
7. Because of the low pressure conditions, it is not reasonable to postulate a loss-of-coolant accident during Phases I and II operation. The NRC normally postulates breaks only in high energy lines; for Phases I and II, there are no high energy lines. However, even if a loss-of-coolant accident should occur during Phase II operation, there is plenty of time available for restoring offsite power should onsite power not be available.
8. If a loss-of-coolant accident should occur during Phase II testing, LILCO states that there would be time on the order of months available to restore make-up water for core cooling. At the decay heat levels which would exist under these conditions, heat transfer to the environment would remove a significant fraction of the decay heat. However, even if no heat transfer from the fuel rods is assumed and equilibrium fission products are assumed (i.e.,

inifinite operation at .001% power), then more than 9 days are available to restore cooling prior to exceeding a temperature of 2200°F. Therefore, even assuming the unavailability of onsite power sources, there is a high probability of restoring AC power and cooling the core.

Marvin W. Hodges

Marvin W. (Wayne) Hodges

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

Clair A. Shaw

Notary Public

My Commission Expires: July 1, 1986

LILCO, May 22, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBefore the Atomic Safety and Licensing Board

In the Matter of)	
LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322-OL-4
(Shoreham Nuclear Power Station,	)	(Low Power)
Unit 1))	

MOTION FOR SUMMARY
DISPOSITION ON PHASE II LOW POWER TESTING

On March 20, 1984, LILCO filed its Supplemental Motion for Low Power Operating License which requested the approval of a license to conduct four phases of low power testing. LILCO renewed its March 20 motion and, pursuant to 10 CFR § 2.749, sought summary disposition with respect to Phase II of the low power testing program in a motion filed with the Commission on May 4, 1984. Subsequently, the Commission's May 16 Order vacated the Licensing Board's April 6 Memorandum and Order to the extent it was inconsistent with the Commission's view that 10 CFR § 50.57(c) did not make GDC 17 inapplicable to low power operation. The Commission did not rule on LILCO's summary disposition motions. LILCO, in a continuing effort to have the merits of its case engaged, renews its motion for summary disposition on Phase II.

I. Basis for Summary Disposition

Phase II of low power testing includes cold criticality testing of the plant at essentially ambient temperature and atmospheric pressure. See attached Statement of Material Facts, Material Fact 1. The testing involves a specified control rod withdrawal sequence that results in achieving reactor criticality at extremely low power levels, in the range of 0.0001% to 0.001% of rated thermal power. Material Fact 2. The primary purpose of Phase II testing is to verify the shutdown margin calculations. Material Fact 4. In order to accomplish this, plant personnel must first install vessel internals and initiate all refuel floor constraints. Expansion and vibration instrumentation is installed and cold baseline data are obtained for later comparison to data obtained during heatup. Material Fact 3.

To obtain the shutdown margin test data, control rods are withdrawn in the proper sequence until criticality is achieved. The necessary test data can be taken within 5 minutes of reaching criticality. The control rods are then reinserted and the reactor is shut down. Material Fact 4.

The extremely low risk of conducting Phase II activities, even without onsite AC power sources available, is demonstrated by a review of the accident and transient events contained in Chapter 15 of the Shoreham FSAR. Under plant conditions during Phase II, 23 of the 38 Chapter 15 events are possible. Material Fact 5-6.

Of the 23 possible events, the standard safety analysis does not require the assumption of loss or unavailability of offsite AC power for 20 of them. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Material Fact 6.

For the three events that do assume loss or unavailability of offsite power (pipe breaks inside containment (loss of coolant accident or LOCA), feedwater system piping break and the loss of AC power event), there are no consequences even assuming no onsite AC power source. Material Facts 7-10, 12.

As in Phase I, the lack of any accident consequences is attributable to the level of fission products in the core. The extremely low power levels achieved during Phase II, and the extremely short amount of time at those power levels result in essentially no fission products in the core and very little decay heat. Material Facts 4, 8-9. Accordingly, in the event a LOCA occurs,^{1/} only a small amount of decay heat is present to heat up the core. Essentially unlimited time is available before core cooling would have to be restored. Thus, there is no need for any AC power, including the TDI diesels. Material Fact 9.

^{1/} Pipe breaks of the sort postulated in the LOCA or feedwater system break events are highly unlikely under Phase II conditions. Material Fact 11.

With respect to the feedwater system break event and the loss of offsite power event, the reactor coolant inventory is not lost. This provides additional cooling capability and further ensures that no AC power is needed for core cooling. Material Fact 10.

As in Phase I, reliable diesel generators are not necessary to satisfy the Commission's regulations. The legal requirement for diesel generators derives from GDC 17, which states in pertinent part:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 C.F.R. Part 50, Appendix A, Criterion 17 (emphasis added). In other words, the onsite AC power source must be of sufficient capacity and capability to assure the performance of specified safety functions.

As demonstrated above, the Chapter 15 accident and transient events do not have any consequences, even assuming the unavailability of the TDI diesels. In fact, no AC power is required to protect the core. Material Fact 13.

Thus, the Commission's analysis with respect to fuel load and precriticality testing for the Diablo Canyon plant is useful here. As the Commission noted in that decision:

The risk to public health and safety from fuel loading and pre-criticality testing is extremely low since no self-sustaining nuclear chain reaction will take place under the terms of the license and therefore no radioactive fission products will be produced.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-83-27, 18 NRC 1146, 1149 (1983). As already noted, self-sustaining nuclear reaction will be conducted at extremely low power levels and for very short periods of time. The radioactive fission products produced under these circumstances are negligible. Thus, operation of the plant during Phase II presents no significant safety issue. See id.

The rationale for the Commission's grant of a license to Diablo Canyon also applies with respect to Phase II activities at Shoreham. At the time the Commission granted Diablo Canyon a low power testing license, quality assurance litigation concerning Diablo Canyon was still ongoing. In contrast, Shoreham has already been the subject of a lengthy, favorable Partial Initial Decision on all safety issues except those concerning those its existing diesel generators. See Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445 (1983) (Opinion), and unpublished Board Findings of Fact and Appendices.

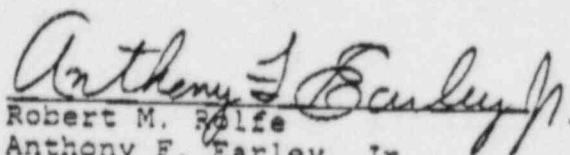
Since there is no need for reliable diesel generators during Phase II, the assurance of no risks to public health and safety from Phase II activities is even greater at Shoreham than at Diablo Canyon because all quality assurance issues at Shoreham have been favorably resolved.

II. Conclusion

Consistent with the Commission's May 16 Order, GDC 17 requires an onsite power source during low power testing with sufficient capacity and capability to perform certain safety functions specified in the GDC. During cold criticality testing conducted during Phase II, no AC power is required to perform these safety functions. Thus, even assuming that LILCO's onsite diesel generators do not operate, the requirements of GDC 17 are met. For the above stated reasons, LILCO's Motion for Summary Disposition on Phase II Low Power Testing should be granted.^{2/}

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY


Robert M. Ralfe
Anthony F. Earley, Jr.
Jessine A. Monaghan

^{2/} If the Licensing Board believes the Commission's May 16 order requires an exemption from the regulations for all four phases of low power testing, then the Board should treat this motion as a motion for summary disposition of all health and safety issues with respect to Phase II.

Hunton & Williams
Post Office Box 1535
Richmond, Virginia 23212

DATED: May 22, 1984

STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE ISSUE
TO BE HEARD ON PHASE II LOW POWER TESTING

The following is the Statement of Material Facts as to which LILCO contends there is no genuine issue to be heard concerning Phase II low power testing:3/

1. Phase II of low power testing includes cold criticality testing of the plant at essentially ambient temperature and atmospheric pressure. Rao, et al., Tr. 285-86; Sherwood Affidavit at ¶ 14; Hodges Affidavit at ¶ 15.

2. Phase II testing involves a specific control rod withdrawal sequence that results in achieving reactor criticality at extremely low power levels, in the range of 0.0001% to 0.001% of rated thermal power. During this phase, reactor operators withdraw each of the 137 control rods and monitor the effect of its withdrawal in terms of neutron flux. By analysis and calculation, Reactor Engineering personnel are able to assign a "worth to each control rod, that is, the effectiveness of each rod in controlling reactivity." Gunther, Tr. 204-06; Notaro Affidavit at ¶ 8; Hodges Affidavit at ¶ 5.

3/ These facts appear in the record in the affidavits filed with LILCO's Supplemental Motion for Low Power License dated March 20 and in the testimony of the seven witnesses who testified on April 24 and 25 before the Licensing Board. Since these documents are readily available, copies have not been attached. Facts also appear in an affidavit of Wayne W. Hodges, dated April 4, 1984, which is attached.

3. Cold criticality testing requires plant maintenance personnel to install vessel internals in accordance with station procedure and with all refuel floor constraints in place. Expansion and vibration instrumentation is also installed. Cold baseline data are obtained to determine pipe movement as heatup occurs later in the low power test program. Gunther, Tr. 205; Notaro Affidavit at ¶ 8.

4. The primary purpose of Phase II testing is to verify shutdown margin calculations. The shutdown margin is measured by withdrawing the analytically strongest rod or the equivalent and one or more additional rods until criticality is reached. This procedure is completed and the necessary data obtained within 5 minutes after going critical. After the conclusion of the procedure, the control rods are reinserted into the core, thereby stopping the reaction and returning the core to subcritical status. Gunther, Tr. 205-06.

5. Under the plant conditions present in Phase II, many events analyzed in FSAR Chapter 15 could not occur or would be very unlikely. Even the possible Chapter 15 events would have no impact on public health and safety regardless of the availability of the TDI diesels. Rao, et al., Tr. 286-89, 295; Sherwood Affidavit at ¶¶ 15-17, 22; Hodges Affidavit at ¶ 6.

6. Of the 23 possible Chapter 15 events reviewed, 20 do not require the assumption of loss or unavailability of off-site AC

power. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Rao, et al., Tr. 291; Sherwood Affidavit at ¶ 18.

7. The three events that do assume loss or the unavailability of off-site AC power are: pipe breaks inside the primary containment, feedwater system pipe break, and the loss of AC power event. Rao, et al., Tr. 292; Sherwood Affidavit at ¶ 19.

8. Because of the extremely low power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶ 17.

9. If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. At the power levels achieved during Phase II, fission product inventory is very low. At most, the average power output will be a fraction of a watt-per-rod, with no single rod exceeding approximately two watts. With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 C.F.R. § 50.46 even after months without restoring coolant and without a source of AC

power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶ 19; Hodges Affidavit at ¶ 8.

10. During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. For these events, no loss of coolant occurs and the decay heat is minimal. Core cooling can be achieved for unlimited periods of time without AC power using the existing core water inventory and heat losses to ambient. Rao, et al., Tr. 293-94; Sherwood Affidavit at ¶ 20; Hodges Affidavit at ¶ 6.

11. The LOCA and the feedwater system piping break postulate the double-ended ruptures of a piping system. Because the reactor will be at essentially ambient temperature and atmospheric pressure during Phase II, it is extremely unlikely that such a pipe break would ever occur. The NRC Staff does not require double-ended ruptures to be postulated for low temperature and low pressure systems in safety analyses. Rao, et al., Tr. 294; Sherwood Affidavit at ¶ 21; Hodges Affidavit at ¶ 7.

12. None of the events analysed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 305; Sherwood Affidavit at ¶ 17.

13. Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶ 22.

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, }
Unit 1) }

AFFIDAVIT OF MARVIN W. HODGES
CONCERNING THE SUPPLEMENTAL MOTION FOR
LOW POWER OPERATION, PHASE I AND II, AT SHOREHAM

I, Marvin W. (Wayne) Hodges, being duly sworn, state as follows:

1. I am a Section Leader in the Reactor Systems Branch of the Office of Nuclear Reactor Regulation. A copy of my professional qualifications is attached.
2. Long Island Lighting Company (LILCO) filed a Supplemental Motion for Low Power Operating License dated March 20, 1984. In that motion, LILCO proposed a phased program for low power operation at Shoreham. The four phases proposed are:
 - a) Phase I: fuel load and precriticality testing,
 - b) Phase II: cold criticality testing,
 - c) Phase III: heatup and low power testing to rated pressure/temperature conditions (approximately 1% rated power); and
 - d) Phase IV: low power testing (1-5% rated power)

The purpose of this affidavit is to address the impact on the health and safety of the public of operation in Phases I and II.

3. In Phase I, fuel loading and precriticality testing, the reactor will not be taken critical. There will be no heat generation in the core. There will be no fission products. Because there will have been no power generation and, consequently, no decay heat, there will be no need for cooling systems to remove decay heat.
1. In its supplemental motion, LILCO examined the 38 accident and transient events addressed in Chapter 15 of the FSAR. I have reviewed the 38 transients and accidents listed and I agree with LILCO that many of the events could not occur because of the operating conditions of the plant (e.g., a turbine trip or a load rejection transient cannot occur when the turbine is not in operation and there is no load on the generator). Of the events that could occur (e.g., loss of AC power), there are no safety concerns because of the absence of power generation.
5. Phase II, cold criticality testing, will involve testing in the power range of .0001% to .001% of rated power at essentially ambient temperature and atmospheric pressure. Because of the low power level and the limited duration of testing, fission product inventory and decay heat will be very low.

Marvin W. (Wayne) Hodges
Professional Qualifications
Reactor Systems Branch
Division of Systems Integration
U. S. Nuclear Regulatory Commission

I am employed as a Section Leader in Section B of the Reactor Systems Branch, DSI.

I graduated from Auburn University with a Mechanical Engineering Degree in 1965. I received a Master of Science degree in Mechanical Engineering from Auburn University in 1967. I am a registered Professional Engineer in the state of Maryland (#13446).

In my present work assignment at the NRC, I supervise the work of 6 graduate engineers; my section is responsible for the review of primary and safety systems for BWRs. I have served as principal reviewer in the area of boiling water reactor systems. I have also participated in the review of analytical models use in the licensing evaluations of boiling water reactors and I have the technical review responsibility for many of the modifications and analyses being implemented on boiling water reactors post the Three Mile Island, Unit-2 accident.

As a member of the Bulletin and Orders Task Force which was formed after the TMI-2 accident, I was responsible for the review of the capability of BWR systems to cope with loss of feedwater transient and small break loss-of-coolant accidents.

I have also served at the NRC as a reviewer in the Analysis Branch of the NRC in the area of thermal-hydraulic performance of the reactor core. I served as a consultant to the RES representative to the program management group for the BWR Blowdown/Emergency Core Cooling Program.

Prior to joining the NRC staff in March, 1974, I was employed by E. I. DuPont at the Savannah River Laboratory as a research engineer. At SRL, I conducted hydraulic and heat transfer testing to support operation of the reactors at the Savannah River Plant. I also performed safety limit calculations and participated in the development of analytical models for use in transient analyses at Savannah River. My tenure at SRL was from June 1967 to March 1974.

From September 1965 to June 1967, while in graduate school, I taught courses in thermodynamics, statics, mechanical engineering measurements, computer programming and assisted in a course in the history of engineering. During the summer of 1966, I worked at the Savannah River Laboratory doing hydraulic testing.

6. As for Phase I, many of the Phase II transients and accident analyzed in Chapter 15 of the FSAR cannot occur. For those transients and accident which can occur, other than a loss-of-coolant accident, core cooling can be achieved, even without AC power, using the existing core water inventory and passive heat loss to the environment. Therefore, there would be no threat to the health and safety of the public.
7. Because of the low pressure conditions, it is not reasonable to postulate a loss-of-coolant accident during Phases I and II operation. The NRC normally postulates breaks only in high energy lines; for Phases I and II, there are no high energy lines. However, even if a loss-of-coolant accident should occur during Phase II operation, there is plenty of time available for restoring offsite power should onsite power not be available.
8. If a loss-of-coolant accident should occur during Phase II testing, LILCO states that there would be time on the order of months available to restore make-up water for core cooling. At the decay heat levels which would exist under these conditions, heat transfer to the environment would remove a significant fraction of the decay heat. However, even if no heat transfer from the fuel rods is assumed and equilibrium fission products are assumed (i.e.,

infinite operation at .001% power), then more than 9 days are available to restore cooling prior to exceeding a temperature of 2200°F. Therefore, even assuming the unavailability of onsite power sources, there is a high probability of restoring AC power and cooling the core.

Marvin W. Hodges

Marvin W. (Wayne) Hodges

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

Claire A. Shivers

Notary Public

My Commission Expires: July 1, 1986

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges
Marshall E. Miller, Chairman
Glenn O. Bright
Elizabeth B. Johnson

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

Docket No. 50-322-OL-4
(Low Power)

July 24, 1984

ORDER GRANTING IN PART AND DENYING IN PART LILCO'S MOTIONS
FOR SUMMARY DISPOSITION ON PHASE I AND PHASE II LOW-POWER TESTING

LILCO filed its supplemental application for a low-power license on March 20, 1984. That application relies upon supplemental emergency power sources to compensate for the absence of an acceptable onsite emergency power source. However, the Commission issued an Order (CLI-84-8) on May 16, 1984 holding that GDC-17¹ applied to low power

¹ GDC-17 states, in pertinent part, that:

"An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability
(Footnote Continued)

operation and that if LILCO's application did not demonstrate compliance with GDC-17, LILCO would have to seek an exemption pursuant to 10 CFR §50.12. LILCO subsequently filed an exemption request with the Licensing Board.

On May 23, 1984, LILCO filed its "Motion for Summary Disposition on Phase I Low-Power Testing", and "Motion for Summary Disposition on Phase II Low-Power Testing", pursuant to 10 CFR §2.749. This Board denied LILCO's motion for expedited responses to its motions for summary disposition, instead directing the parties to file answers within the time limits prescribed by regulations. Suffolk County, the State of New York, and the NRC Staff filed answers to the summary disposition motions on June 13, 1984.

LILCO's motions are based upon its assertion that even if the Shoreham facility lacks a qualified source of onsite AC power, the

(Footnote Continued)

to assure that (1) specified acceptable fuel design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure" (10 CFR Part 50, Appendix A, Criterion A).

activities which would be performed during Phases I and II² of its Low-Power testing program require no such power to perform the safety functions specified by the General Design Criteria (GDC), specifically GDC-17.

LILCO argues that as to Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat. Thus no core cooling is required, and hence no AC power (either onsite or offsite) is needed "to permit functioning of structures, systems, and components important to safety" (GDC-17). As to Phase II cold criticality testing, LILCO asserts that any self-sustaining nuclear reaction will be conducted at extremely low power levels and for very short periods of time, and that radioactive fission products produced will be negligible. A review of the accident and transient events contained in Chapter 15 of the Shoreham FSAR allegedly shows that there are no consequences even assuming no onsite AC power source, and in fact no AC power is required to protect the core.

In essence, LILCO seeks summary disposition as to Phases I and II, because (a) no onsite or offsite AC power is necessary to perform the safety functions needed to protect the public health and safety, and

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Phase I: Fuel load and precriticality testing.
Phase II: Cold criticality testing.

(b) since no AC power is needed, GDC-17 is said to be satisfied at Phases I and II without an approved (or indeed any) onsite power source.

The Staff in its June 13 response to LILCO's motions for summary disposition submitted that the motions should be granted in part and denied in part. It stated that the Commission's May 16 Order (CLI-84-8) stands for the proposition that GDC-17 means the same for low-power operation as for full-power operation and must be completely satisfied before any license (including low-power) may be issued. It therefore follows that, in the absence of a fully approved onsite power system, an exemption from GDC-17 is needed before any license can be issued pursuant to 10 CFR §50.57(c). LILCO did not seek summary disposition of its exemption request nor address factual issues involved therein, and accordingly the ultimate issues involved in Phases I and II could not be summarily disposed of. However, the Staff stated that partial summary disposition should be made as to some of the statements of material facts appended to the Phase I motion (Statements 5-9) and to the Phase II motion (Statements 5, 8, 9, 10, 11, 12 and 13, and reworded 6 and 7),³ and that such statements should be deemed admitted unless properly controverted.

³ These Statements of Material Facts are described and discussed infra, at pages 9-14.

The Response of Suffolk County and the State of New York (with attached affidavits and statement of material issues as to which it is alleged that there are facts in dispute) submits that the LILCO motion may not be granted because, first, the NRC allegedly lacks authority to grant what is characterized as a "no power" license. Second, because the LILCO low-power license application which was considered by the Commission in its Order of May 16, 1984 (CLI-84-8, 19 NRC ___) included Phases I and II, that are the subjects of the pending summary disposition motions, they argue that the Commission's statement that LILCO must obtain an exemption from applicable General Design Criteria (expressly GDC-17) prior to the grant of its low-power proposal, includes the grant of any portion thereof. They further argue that LILCO's position that the requirements of GDC-17 would be met during Phases I and II ignores the plain language of that criterion. Lastly, the Intervenor's set forth issues of material fact which they say remain in dispute.

I. LEGAL STANDARDS FOR SUMMARY DISPOSITION

The Commission's Rules of Practice provide for summary disposition of certain issues where "the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law" (10 CFR §2.749(d)). The Rules also provide for summary disposition as to any portions of a

matter involved in a proceeding as to which there is no genuine issue of material fact (10 CFR §2.749(a)).

The Commission and Appeal Board have encouraged the use of summary disposition to resolve contentions where an intervenor has failed to establish that a genuine issue exists.⁴ The "summary disposition rule" (10 CFR §2.749) provides an ample safeguard against an applicant or the...staff being required to expend time and effort at a hearing on any contention advanced by an intervenor which is manifestly unworthy of exploration."⁵

The Commission's policy is to encourage the use of summary disposition where no genuine issue of material fact exists "so that evidentiary hearing time is not unnecessarily devoted to such issues." Statement of Policy in Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 457 (1981). Thus, a hearing on the questions raised by an intervenor is not inevitable. See Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-654, 14 NRC 632 (1981). The purpose of summary disposition is to avoid hearings.

⁴ Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 & 2), CLI-73-12, 6 AEC 241, 242 (1973), aff'd sub nom. BPI v. AEC, 502 F.2d 424 (D.C. Cir. 1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550-51 (1980); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424-25 (1973).

⁵ Gulf States Utilities Co. (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 228 (1974).

unnecessary testimony and cross-examination in areas where there are not material issues to be tried.⁶

The Supreme Court has very clearly stated that there is no right to a trial except so far as there are issues of fact in dispute to be determined. Ex parte Peterson, 253 U.S. 300, 310 (1920). Under the Federal Rules the motion is designed to pierce the general allegations in the pleadings, separating the substantial from the insubstantial by utilizing depositions, interrogatories or other material of evidentiary value. 6 J. Moore, Moore's Federal Practice §56.04[1] (2d ed. 1976). Mere allegations in the pleadings will not create an issue as against a motion for summary disposition supported by affidavits (10 CFR §2.749(b); Fed. R. Civ. P. 56(c)).

The Commission's summary disposition procedures have been analogized to Rule 56 of the Federal Rules of Civil Procedure.⁷ Decisions arising under the Federal Rules thus may serve as guidelines to licensing boards in applying 10 CFR §2.749.⁸ Under both Federal and

⁶ A material fact is one that may affect the outcome of the litigation. Mutual Fund Investors Inc. v. Putnam Management Co., 553 F.2d 620, 624 (9th Cir. 1977).

⁷ Cleveland Electric Illuminating Co., et al. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977); Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 217 (1974).

⁸ Perry, ALAB-443, supra at 754; Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-74-36, 7 AEC 877, 878-79 (1974).

NRC rules, the record is to be reviewed in the light most favorable to the party opposing the motion.⁹

To draw on federal practice, the Supreme Court has pointed out that Rule 56 of the Federal Rules of Civil Procedure does not permit plaintiffs to get to a trial on the basis of the allegations in the complaint coupled with the hope that something can be developed at trial in the way of evidence to support the allegations.¹⁰ Similarly, a party may not defeat a motion for summary judgment on the hope that on cross-examination the defendants will contradict their respective affidavits. To permit trial on such a basis would nullify the purpose of Rule 56 which permits the elimination of unnecessary and costly litigation where no genuine issues of material fact exist.¹¹

All material facts adequately set forth in a motion and not adequately controverted by the responses thereto are deemed to be

⁹ Poller v. Columbia Broadcasting System, Inc., 368 U.S. 464, 473 (1962); Crest Auto Supplies, Inc. v. Ero Manufacturing Co., 360 F.2d 896, 899 (7th Cir. 1966); United Mine Workers of America, Dist. 22 v. Roncco, 314 F.2d 186, 188 (10th Cir. 1963); Pennsylvania Power & Light Co. and Allegheny Electric Cooperative, Inc. (Susquehanna Steam Electric Station, Units 1 and 2), LBP-81-8, 13 NRC 335, 337 (1981), directed certification denied, ALAB-641, 13 NRC 550 (1981); Seabrook, LBP-74-36, *supra*, 7 AEC at 879.

¹⁰ First National Bank of Arizona v. Cities Service Co., 391, U.S. 253, 289-90 (1968), rehearing den., 393 U.S. 901 (1968).

¹¹ See Orvis v. Brickman, 95 F. Supp 605, 607 (1951), *aff'd* 196 F.2d 762 (D.C. Cir. 1952), cited with approval in Gulf States Utilities Co. (River Bend Station, Units 1 and 2), 1 NRC 246, 248 (1975).

admitted (10 CFR §2.749(a)). A party opposing the motion may not rely upon a simple denial of the material facts stated by the movant, but must set forth specific facts showing that there is a genuine issue of fact remaining.¹² However, the proponent of a motion must meet the burden of proof in establishing that there is no genuine issue of material fact, even if the opponent fails to controvert the conclusions reached in the motions' supporting papers.

II. DENIAL AS TO ULTIMATE ISSUES

The Commission's May 16 Order (CLI-84-8) stated that it "has determined that 10 CFR 50.57(c) should not be read to make General Design Criterion 17 inapplicable to low-power operation" (slip opinion, page 1). That order therefore stands for the proposition that GDC-17 means the same for low-power operations as for full-power operation, and it must be completely satisfied before any license (including low-power) may be issued. Accordingly, the only recourse available to LILCO in this proceeding is to seek an exemption under the provisions of 10 CFR §50.12(a), which is the subject of the instant evidentiary hearing.

The Board does not have the power or jurisdiction to grant LILCO's motion for summary disposition of Phases I and II of its low-power testing program, even though such activities do not require a qualified

¹² 10 CFR §2.749(b), Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453 (1980).

source of onsite AC power in order to perform the safety functions specified by GDC-17. The Commission's order requires that the GDC-17 requirements be completely satisfied even for fuel loading and precriticality testing. In its motion LILCO did not seek summary disposition of its exemption request, nor did it even address the factual issues involved therein. Accordingly, the ultimate issues involved in Phase I and II activities cannot be disposed of summarily, and that portion of the summary disposition motion is denied.

III. GRANTED AS TO CERTAIN STATEMENTS OF MATERIAL FACTS

Some of the statements of material facts appended to LILCO's Phase I motion (Statements 5-9) and to the Phase II motion (Statements 5, 8-13, and reworded 6 and 7) were not controverted and should be deemed to be admitted. Accordingly, the following statements of material fact are held to be admitted in this proceeding.

Phase I Statements 5-9:

(5) During all of the activities in Phase I, the reactor will remain at essentially ambient temperature and atmospheric pressure. The reactor will not be taken critical. Any increase in temperature beyond ambient conditions will be due only to external heat sources such as recirculation pump heat. There will be no heat generation by the core. Rao, et al., Tr. 279; Sherwood Affidavit at ¶7; Hodges Affidavit at ¶3.

(6) Of the 38 accident or transient events addressed in FSAR Chapter 15, 18 of the events could not occur during Phase I because of the operating conditions of the plant. An additional six events could

physically occur, but given the plant conditions, would not cause the phenomena of interest in the Chapter 15 safety analysis. The remaining 14 events could possibly occur, although occurrences are highly unlikely given the plant conditions. The potential consequences of these 14 events would be trivial. Rao, et al., Tr. 279-84; Sherwood Affidavit at ¶¶8-11; Hodges Affidavit at ¶4.

(7) During Phase I fuel loading and precriticality testing, there are no fission products in the core and no decay heat exists. Therefore, core cooling is not required. In addition, with no fission product inventory, there are no fission product releases possible. Rao, et al., Tr. 283-84; Sherwood Affidavit at ¶11; Hodges Affidavit at ¶4.

(8) Even a loss of coolant accident would have no consequences during Phase I since no core cooling is required. No fission products exist and therefore no decay heat is available to heat up the core. The fuel simply would not be challenged even by a complete drain down of the reactor vessel for an unlimited period of time. Rao, et al., Tr. 284; Sherwood Affidavit at ¶9; Hodges Affidavit at ¶4.

(9) No core cooling is required during Phase I and, therefore, no AC power is necessary during Phase I to cool the core. Rao, et al., Tr. 285; Sherwood Affidavit at ¶13; Hodges Affidavit at ¶3.

Phase II Statements 5, 8-13:

(5) Under the plant conditions present in Phase II, many events analyzed in FSAR Chapter 15 could not occur or would be very unlikely. Even the possible Chapter 15 events would have no impact on public

health and safety regardless of the availability of the TDI diesels. Rao, et al., Tr. 286-89, 295; Sherwood Affidavit at ¶¶15-17, 22; Hodges Affidavit at ¶6.

(8) Because of the extremely low-power levels reached during Phase II testing, fission product inventory in the core will be only a small fraction of that assumed for the Chapter 15 analysis. The FSAR assumes operation at 100% power for 1,000 days in calculating fission product inventory; inventory during Phase II low-power testing will be less than 1/100,000 (0.00001) of the fission product inventory assumed in the FSAR. Rao, et al., Tr. 295; Sherwood Affidavit at ¶17.

(9) If a LOCA did occur during the cold criticality testing phase (Phase II), there would be time on the order of months available to restore make-up water for core cooling. At the power levels achieved during Phase II, fission product inventory is very low. At most, the average power output will be a fraction of a watt-per-rod, with no single rod exceeding approximately two watts. With these low decay heat levels, the fuel cladding temperature would not exceed the limits of 10 CFR §50.46 even after months without restoring coolant and without a source of AC power. Thus, there is no need to rely on the TDI diesel generators, or any source of AC power. Rao, et al., Tr. 292-94; Sherwood Affidavit at ¶19; Hodges Affidavit at ¶8.

(10) During Phase II cold criticality testing conditions, there is no reliance on the diesel generators for mitigation of the loss of AC power event or the feedwater system piping break event. For these

events, no loss of coolant occurs and the decay heat is minimal. Core cooling can be achieved for unlimited periods of time without AC power using the existing core water inventory and heat losses to ambient. Rao, et al., Tr. 293-94; Sherwood Affidavit at ¶20; Hodges Affidavit at ¶6.

(11) The LOCA and the feedwater system piping break postulate the double-ended ruptures of a piping system. Because the reactor will be at essentially ambient temperature and atmospheric pressure during Phase II, it is extremely unlikely that such a pipe break would ever occur. The NRC Staff does not require double-ended ruptures to be postulated for low temperature, and low pressure systems in safety analyses. Rao, et al., Tr. 294; Sherwood Affidavit at ¶21; Hodges Affidavit at ¶7.

(12) None of the events analyzed in Chapter 15 could result in a release of radioactivity during cold criticality testing that would endanger the public health and safety. Rao, et al., Tr. 296; Sherwood Affidavit at ¶17.

¶(13) Even if AC power were not available for extended periods of time, fuel design limits and design conditions of the reactor coolant pressure boundary would not be approached or exceeded as a result of anticipated operational occurrences, and the core would be adequately cooled in the unlikely event of a postulated accident. Rao, et al., Tr. 295-96; Sherwood Affidavit at ¶22.

Phase II Statements 6 and 7:

(6) Of the 23 possible Chapter 15 events reviewed, 20 would not be adversely affected by the loss or unavailability of offsite AC power. Therefore, the consequences of these events are unaffected by the unavailability of the TDI diesels. Hodges Affidavit at ¶10.

(7) The three events that are adversely affected by the loss or unavailability of offsite AC power are: pipe breaks inside the primary containment, feedwater system pipe break, and the loss of AC power event. Hodges Affidavit at ¶10.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Marshall E. Miller
Marshall E. Miller, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 24th day of July, 1984.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

LONG ISLAND LIGHTING COMPANY

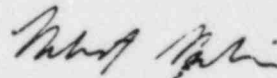
(Shoreham Nuclear Power Station,
Unit 1)

Docket No. 50-322-OL-4
(Low Power)

NRC STAFF RESPONSE TO LILCO MOTION FOR
REFERRAL OF THE BOARD'S ORDER ON SUMMARY DISPOSITION

On July 23, 1984, the Licensing Board issued an Order granting in part and denying in part LILCO's Motion for Summary Disposition of Phases I and II of its Supplemental Motion for a Low Power Operating License. On August 2nd, LILCO simultaneously moved for directed certification by the Commission and referral to the Commission of the Board's Order. For the reasons set forth in the attached Staff Response to LILCO's Motion for Directed Certification, the Staff supports referral of the July 23rd Order to the Commission.

Respectfully submitted,



Robert G. Perlis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 17th day of August, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of

LONG ISLAND LIGHTING COMPANY

(Shoreham Nuclear Power Station,
Unit 1)

Docket No. 50-322-OL-4
(Low Power)

NRC STAFF RESPONSE TO LILCO'S MOTION FOR DIRECTED
CERTIFICATION OF THE LICENSING BOARD'S ORDER RULING ON
LILCO'S MOTIONS FOR SUMMARY DISPOSITION OF PHASES I AND II

Robert G. Perlis
Counsel for NRC Staff

August 17, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

Docket No. 50-322-OL-4
(Low Power)

NRC STAFF RESPONSE TO LILCO'S MOTION FOR DIRECTED
CERTIFICATION OF THE LICENSING BOARD'S ORDER RULING ON
LILCO'S MOTIONS FOR SUMMARY DISPOSITION OF PHASES I AND II

I. INTRODUCTION

On July 23, 1984, the Shoreham Low Power Licensing Board issued an Order granting in part and denying in part LILCO's Motions for Summary Disposition of Phases I and II of LILCO's Supplemental Motion for a Low Power Operating License. On August 2nd, LILCO moved for directed certification of the Board's July 23rd Order. For the reasons given below, the Staff believes further Commission guidance would be helpful and therefore supports that part of LILCO's Motion which requests early consideration by the Commission.

II. DISCUSSION

A. Background

A brief review of the history of this proceeding is needed to put LILCO's present motion in its proper context. LILCO filed its Supplemental Motion for a Low Power Operating License on March 20, 1984. That

Supplemental Motion requested a low power operating license for the Shoreham facility pursuant to 10 C.F.R. § 50.57(c) in advance of the conclusion of litigation addressing the adequacy of Shoreham's onsite emergency diesel generators. The requested license would cover four phases of low power operation: fuel loading and precriticality testing (Phase I); cold criticality testing at essentially ambient temperature and pressure (Phase II); reactor heatup and pressurization with the power level reaching 1% of rated power (Phase III); and testing at power levels up to 5% of rated power (Phase IV). To provide emergency power for low power operation, LILCO proposed to rely on two supplemental power sources: four mobile diesel generators and one gas turbine.

After hearing oral argument on May 7, 1984, the Commission issued an Order (CLI-84-8) on May 16th holding that General Design Criterion 17 of Appendix A to 10 C.F.R. Part 50 was applicable to low power operation and that, in the circumstances of this proceeding, LILCO would either have to demonstrate compliance with GDC 17 or receive an exemption pursuant to 10 C.F.R. § 50.12(a) before a low power license could issue.^{1/} On May 22nd, LILCO filed its Application for Exemption; hearings were held on that application in late July and early August. Concurrent with the filing of its Application for Exemption, LILCO filed Motions for Summary Disposition of Phases I and II of its March 20th Supplemental Motion for a Low Power Operating License. As basis for summary disposition, LILCO argued that no AC power is needed during Phases I and II to ensure that

^{1/} GDC 17 requires that nuclear plants have both an onsite and an offsite electric power system.

the core remain adequately cooled and that even if LILCO's onsite emergency diesel generators (the subject of remaining litigation before the Licensing Board) were assumed to fail to operate, the requirements of GDC 17 would be met during Phases I and II.

In its June 13, 1984 Response to LILCO's Motions for Summary Disposition, the Staff opposed in part and supported in part summary disposition of Phases I and II. The Staff agreed with LILCO's technical argument that the need for emergency AC power during Phases I and II is very slight.^{2/} The Staff therefore supported disposition of the technical issues associated with Phases I and II. In terms of compliance with GDC 17, LILCO's argument boiled down to the assertion that GDC 17 does not apply to Phases I and II. The Staff had originally taken the position that GDC 17 should be applied with flexibility and dependent upon the nature of the activity sought to be licensed. The Staff believes the Commission did not adopt this position in CLI-84-8 and that it was the Commission's judgment that GDC 17 means the same for low power operation (including Phases I and II) as for full power operation and must be satisfied (or an exemption must be granted) before any license (including a low power license) may be issued. The Staff therefore

^{2/} As detailed in the Affidavit of Marvin W. Hodges attached to the Staff Response, there is no power generation during Phase I and hence no decay heat and no need for cooling systems to remove decay heat. Hodges Affidavit, ¶ 3. During Phase II, unless a loss-of-coolant accident (LOCA) occurs, core cooling could be achieved without AC power using the existing core water inventory and passive heat loss to the environment. Affidavit, ¶ 6. Because the plant will be at essentially ambient pressure during Phase II, the Staff would not normally postulate the possibility of a LOCA. Even if a LOCA were to occur during Phase II, however, more than thirty days are available before AC power is needed to restore cooling. Affidavit, ¶¶ 7-8.

opposed summary disposition of the ultimate issue involved, whether a license for Phases I and II should be granted, pending the hearing on whether the standards for an exemption were met.

In its Order, the Licensing Board took a position similar to that of the Staff. The Board granted summary disposition of the technical issues raised in LILCO's Motions, but it refused to authorize the grant of a license for Phases I and II in the absence of an exemption.

B. The Motion for Directed Certification

LILCO raises three grounds in support of its Motion for Directed Certification. First, LILCO argues that the public interest might be harmed if any ambiguities in CLI-84-8 are not eliminated. Second, LILCO asserts that the parties might be spared the expense and delay of litigating issues associated with Phases I and II. Finally, it is claimed that resolution of the ambiguities in CLI-84-8 would affect the basic structure of the proceeding in a pervasive manner by removing all issues associated with Phases I and II from the proceeding and by allowing a license for those Phases to issue.

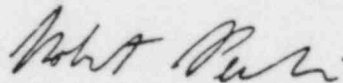
Inasmuch as the hearing on all issues other than security has already been completed for all phases of low power operation, the Staff does not believe that the second and third grounds enumerated by LILCO warrant directed certification. However, the Staff does believe that early consideration of the issue raised by LILCO's Motion for Directed Certification would be in the public interest. The Staff has already met with the Commission once (on July 25, 1984) for guidance on how to apply

CLI-84-8 to other license applications.^{3/} The question raised by LILCO here, whether (or how) GDC 17 should be applied to fuel loading and low power testing, is an issue that may well involve other general design criteria and other license applications.^{4/} Because this issue or similar ones are likely to recur in the future, the Staff believes early Commission guidance would be helpful.

CONCLUSION

For the reasons stated above, the Staff believes that Commission guidance on the issues raised by LILCO's Motion for Directed Certification would be beneficial and therefore supports early consideration of the issues raised in the Motion.

Respectfully submitted,



Robert G. Perlis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 17th day of August, 1984

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- ^{3/} Following this meeting, the Commission requested that "an intensive program of reexamination of the exemption process should be undertaken [by the Staff] with the goal of providing the Commissioners with an analysis and proposed changes in approximately 30 days" Memorandum from Samuel J. Chilk to William J. Dircks (July 27, 1984). This reexamination is currently in progress.
- ^{4/} Indeed, in a similar situation to that posed by LILCO, the Staff recently granted an exemption from GDC 17 to Duke Power Company to permit fuel loading and precriticality testing at the Catawba facility.

LILCO, September 14, 1984

CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322-OL-4 (Low Power)

DOCKETED
USNRC
'84 SEP 14 P4:0

I hereby certify that copies of LILCO'S VIEWS IN SUPPORT OF
ISSUANCE OF A PHASE I AND PHASE II LOW POWER TESTING LICENSE were
served this date upon the following by U.S. mail, first-class,
postage prepaid or by hand (as indicated by one asterisk) or by
Federal Express (as indicated by two asterisks).

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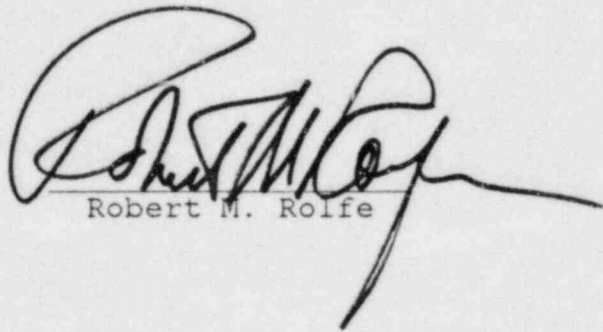
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DATED: September 14, 1984