

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Commission

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USNRC

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In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,
Unit 1))

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

JOINT RESPONSE OF SUFFOLK COUNTY AND THE
STATE OF NEW YORK TO THE COMMISSION'S
ORDER OF APRIL 30, 1984

On April 30, 1984, the Commission issued an Order vacating the schedule adopted by the Licensing Board in its April 6 Order^{1/} and called for arguments on May 7, 1984 concerning the applicability of the NRC's General Design Criteria (particularly GDC 17) to LILCO's proposal to operate Shoreham at low power with no onsite power system and several other matters. This Joint Response is filed pursuant to the Commission invitation for written comments to be submitted by Noon on May 4. See Order at 3.

^{1/} ASLB Memorandum and Order Scheduling Hearing on LILCO's Supplemental Motion for Low Power Operating License, April 6, 1984.

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LILCO's proposal for low power operation of Shoreham presents an unprecedented departure from NRC practice. Plainly, GDC 17 by its own terms requires both an onsite and an offsite electric power system so that if one system were to fail, the other would still be operable. Further, under GDC 17, as well as Section 8.3 of the Staff's Standard Review Plan, it is the onsite electric power system which is in the nature of emergency equipment. Indeed, only the onsite system is required to meet stringent nuclear-grade requirements, including the single failure criterion (Part 50, Appendix A), quality assurance criteria (Part 50, Appendix B and GDC 1), seismic qualification criteria (GDC 2), fire protection criteria (GDC 3 and Part 50, Appendix R), environmental qualification criteria (GDC 4), and physical protection and security criteria (Part 73).

LILCO, however, proposes to operate Shoreham at low power with no onsite power system. It proposes to operate with only an offsite power system, a system which itself betrays defects that threaten the public's health, safety, and security. In short, LILCO's proposal would violate not only GDC 17, but also GDC's 1, 2, 3, and 4, Part 50, Appendix B, and Part 73.

There can be no legitimate argument that exempting LILCO from the foregoing regulatory requirements would protect the public's health and safety, much less do so as well or better than by applying those requirements. Rather, by giving LILCO its way, the Commission would reduce the level of safety and security protection accorded to the citizens of New York State and Suffolk County. Indeed, this level of protection would be substantially less than that accorded to residents of other areas where low power operation has been permitted.

Why is the Commission even considering LILCO's unprecedented and far-reaching proposal? Since public health, safety, and security are not furthered by licensing a plant which fails to satisfy NRC regulations, what justification is there for the favored treatment that LILCO and Shoreham are receiving? For example, without offering justification, LILCO found itself being granted "expedited" treatment by the Licensing Board. And without even filing the required pleadings for a waiver, LILCO was permitted to circumvent the preclusionary language of GDC 17 and the other cited regulations. On the face of the record before this Commission, there is no explanation for such singular consideration.

Behind the record, however, one cannot help but conclude that the aggressive "politicalization" of this case by LILCO over the past three months has not gone unnoticed at the NRC. Indeed, LILCO's lobbying campaign and the high-profile press coverage it has engendered, have made the company's dire financial position a well-publicized story. In reality, however, there are within Suffolk County and New York State controversies over various aspects of LILCO's assertions. These controversies are properly before the State Public Service Commission and other public bodies charged with responsibility for the financial and economic dimensions of LILCO and its electric power service.

What is important here is that the NRC recognize that the economic and financial dimensions of LILCO and its electric power service are not the business of the NRC, except to the extent that LILCO's lack of financial qualifications renders the company unfit for an NRC license. Thus, in this low power proceeding, consideration by the NRC's decisionmakers of LILCO's investment and of its publicized calls for a "life preserver" from Washington is to be scrupulously avoided. It is safety first and safety alone that must govern the NRC. As the Supreme Court has stated, the NRC "is absolutely denied any authority to consider [LILCO's] investment when acting upon an

application for a license to operate." Power Reactor Devel. Corp. v. Int'l Union of Electrical, Radio, and Machine Workers, 367 U.S. 396, 415 (1961) (Emphasis added).

Suffolk County and New York State submit that there is only one action that the Commission may take if it is to act faithfully in pursuit of its legislative mandate to protect the public health and safety: it must summarily dismiss LILCO's Supplemental Low Power Motion. In taking this action, the Commission should:

- Acknowledge that LILCO's plan for Shoreham's operation at low power without onsite electric power and without any offsite electric power which meets safety-related requirements represents an unprecedented and unacceptable departure from the way the NRC has always licensed plants.
- Re-confirm the fact that GDC 17 does apply to low power operation and that nothing in the NRC's low power license regulations [Section 50.57(c)] permits a licensing board to ignore or "interpret" out of existence the plainly stated requirements of GDC 17.
- Find that LILCO's Supplemental Low Power Motion constitutes a direct challenge not only to GDC 17, but also to all the other NRC requirements which have consistently been applied to onsite electric power systems. These include GDC's 1-4, Appendix B to Part 50, and Part 73.

- Find that LILCO has failed to comply with the mandatory requirements of 10 C.F.R. § 2.758 pertaining to waivers of or exemptions from the requirements of the regulations. Acknowledge further that there is no possible basis for a Section 2.758 waiver or a Section 50.12 exemption, because there can be no showing that by requiring onsite power as specified by GDC 17 the Commission would not serve this regulation's intended purpose of providing a reliable power supply to ensure that safety functions are performed.

Therefore, Suffolk County and the State of New York respectfully urge this Commission to dismiss summarily LILCO's Supplemental Low Power Motion. The discussion below provides the detailed bases for our position and responds to the specific issues raised by the Commission in its April 30 Order.

I. LILCO Is Requesting Permission To Operate Shoreham Under A Hybrid Scheme Which Endangers Public Health and Safety

To put into perspective the far-reaching and unprecedented nature of LILCO's proposal, it is essential to compare LILCO's proposed mode of operating Shoreham at low power prior to March 20, 1984, as set forth in the FSAR, with LILCO's proposed mode of such operation after March 20, as set forth in its Supplemental Low Power Motion. This comparison documents the drastic reduction in safety and security which LILCO is proposing.

A. LILCO's Proposal for Shoreham Low Power
Operation Prior to March 20, 1984

Prior to March 20, LILCO had consistently proposed to operate Shoreham with both onsite and offsite power sources, as required by GDC 17. Thus, LILCO proposed to supply power to the safety-related loads at Shoreham as follows:

Onsite AC Power: Via three fully tested and qualified safety-related diesel generators (diesels 101, 102, 103), each of which could deliver their power to the safety-related loads independently of the other.^{2/}

Offsite AC Power: Via a 138 kV circuit serving the safety-related loads through the NSS transformer; and via a 69kV circuit serving the safety-related loads through the RSS transformer.

Hence, for low power operation, there were 5 independent power sources proposed by LILCO to serve safety-related loads:

138 kV
69 kV
diesel 101
diesel 102
diesel 103

The 138 kV and 69 kV power sources presumably were tailored to appropriate electric power industry standards, but did not meet

^{2/} These were the deeply troubled and faulty diesels manufactured by Transamerica Deleval, Inc. ("TDI"), which LILCO had intended, and still purportedly intends, to qualify for use at Shoreham.

safety-related nuclear standards. In contrast, the three diesels were claimed by LILCO to be in compliance with all safety-related nuclear requirements, including:

- The single failure criterion;
- Quality assurance criteria (GDC 1 and Appendix B to Part 50);
- Seismic qualification criteria (GDC 2 and Part 100, Appendix A);
- Fire protection criteria (GDC 3 and Appendix R to Part 50);
- Environmental qualification criteria (GDC 4);
- Onsite power requirements (GDC 17);
- Security criteria, including the "high assurance" standard of Section 73.55(a).^{3/}

B. The LILCO Proposal for Shoreham's Low Power Operation After March 20, 1984

On March 20, LILCO drastically changed its proposed AC power supply for low power. Instead of 5 power sources -- 3 fully safety-related onsite sources and 2 offsite -- LILCO now proposed to operate Shoreham with no onsite safety-related AC power supply whatsoever. Instead, LILCO proposed 3 (versus the

^{3/} There will be no detailed discussion of security matters herein. The LILCO proposal raises various security issues. These should properly be discussed only as safeguards information, as provided in Part 73. While the County's counsel have requested the establishment of safeguards procedures, this has not been done.

previous 2) offsite, nonsafety-related power sources as a substitute. Thus, LILCO proposed that Shoreham should be permitted to operate at low power with the following emergency power supply system:

Onsite AC Power: None

Offsite AC Power: (a) The same nonsafety-related 138 kV circuit described above, supplying power to safety loads via the NSS transformer.

(b) The same nonsafety-related 69 kV circuit described above, supplying power to safety loads via the RSS transformer. The 69 kV system is to be "enhanced" by a nonsafety-related 20 MW gas turbine located at the 69 kV switchyard. This gas turbine supplies its power to the plant via the 69 kV line through the RSS transformer.^{4/}

(c) Four nonsafety-related EMD mobile diesels located near the plant which gain starting power from a single battery and which supply their power to the safety loads via a single cable.

^{4/} The Shoreham 138 kV circuit and the 69 kV circuit are supported by multiple offsite power generating sources identified in LILCO's Supplemental Low Power Motion. There are, in addition, four 138 kV circuits which feed the 138 kV switchyard near the plant. However, despite the multiple power sources and diverse transmission sources offsite, there are in fact under LILCO's proposal only three nonsafety-related power lines into the plant to serve the safety loads.

Several points must be emphasized about LILCO's March 20 proposal. First, although the 20 MW gas turbine and the mobile diesels are located near or on the Shoreham property site, they are not -- by LILCO's own admission -- an "onsite" power source. The reason is that they are not qualified under NRC regulations to be deemed an onsite source. Instead, these pieces of equipment -- again by LILCO's own admission -- are part of LILCO's offsite power system.^{5/} Therefore, while prior

^{5/} At a transcribed March 29 meeting between LILCO and the NRC Staff, the following exchange took place:

MR. MUSELER (LILCO): Generally, the first thing to remember is that the supplemental sources of AC power to the plant are part of the off-site power system. And I think we say that and we may have somewhat caused a little bit of ambiguity in one statement we made in one of the affidavits.

Those sources are off-site power, we look at them as enhancements to the off-site power system. In one place in the affidavit we say that they are off-site power sources but that it's significant to remember that they are located on site.

MR. SHERON (NRC STAFF): So you're saying that your portable diesels and your gas turbines and the like that are on site are still considered to be part of the off-site sources?

MR. MUSELER: That's correct.

March 29 Tr. at 41-42 (emphasis supplied).

to March 20, LILCO was proposing to have five (5) independent emergency sources of power to the plant's safety loads, after March 20, LILCO proposed only three (3) sources.

Second, while before March 20, LILCO proposed that there be three power sources that conform to applicable NRC safety-related requirements, after March 20 LILCO proposed that none of its power sources conform to safety-related requirements. Consequently, what this Commission has from LILCO now is LILCO's own downgraded proposal to operate Shoreham with only an offsite, unqualified power system which:

- was not designed or manufactured in accordance with Appendix B to Part 50;
- is not seismically qualified;
- does not meet GDC 3 and Appendix R fire protection requirements;
- is not environmentally qualified;
- does not meet GDC 17 requirements for onsite power systems; and
- is not adequately dealt with in the face of the security requirements of Part 73.

To attempt to offset the absence of qualified onsite power, LILCO has added additional unqualified equipment: a 20 MW gas turbine and 4 EMD mobile diesels. This equipment is

offered as a substitute for LILCO's pre-March 20 proposal to use 3 fully safety-related onsite diesels. In Attachment I hereto, we compare the unqualified gas turbine and unqualified EMD diesels with the purportedly fully safety-related diesels that previously had been proposed for Shoreham's operation. This comparison further confirms the drastic reduction in safety and reliability now proposed by LILCO.

II. There Is No Legal Basis For Ruling That General Design Criterion 17 Is Not Applicable To Low Power Operation Of Shoreham

A. GDC 17 is Applicable to Low Power Operation of Shoreham

The Licensing Board ruled that GDC 17 specifies requirements "concerning emergency power needs for full-power operations." ASLB Memorandum and Order Scheduling Hearing on LILCO's Supplemental Motion for Low-Power Operating License, April 6, 1984, at 7 (emphasis supplied) (hereafter, the "April 6 Order"). The Board repeated this same basic ruling later in its April 6 Order. See id. at 11. The Board then went on to state:

The GDC-17 requirements, which govern full-power operation, must be read in light of the low-power operation provisions of Section 50.57(c).

Id. at 11-12. The Board held thereafter that Section 50.57(c)

would permit operation of Shoreham with no onsite power at all "provided that (as the Staff states), it can be found by the Board that there is reasonable assurance that the low power activities can be conducted with the protection to the public at least equal to the protection afforded at full-power operations with the approved diesel generators." Id. at 12.

The Board's interpretation is plainly incorrect, and this Commission must correct it in order to protect the public's health, safety, and security. GDC 17 does not apply only to full power operation. It also applies to the low power activities which LILCO seeks to conduct at Shoreham, since for certain postulated accidents at low power, AC electric power is required to ensure that fuel design limits are not exceeded.^{6/} Moreover, nothing in Section 50.57(c) permits the Commission to "harmonize," as the Licensing Board did (April 6 Order at 11), GDC 17 and Section 50.57(c) so as to eliminate GDC 17 from the regulations.

The County and State discuss in greater detail below the reasons why LILCO's Supplemental Low Power Motion should be dismissed. First, however, it is essential to keep certain facts in mind:

^{6/} See March 29 Tr. at 43-46; LILCO's Low Power Motion at 21-22.

1. General Design Criterion 17 expressly requires that there be both "an onsite electric power system and an offsite electric power system . . . to permit functioning of structures, systems, and components important to safety." The onsite electric power system must function "assuming the other [offsite] system is not functioning" GDC 17 contains no exception for low power operation.
2. The Shoreham plant has no onsite power system because the TDI diesels, after their repeated failures, are presumed not to operate. This was the holding of the Licensing Board on February 22, 1984. Feb. 22 ASLB Tr. at 21,615-17.
3. A Licensing Board lacks jurisdiction to consider any waiver of or an exemption from regulatory requirements. Rather, as specified in 10 C.F.R. § 2.758, there are specific procedures for seeking such a waiver or exemption. It is undisputed that LILCO has not complied with Section 2.758. Hence, if LILCO's Motion is an attempt to obtain a waiver of or an exemption from GDC 17 and other regulations, LILCO has failed to comply with Section 2.758 and its Motion therefore must be dismissed.

The Licensing Board's bases for considering LILCO's Motion should be rejected by the Commission. First, the Board implied that the requirements of GDC 17 are not applicable to, or may be reduced for, low power operation. April 6 Order at 11-12. The Board did not cite even a single authority to support this novel interpretation. In fact, nothing in the NRC's

regulations or cases suggests that the GDC 17 requirement for an onsite electric power system is not applicable to a nuclear plant operating at less than full power.

The Introduction to the General Design Criteria provides that the GDCs "establish minimum requirements for the principal design criteria for water-cooled nuclear power plants" There is no suggestion that these criteria, which address design integrity of the plant itself and not different modes of operation, do not apply during low power operation. Indeed, by its very own terms, GDC 17 applies to low power operation: it is an unqualified statement with no exception, provision, or ambiguity. To recast GDC 17 now as applying only to full power would be akin to promulgating a new regulation. This would require a rulemaking proceeding that would have to follow the rigors of the Administrative Procedure Act.

Notwithstanding the plain wording of GDC 17, the Licensing Board chose to ignore those words and, instead, to "harmonize" the requirements of GDC 17 and other GDCs (and presumably other NRC regulations) with the low power licensing provisions of Section 50.57(c). The result of the Board's action was to erase GDC 17 from the books and to reduce the requirements for licensing a plant at less than full power. April 6 Order at

11-12. The Board thus stated, without basis or citation of authority:

The very purpose of this regulation [Section 50.57(c)] is to permit motions for low-power operations where, as here, the licensing proceedings are not completed because of pending hearings on the satisfaction of all of the requirements of GDC-17, among others.

April 6 Order at 12.

In fact, that is not "the very purpose" of Section 50.57(c). Section 50.57(c) actually says quite the opposite: it requires that the Board make a finding under Section 50.57(a) that "the facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission." Since GDC 17 is a regulation of the Commission, there must be a finding that the grant of a low power license to LILCO is "in conformity with" GDC 17. Such a finding cannot be made.^{7/}

^{7/} The Board cited no authority for "harmonizing" GDC 17 out of the regulations. The San Onofre and Diablo Canyon decisions which had been incorrectly relied upon by the Staff were properly not cited by the Board. Those decisions are not on point here. Each involved regulatory requirements for emergency planning that had to be satisfied for low power operation. In San Onofre, the Board specifically relied on 10 C.F.R. § 50.47(c)(1) to permit low power operation where all regulations were not met. Section 50.47(c)(1) is a specific exemption provision for emergency planning, which has no applicability to GDC 17

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Nevertheless, in attempting to reconcile the provisions of Section 50.57(a) with its ruling, the Board stated:

The operation of the facility in conformity with the rules and regulations of the Commission includes the possibility of low-power operations equal to the full-power requirements of GDC-17, provided that (as the Staff states), it can be found by the Board that there is reasonable assurance that the low-power activities can be conducted with the protection to the public at least equal to the protection afforded at full-power operations with the approved diesel generators.

April 6 Order at 12. There is no basis or citation of authority for this statement. Indeed, the concept it embodies would permit a licensing board to change an NRC regulation anytime a Board found an applicant not in compliance with a specific regulation but otherwise worthy of being given a chance to meet a "harmonized" version of that regulation. It is not a tolerable

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or the instant case. Indeed, the San Onofre Board termed Section 50.47(c)(1) an "escape clause." See Southern Calif. Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-3, 15 NRC 61, 193 (1982). In Diablo Canyon, the Board also relied upon Section 50.47(c)(1), as well as on SECY-81-188 (which was found to be an express Commission directive as to low power emergency planning) as its basis for finding that not all of the emergency planning regulations applied at low power. See Pacific Gas & Elect. Co. (Diablo Canyon Nuclear Plant, Units 1 and 2), LBP-81-21, 14 NRC 107, 122 (1981).

concept, for its foundation is unbounded discretion rather than the rule of law.

B. If LILCO Wishes To Operate Shoreham At Low Power Without A Qualified Onsite Power Source, LILCO Must Seek To Avail Itself Of The NRC's Waiver Procedures

LILCO has admitted that during five percent power operation, an accident can be postulated that would require AC power to keep the core cooled and the fuel within design limits. E.g., LILCO's Low Power Motion at 21-22. Thus, at low power, a "safety function" of GDC 17 is clearly applicable.^{8/} GDC 17 specifies that there must be an offsite and an onsite AC power system, so that if one system were not functioning, the

^{8/} LILCO concedes, for example, that AC power would be necessary for postulated accidents during low power testing. LILCO's Low Power Motion at 21-22. Thus, a loss of offsite AC power, which must be assumed under GDC 17, would leave Shoreham with no AC power at all, since there is no onsite AC power system. A plant operating at low power which has no AC electric power when needed in a LOCA cannot possibly protect the public to the same extent as a plant at full power operation which has reliable onsite and offsite AC power systems. The very uncertainties which would be inherent during a LOCA at low power -- such as the capabilities and reactions of the relatively inexperienced operators who LILCO claims would undergo needed training during low power operation -- increase the comparable risk. It would thus necessarily take either immeasurable faith in LILCO coupled with good fortune or further "harmonizing" of the regulations to find the public's protection at low power "at least equal" to that at full power.

other would be adequate to fulfill the plant's safety functions. At Shoreham, there is zero onsite AC power, and therefore, if offsite AC power were assumed to be lost as required by GDC 17, there would be no AC power at all. Despite this, LILCO is asking the Commission to eliminate the requirement of GDC 17 that assumes the loss of offsite AC power. However, since LILCO has failed to comply with Section 2.758, the Commission may not even consider that request.

At the Licensing Board's April 4 conference, counsel for the State of New York pointed out that there is a specific regulation, Section 2.758, which provides the way waivers of or exceptions to NRC regulations may be sought. See Low Power ASLB Tr. 59-60 (Palamino). The purpose of Section 2.758 is to prevent challenges to regulations in adjudicatory proceedings, which is actually what LILCO's Supplemental Low Power Motion amounts to, and to prevent the removal or modification of regulatory requirements by extravagant interpretations, such as by "harmonizing" them out of existence.^{9/}

^{9/} Suffolk County and the State are not the only parties to have suggested that LILCO must seek a waiver of GDC 17 if the company were to seek to operate without approved, qualified onsite diesels. Also, the NRC Staff itself clearly acknowledged that were Shoreham allowed to operate at low power without approved diesels, an exemption would be essential. Thus, in the NRC Staff's Response to Suffolk County's Motion to Admit Supplemental Diesel Gen-

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In this case, there is no justification to permit a waiver of GDC 17 and other related regulations. Section 2.758(b) provides that:

The sole ground for a petition for waiver or exception shall be that special circumstances with respect to the subject matter of the particular proceeding are such that application of the rule or regulation (or provision thereof) would not

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erator Contentions (February 14, 1984), the Staff stated:

In view of the past faults and failures in these [TDI] engines, the relationships between parts and soundness of the design, manufacture, and quality assurance process for the machine as a whole must be examined before consideration of the diesels could lead to any license for Shoreham.

Id. at 12. The Staff then also stated that it would give no credit to LILCO's offsite power system, including the gas turbines located at Shoreham, because "General Design Criteria 17 requires an independent, redundant and reliable source of on-site power." Ibid., footnote 7 (Emphasis added). The Staff indicated that it took "no position upon whether applicant, upon a proper technical analysis, could or could not support an application for an exemption to allow it to go to low-power absent reliable safety-grade diesels." Ibid. (Emphasis added). Exemptions in a contested adjudicatory proceeding such as this are properly considered by a Licensing Board only under Section 2.758 and subsequent certification to the Commission. Section 2.758 requires first that the applicant make the requisite showing to the Licensing Board. The Commission's residual authority under Section 50.12 cannot properly be invoked here: there are no ". . . exigent circumstances, such as emergency situations in which time is of the essence" Washington Public Power Supply System (WPPSS Nuclear Project Nos. 3 and 5), 5 NRC 719, 723 (1977).

serve the purposes for which the rule or regulation was adopted.

(Empahsis added). The purpose of the requirement of GDC 17 that a nuclear plant must have an independent, adequate and reliable onsite electric power system is, as GDC 17 states, to provide the necessary safety function "assuming the other [offsite] system is not functioning." What are the "special circumstances" at Shoreham to show that requiring Shoreham to have an onsite AC power system, just like every other plant, would not serve this purpose? There are none, and none have been pleaded by LILCO.

Similarly, what are the "special circumstances" to show that the purpose of GDC 17 to ensure design integrity of the plant would not be served by requiring a fully qualified onsite power system at Shoreham? Again, there are none. The plain fact is that, even if it tried, LILCO could not show the existence of "special circumstances" at Shoreham to justify the waiver of GDC 17. And the failure of LILCO to come forward with a properly drawn and supported waiver petition under Section 2.758, despite the challenges of New York State and Suffolk County, should be conclusively presumed to show that LILCO in fact cannot make even a rebuttable, prima facie showing for such a waiver.

Further, the regulatory requirement that Shoreham have an onsite AC power system expresses, as a virtual tautology, the purpose of GDC 17: namely, to have a reliable AC power source onsite and be able to function safely in the assumed event of a total loss of offsite power. The standard of Section 2.758(b) is not whether some substitute for the explicit requirements of GDC 17 can be conjured up or otherwise fashioned, as LILCO speculates in its argument that Shoreham's "enhanced" offsite electric system could swiftly be restored if lost during low power operation. Rather, the standard, as quoted above, is that LILCO would have to demonstrate that because of "special circumstances" at Shoreham, the purpose of GDC 17 -- having an independent onsite emergency AC power system -- would not be served if such a system were installed at Shoreham. The plain fact, therefore, is that there must be a qualified onsite power system.

Indeed, Mr. M. Srinivansan, chief of the NRC's Power Systems Branch, indicated that LILCO could not support a case for waiver of GDC 17. Thus, as reported in Newsday on February 22, 1984, Mr. Srinivansan stated:

[S]ubstituting offsite power for the onsite diesels is against NRC codes and that exceptions were unlikely. "The regulations require both," said Mr. Srinivasan, chief of the NRC power systems branch,

which oversees diesels. Diesels are needed to safely shut a reactor if off-site power is lost, so adding offsite power alone is not enough, he said.

He said on-site gas turbines could not be substituted without a rigorous installation and testing program -- which, some experts say, could take many months.

"Sometimes we give one-time relief, if one diesel is out for three days," he said. "But if we're talking about three, six, nine months, operating on equipment that is not fully qualified, you could not really predict what would happen . . . I don't think we would license a plant under those circumstances."

See Attachment 2 hereto which is a copy of the Newsday article.

Finally, a case for waiver of the NRC's safety regulations cannot be premised on concern for LILCO's dire financial situation. Rather, as noted previously, the sole basis for a waiver must be that application of GDC 17 would not serve the purposes of that rule, and the purposes are public safety alone. LILCO's finances are irrelevant, as is clear from an iron-clad, long line of judicial and NRC decisions. See Power Reactor Devel. Corp. v. Int'l Union of Electrical, Radio, and Machine Workers, 367 U.S. 396, 402, 415 (1961); Drake v. Detroit Edison Co., 453 F. Supp. 1123 (W.D. Mich. 1978); Portland General Electric Co. (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 N.R.C. 610, 613-14 (1976); Detroit Edison Co.

(Enrico Fermi Atomic Power Plant, Unit 2), LBP-78-11, 7 NRC 381 (1978), aff'd, ALAB-470, 7 NRC 473 (1978).

The only other arguable course that LILCO could pursue in an effort to avoid the mandatory language of GDC 17 would be to seek an exemption under Section 50.12 of the regulations. However, LILCO has not requested such an exemption, and, if it did, this is not a case where the Commission could properly grant the exemption. Nor is this a case where the Commission could justify an exemption on its own initiative. The reasons are several.

Section 50.12 provides:

The Commission may, upon application by an interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

Thus, to grant LILCO an exemption from GDC 17, the Commission would have to find that exempting LILCO from the requirement for a qualified onsite power system at Shoreham:

-- is authorized by law;

-- will not endanger life, property, or security;
and

-- is also in the public interest.

None of these findings can be made here. First, the exemption is clearly not in the "public interest." Indeed, the representative governments of the very public whose interests are here at stake are opposing an exemption. The State and County have expended large manpower, financial, and analytical resources to protect the well-being of their citizenry before the NRC and other forums. Surely, the public interest lies with this Commission giving compelling weight to the public interest representations of those governments.

Second, because Suffolk County and New York State contend that the grant of an exemption would "endanger life and property," a factual hearing record on the matters in dispute would have to be compiled before it would be possible for the Commission even to approach whether it could make this requisite finding for an exemption. For example, Suffolk County and the State contend that the grant of an exemption to LILCO would violate the NRC's seismic qualification requirements which are specifically part of the NRC's regulations to protect life and property.

Third, the grant of an exemption would violate the security requirements of Part 73. Again, only after a factual hearing could the Commission approach the issue of whether it could make the requisite security finding.

Fourth, for reasons of failing to comply with the regulatory requirements mentioned above, the Commission could not find that the exemption would be "authorized by law." Moreover, as discussed later, the grant of an exemption from GDC 17 would make it unlawful for the Commission to license Shoreham for low power operation without an offsite emergency plan and preparedness fully in compliance with the regulations. That is, the absence of qualified onsite power would increase the risk beyond that contemplated by Section 50.47(d) and render that regulation inapplicable.

Finally, under the Commission's own decision in Washington Public Power Supply System, supra, the instant case is entirely inappropriate for consideration of a Section 50.12 exemption. There the Commission denied the exemption requested by the applicant, stating:

The Licensing Boards exist for the very purpose of compiling a factual record in a particular proceeding, analyzing the record, and making determination based on the record. Not only is WPPSS asking us to grant authorization preliminary to an

L.W.A. which itself is preliminary in nature, but it is asking us to displace the Board's function prior to a final order of the Board. Absent extraordinary circumstances not readily apparent in the present case, we would be extremely reluctant to assume the function of the Board and scrutinize the factual issues ourselves, particularly without benefit of an initial decision by the Board. See Kansas Gas and Electric Company, (Wolf Creek Generating Station) Slip Op. at 8 (Jan. 12, 1977).

* * * * *

The third method is to seek an exemption from the Commission under 10 CFR §50.12. We regard this method as extraordinary, and we reiterate that it should be used sparingly. See Statement of Considerations, 37 F.R. 5745. Parties should resort to this method of relief only in the presence of exigent circumstances, such as emergency situations in which time is of the essence and relief from the Licensing Board is impossible or highly unlikely. The present situation does not present the type of exigencies that we would consider sufficiently compelling to grant an exemption under section 50.12.

5 NRC at 722-23 (Emphasis added).

Here, there is no justification for the "extraordinary" relief contemplated by Section 50.12. There are no "exigent circumstances" and certainly no "emergency situations in which time is of the essence." Indeed, repeatedly in pleadings and then orally at the Licensing Board's April 4 conference, Suffolk County and the State in effect challenged LILCO to come

forth and support an exemption request. The fact is that such a request could not be properly supported, even if LILCO were to request one.

III. There Is No Technical Justification for Authorizing Low Power Operation Without the Onsite Electric Power System Required by GDC 17

In its April 30 Order, the Commission poses the following question:

What would be the technical justification for authorizing low power operation without the onsite electric power system required by GDC 17? What would be the basis of any calculation or judgment that protection to the public at low power under these circumstances would be greater than or equal to public protection at full power?

Order at 2.

Suffolk County and the State of New York submit that there is no technical justification which would permit low power operation without the onsite electric power system required by GDC 17. Rather, as documented in Section I, supra, and in Attachment 1, a comparison of LILCO's pre-March 20 and post-March 20 low power proposals reveals such a drastic reduction in the level of safety that there can be no basis for proceeding. In short, given the changes proposed by LILCO, there can be no reliable calculation or judgment that the protection of the

public under LILCO's proposal would be greater than or equal to public protection at full power.

At full power, with all systems assumed to be in full compliance with all regulations, one might assume that a certain level of protection for the public would be achieved. At low power, there will under most circumstances be some reduction in danger to the public due to the lesser fission products produced, resulting in more time to take mitigating actions. This apparently was the reason that the Commission in 1982 amended its emergency planning regulations to permit low power operation without full-scale offsite emergency planning and preparedness. See 47 F.R. 30,232 (1982).

In the instant proceeding, however, a multitude of uncertainties are created by LILCO's unprecedented low power scheme. These uncertainties are heightened by the Licensing Board's purported "standard" for low power licensing -- namely whether the level of protection at low power is equal to or greater than that achieved at full power. If the level of protection at low power under the LILCO scheme is merely equal to that at full power, then the entire basis for the Section 50.47(d) exemption is eliminated. That exemption is predicated on a belief that the risk of low power operation is

"significantly lower" than at full power (47 F.R. 30,234-35 (1982)), and hence the level of protection resulting from operation of plant mitigating systems is much higher. It is thus the far higher level of protection at low power from onsite safety systems which purportedly justifies no offsite emergency preparedness at low power. See 47 F.R. 30,324-35 (1982). If the standard for low power licensing is the "equal protection" formula enumerated by the Licensing Board, then clearly Section 50.47(d) cannot apply for Shoreham.

Indeed, the Commission in its April 30 Order specifically raised the issue whether, given LILCO's low power electric power proposal, there is justification for waiving the offsite emergency preparedness requirements applicable to full power operation. See April 30 Order at 2. There is none. In adopting 10 CFR §50.47(d), and therefore ruling that there needed to be no findings on the adequacy of offsite emergency preparedness prior to issuance of a low power license, the NRC premised its action on the assumed much lower risk of low power operation. For example, in the Supplementary Information which accompanied the Final Rule, the NRC stated:

The risks of operating a power reactor at low power are significantly lower than the risks of operating at full power because: first, the fission product inventory during low power testing is much less

than during higher power operation due to the low level of reactor power and short period of operation; second, at low power there is a significant reduction in the required capacity of systems designed to mitigate the consequences of accidents compared to the required capacities under full-power operation; and third, the time available for taking actions to identify accident causes and mitigate accident consequences is much longer than at full power. This means the operators should have sufficient time to prevent a radioactive release from occurring. In the worst case, the additional time available (at least 10 hours), even for a postulated low likelihood sequence which eventually results in release of the fission products accumulated at low power into the containment, would allow adequate precautionary actions to be taken to protect the public near the site.

47 F.R. 30,234-35 (1982) (emphasis supplied).

From this quotation and from some of the underlying documents as well (e.g., SECY-82-185), it is clear that the Commission, in concluding that significantly lower risks at low power justified exclusion of offsite preparedness at that power level, relied upon a greater capacity of accident mitigating systems at low power than at full power. The Commission also relied on the assumed greater amount of time for taking emergency actions at low power versus full power.

The Commission's assumptions in the Section 50.47(d) rulemaking are sharply undercut by LILCO's low power proposal.

The assumed extra capacity of mitigating systems is undercut because instead of 5 power cables to provide electricity to run these mitigating systems, there are now only 3, none of which is safety-related. Accordingly, while Section 50.47(d) is premised on the presumed extra capacity of mitigating systems to handle the fission products produced at low power, there now is serious doubt (versus the normal situation) regarding whether there will be reliable power to run these mitigating systems. The Commission clearly seems to have assumed in its Section 50.47(d) rulemaking that there would be reliable power to operate the mitigating systems. Otherwise, it could not have concluded that the risk of low power operation would be "substantially less" than full power operation and that there would be at least 10 hours of additional time before an offsite release could occur. There is no indication that the Commission considered the possibility of a significant decrease in the redundancy and quality of power supplies when it adopted the rule. Therefore, if the Commission were to permit low power operation under LILCO's proposal, it would need also to rule that Section 50.47(d) does not apply and that the requisite emergency preparedness findings under Section 50.47(a) and (b) would need to be made as a precondition to Shoreham's low power operation.

In the instant case, however, the uncertainties concerning the level of protection provided by the LILCO low power licensing scheme go far beyond merely undercutting the bases for 10 CFR § 50.47(d). Indeed, these uncertainties make it impossible to derive any even remotely reliable calculation or judgment regarding the level of protection at low power at Shoreham under LILCO's proposed licensing scheme. Some of these uncertainties are described below:

- a) Seismic Comparison. LILCO previously proposed to have 3 seismically qualified onsite diesels, with all connecting components similarly qualified. In LILCO's new configuration, it proposes to have instead 4 EMD mobile diesels mounted outdoors which are not seismically qualified and whose power is carried to the plant in a single, unqualified cable tray supported by wooden posts and a gas turbine which is not seismically qualified and which feeds its power via the existing 69 kV line which also is not seismically qualified. One cannot assess the relative levels of protection afforded by these diverse elements and reach any competent judgment that the LILCO proposal at low power provides equal or greater protection than the fully qualified diesels at full power.

- b) Quality Assurance Comparison. LILCO previously proposed to have 3 onsite diesels and connecting components designed, manufactured, installed, and maintained in accordance with 10 CFR Part 50, Appendix B. In the new configuration, by contrast, neither the gas turbine nor the EMD mobile diesels have ever been subject to an Appendix B program. Again, one cannot possibly reach a competent judgment that LILCO's proposal results in a level of protection equal to or greater than that at full power with proper diesels.
- c) Fire Protection Comparison. LILCO previously proposed to have 3 diesels and connecting components which are housed in separate rooms, each protected from fire in accordance with GDC 3 and Appendix R requirements. The mobile diesels and gas turbine which LILCO now proposes to use have no fire protection except for a fire wall between the EMD power cable to the plant and the RSS transformer.
- d) Starting Motor Comparison. LILCO proposed to have 3 diesels, each of which has two fully independent safety-related air powered starting motors. Each of

these motors is capable of five starting attempts. By contrast, LILCO now proposes to use 4 mobile diesels, each of which has two nonsafety-related starting motors and all of which share a single nonsafety-related battery and also to use a gas turbine which has a single nonsafety related air powered starting motor capable of 3 start attempts.

- e) Redundancy Comparison. LILCO previously proposed to have 3 safety-related diesels, each of which supplies power to the safety loads via separate safety-related conduit. By contrast, LILCO now proposes to use a gas turbine which supplies power to safety loads via a single nonsafety-related 69kV offsite circuit and 4 mobile diesels which supply power to safety loads via a single nonsafety-related cable.
- f) Automatic Operations Comparison. LILCO previously proposed to use 3 safety-related diesels, each of which started automatically and whose power is automatically connected to safety loads in the event of an emergency. LILCO now proposes to use a gas turbine and 4 mobile diesels, each of which starts automatically but which then requires manual operator

actions (taking between 5 and 30 minutes, assuming no operator errors) in order to supply power to the safety loads.

- g) Security Comparison. LILCO previously proposed a system purportedly in compliance with Part 73. In contrast, LILCO's current proposal fails to satisfy the "high assurance" standard of Part 73. (As noted above, detailed analysis and discussions of security must await the establishment of safeguards procedures.)
- h) Operation Comparison. LILCO previously proposed to use 3 safety-related diesels operated by persons who are fully familiar with and trained on such equipment. LILCO now proposes to operate with a gas turbine and mobile diesels which represent an entirely new configuration for plant operation, which will be run by operators who have had no actual experience with such mode of operation, have had training only for a very brief period, and who will have to perform new manual operations in order to bring the power to the safety loads.

The foregoing examples are meant to highlight the substantial reduction in safety and reliability represented by LILCO's own downgrading of its low power proposal. Refer to Attachment 1 for further comparisons. In short, however, the foregoing comparisons and resulting uncertainties make clear that there can be no basis for any calculation or judgment that protection to the public at low power under these circumstances would be greater than or equal to public protection at full power.

A further matter must also be addressed. The purposes of low power operation includes testing the reactor and its supporting systems to identify potential problems, thus ultimately allowing ascension to commercial power levels, and providing some training for operating personnel. The LILCO proposal runs plainly counter to these purposes. First, the plant power system configuration proposed for support of low power operation is not the same as that which LILCO proposes to use for higher power levels. Thus, the training which is received relative to the new electric power system configuration will not benefit operation at higher power levels. Second, at low power in even a conventional configuration, there are somewhat higher risks due to operators having less experience with the plant and due to the potential for undiscovered design and

construction defects. See 47 F.R. 30,232-33 (1982). In LILCO's new configuration, the operators will have even more to do in an emergency, since the EMD diesels and the gas turbine require manual loading in order to supply safety loads. Thus, it appears that the new LILCO proposal creates new potential for operator error, which again must increase the risks involved in low power operation. Finally, it should be borne in mind that LILCO's operators do not have actual BWR operating experience. This is another factor which increases risks at Shoreham above the norm.

Therefore, the County and State submit that there can be no reasoned basis for any conclusion that the LILCO low power proposal presents equal or less of a risk to the public than operation at full power with all safety systems in place. Rather, the reduction in the quality of the systems proposed for use by LILCO, coupled with the multiple uncertainties created by LILCO's unprecedented proposal, requires the conclusion that no reasonable assurance of public health and safety can be found to permit LILCO operation of Shoreham in the presently proposed manner.

IV. Schedule for Future Proceedings

In its April 30 Order, the Commssion indicated that it

would on May 7 entertain comments on scheduling in the event that a hearing proves necessary. As is clear from the preceeding discussion, the County and State submit that no hearing is necessary because the General Design Criteria do apply at low power and LILCO's Low Power Motion constitutes a challenge to NRC regulations; LILCO has failed to comply with requirements for seeking a waiver or exemption; and there is no basis upon which a waiver or exemption could be permitted.

The County and State recognize that the Commission may disagree with the foregoing position. Accordingly, the County and State will be prepared on May 7 to discuss scheduling matters. In that regard, should a hearing be ordered, we emphasize the need for a fair opportunity to prepare for and to present the case that is necessary to represent the interests of the citizens of the State and County.

The issue then becomes what is a fair schedule. The County and State have set forth their views on that in exhaustive detail: first, is preliminary papers filed with the Licensing Board by the County and State on March 26 and 28, respectively; second on April 4 at the oral argument; third, in our Joint Objections to the Licensing Board, filed April 16; and fourth in papers filed recently with the U.S. District Court.

What has been demonstrated in our filings is that our schedule proposals are reasonable. Indeed, they are predicated upon the sworn affidavits of our experts^{10/} regarding the time required for them to work diligently and prepare for a hearing. This Commission has those affidavits, as they were filed as part of the Court proceeding. What is significant, in our view, is that no party has challenged the merits of our schedule, i.e., no one has even attempted to prove that the time required by our experts, as set forth in their affidavits, was wrong. And equally significant, no one has attempted to demonstrate why a schedule more aggressively paced than that proposed by the County and State would better protect the public health and safety.

We respectfully submit that if this Commission believes that there should be any deviation from the schedule proposed by the County and State and supported by the County's affidavits, then the Commission should do the following:

^{10/} Affidavits have been submitted by Dr. Christain Meyer, who is performing seismic analyses; by Mr. G. Dennis Eley, who is analyzing the EMD mobile diesels; by Mr. Robert Weatherwax, who is performing reliability analyses concerning LILCO's offsite power system; and by Mr. Gregory Minor, a County technical consultant who is working on varied technical aspects of the low power proceeding and who identifies additional substantive areas which will need to be investigated. Mr. Lawrence Lanpher, an attorney, submitted an affidavit on procedural matters.

- (a) Explain why it believes such deviation is necessary despite the County's representations and affidavits; and
- (b) Explain why it believes such deviations will foster more effective protection of public safety and security than the County's proposed schedule.

The County's and State's suggested schedule is described in detail in Attachment 3 hereto, an April 27, ASLB filing by the County (in which the State joined). The schedule has the following major milestones:

Completion of discovery and preparedness of technical analyses	July 9
Prefiled testimony submitted	July 19
Commence hearing	August 7

On April 27, 1984, the County met with the Staff and LILCO to discuss the foregoing schedule proposal. At that meeting, LILCO indicated that it would agree to a schedule resulting in a hearing starting on May 30; the Staff would agree to a hearing starting on June 18. Neither LILCO nor the Staff responded to the details of the County's proposal or even sought to explain why any dates proposed by the County and State were inappropriate or contrary to the public interest.

Finally, in recent submissions to the Commission and the the U.S. District Court, the County has made clear its view

that if there need to be further proceedings concerning LILCO's Supplemental Low Power Motion, the existing Licensing Board should be disestablished and a new Board appointed to preside. The County respectfully suggests, therefore, that if the Commission does order further proceedings, it direct that these be before a newly appointed Board.

Respectfully submitted,

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COMPARISON OF TECHNICAL FEATURES

Issue	<u>Onsite Diesels (proposed to be used for low power operation prior to March 20, 1984)</u>	<u>20 MW Gas Turbine</u>	<u>4 EMD Mobile Diesels</u>
Physical Location	<p>The onsite diesels are within control building and provided Part 73 protection.</p>	<p>The gas turbine is outside security fence. No Part 73 protection.</p>	<p>The EMD mobile diesels are within protected area fence but not required to be designated as vital equipment. Further, cable from EMDs is in exposed cable tray. Minimal Part 73 Protection.</p>
	<p>Onsite diesels are mounted in separate diesel generator rooms designed as Seismic Category 1 capable of withstanding design basis earthquake and tornado missiles. Meet GDC 2 and 4 and Part 100, Appendix A.</p>	<p>The offsite gas turbine is mounted on a pad in the 69 kV switchyard but is not protected against missiles by a structure nor is it designed to withstand earthquakes. Thus, does not meet GDC 2 or 4 Part 100, Appendix A.</p>	<p>The EMDs are mounted outdoors near the reactor building but not in a seismic structure, nor on a foundation designed to withstand a DBE. Associated components (such as the cable carrying power to safety loads) also are not qualified. Thus, do not meet GDC 2 or 4 or Part 100, Appendix A.</p>
	<p>The onsite diesel generator rooms are physically close to the 4.16 kV switchgear room and power is directed there via 3 independent, protected, fully safety-related busses.</p>	<p>The gas turbine is located separate from the main plant in the Shoreham 69 kV switchyard and power is directed to the plant's RSS transformer via a single nonsafety-related buried cable system.</p>	<p>The EMDs are outdoors near the reactor building with power directed to the 4.16 kV switchgear room via a single, nonsafety-related above ground cable in covered raceway mounted on wooden posts.</p>

Each onsite diesel has an independent 2-hour fuel supply in its day tank and redundant transfer pumps to supply fuel from an individual 42,000 gallon buried fuel oil storage tank.

The gas turbine gets its fuel from a 1,000,000 gallon above ground storage tank located outside the main security fence and near the 69 kV switchyard.

The EMDs have small independent day tanks but rely on main fuel supply from a 9000 gallon tanker truck which will be stationed in the vicinity of the Auxiliary Poiler fueling station which is outside the Reactor Building near the EMD location.

Connections to Safety- Related Loads

The three onsite diesels feed the emergency busses 101, 102, and 103. Breakers permit them to provide automatic loading to other busses if needed.

The gas turbine feeds the same 69 kV line that supplies power through the RSS transformer to feed the 4.16 kV busses 1B and 12 but does not normally feed the emergency busses. Manual operation is required to load the gas turbine to emergency busses.

The EMDs are connected to the 4.16 kV bus on the plant side of the NSS transformer at 4.16 kV bus No. 11. To load EMDs to emergency busses requires manual operations.

Power from the onsite diesels enters the emergency switchgear room through qualified devices, protected to Appendix R for fires. Where external ducts used, missile protection criteria are 5 feet of earth and 2 feet of concrete.

The 69 kV line from the gas turbine connects to the RSS transformer via a buried cable and then enters the nonsafety-related switchgear room which is not protected to Appendix R.

The single power line from the EMD's enters via nonsafety-related switchgear room, which is not protected to Appendix R; routed in an above ground covered raceway mounted on wood posts.

Automatic
Operation

Each onsite diesel automatically starts on indication of plant or accident conditions which may require diesel operation:

1. Loss of Voltage on the 4.16 kV bus the diesel is connected to;
2. High drywell pressure; or
3. Low reactor coolant level

Onsite diesels are automatically connected to the 4.16 kV bus and sequentially loaded.

Each onsite diesel has independent start control circuits and two redundant starting mechanisms, thus making each less vulnerable to single failures.

The gas turbine automatically starts on loss of offsite power on the 69 kV line.

Gas turbine is manually connected to the bus and loaded. These steps are expected to take 10 minutes.

The gas turbine has a single compressed air starting device capable of 3 starting attempts. It represents a point of single failure.

EMDs automatically start on loss of offsite power on the 4.16 kV bus from the NSS transformer.

EMDs are manually connected to the bus and loaded as one block. These steps are expected to take 30 minutes.

The four EMDs share one battery supply which is rated for 12 starting attempts and is used to sequentially start the four diesels. The battery is a potential source of single failure which could prevent operation of the EDM's.

Design and
Quality
Standards

The onsite diesels are safety-related and are therefore required to be designed, fabricated, and installed according to 10 C.F.R. 50 Appendix A, GDC 1 and Appendix B, and IEEE 336-1971 (Installation, Inspection and Testing Requirements for I&E Equipment During Construction of Nuclear Generating Facilities)

The onsite diesels are qualified for seismic consistent with GDC 2. Their structure is Seismic Category 1.

The onsite diesels must be provided 10 CFR Appendix R fire protection. Each diesel room is equipped with fixed CO₂, and water hoses, and detection equipment.

Operating
Procedures

Operating, maintenance and emergency procedures are in place for the onsite diesels and training has been conducted.

The gas turbine has no defined quality specifications for design, fabrication and installation. It is not classified safety-related.

The gas turbine is not seismically qualified.

No fire protection or design basis fire has been defined for the gas turbine and the 1,000,000 gallon fuel oil storage tank located nearby.

The procedures for normal and emergency operation of the gas turbine have not yet been approved, nor has there been training in their use.

The EMDs have no defined quality specifications for design, fabrication, and installation. They are not classified as safety-related.

The EMDs are not seismically qualified, nor is their installation and foundation seismic Category 1.

No fire protection or design basis fire has been defined for the EMDs or the dedicated 9000 gallon tank truck located in their vicinity near the auxiliary boiler.

The procedures for normal and emergency operation of the EMD diesels have not been approved, nor has there been training in their use.

Redundancy
and Independence

The onsite diesel system is required by Part 50, Appendix A, to be designed for independence and freedom from single failures.

The gas turbine, being a single unit, has not been designed to meet the single failure criterion.

The EMDs are not independent and will not meet the single failure criterion due to common reliance on one starting battery, one long term fuel supply, and a single bus feeding power to the 4.16 kV switchgear room.

Security

The onsite diesel rooms are within the main security area of the plant. Thus they are protected to the requirement of Part 73.

The gas turbine is outside the main security area.

The EMD's are not required to be classified as a vital area but are inside the main security area of the plant. Thus they are assured of only nominal protection to Part 73 requirements.

Diesels Called Central To Shoreham's Troubles ✓

By Stuart Diamond *Newsday Environment Writer* ✓
Shoreham could get a low-power operating license.

Attachment 2
Despite LILCO's recent leadership change, urgent financial problems and efforts to win political support, the fate of the Shoreham nuclear plant apparently still rests largely on the troubled backup diesel generators.

And the diesels are still having new problems even amid round-the-clock repairs.

In the past week, voids — weak spots — were found in three new bearings that the diesel maker, Transamerica Delaval, supplied for one unit. Various cracks were found in the cylinder block. Charles Petrone, the Nuclear Regulatory Commission's resident inspector at Shoreham, said yesterday.

Another diesel had a cracked cylinder; low oil pressure was found in the turbocharger, a power booster recently fixed. All three units have been out of service for much of the month and Petrone agreed it could cause close to a three-week delay in the repair schedule beyond the April 5 target.

The \$2.1-million diesels are a small item compared with the plant's \$4-billion cost. But they are severely weakening Long Island Lighting Co.'s financial health. Danielle Seitz, utilities analyst for Smith Barney, recently reflected the beliefs of many financial experts when she said: "The whole game is in the current diesels."

Underlying that assessment is a recent statement by William Catacosinos, LILCO's new chairman, that the utility could not survive the \$45-million monthly carrying charges for the 18 to 24 months needed to install new diesels if the current ones cannot be fixed.

Yesterday, Catacosinos suggested that outside power lines or gas turbines could substitute for the diesels, so

But even that suggestion appears to have problems. A top NRC expert said substituting offsite power for the on-site diesels is against NRC codes and that exceptions were unlikely. "The regulations require both," said M. Srinivasan, chief of the NRC power systems branch, which oversees diesels. Diesels are needed to safely shut a reactor if off-site power is lost, so adding offsite power alone is not enough, he said.

He said on-site gas turbines could not be substituted without a rigorous installation and testing program — which, some experts say, could take many months.

"Sometimes we give one-time relief, if one diesel is out for three days," he said. "But if we're talking about three, six, nine months, operating on equipment that is not fully qualified, you could not really predict what would happen. . . . I don't think we would license a plant under those circumstances."

NRC officials declined to say whether the diesels can be fixed since neither tests nor analysis is finished. LILCO has declined to comment. But the NRC says Delaval diesels — supplied to 16 nuclear plants — have major problems and that no reactors with such diesels will operate until repairs are made.

Alan Dynner, attorney for Suffolk County, which opposes Shoreham's operation, said the new problems "show that evidence continues to pile up that these engines are undersized, overrated, badly designed and poorly manufactured. . . . The stresses are just too great for the components." One of the recent bearing problems occurred after only one week of tests, although LILCO's consultants had predicted the bearing would last for 38,000 hours of operating time, Dynner noted.

Newsday 2/22/84 P.20

Prehearing conference	August 6 <u>2</u> /
Prefiled testimony submitted	August 21
Commence hearing	September 5

The Licensing Board rejected the foregoing schedule. However, with the subsequent developments, the parties are now attempting to agree upon a reasonable schedule. The schedule proposed by the County below reflects some developments that have occurred since April 4, and begins on Monday, April 30:

<u>Event</u>	<u>Date</u>
Retention of additional experts (10 days)	May 10
Completion of discovery and preparation of technical analyses (60 days)	July 9
Prefiled testimony submitted	July 19
Commence hearing	August 7

Explanation of New Proposed Schedule

1. The County needs an additional 10 days to complete its retention of experts. Some experts have already been retained for work on low power matters (Messrs. Weatherwax, Meyer, Roesset, and Eley). As documented in Mr. Minor's affidavit, there are still other consultants in other disciplines to be retained. Minor Affidavit at 9-10.

2. The County's experts who have already been retained have set forth in their affidavits the amount of time required for them to complete their technical analyses. The affidavits indicate the following time:

Meyer and Roesset

end of June 1984

Eley

45-50 days 3/

Weatherwax

mid to late June 4/

Thus, it will take until late June for the retained experts to perform the necessary technical analyses. In the new proposed schedule we have added about 10 days (until July 9) to permit the still-to-be-hired experts to perform their work.

3. The Board apparently does not desire a period of time for specification of issues and a prehearing conference; therefore, we have deleted these items from the County's original schedule. Instead, a 10-day period after July 9 is allowed for submitting prefiled testimony. The County's affidavits indicate our experts need 1-2 weeks after completion of technical analyses in order to prepare testimony.

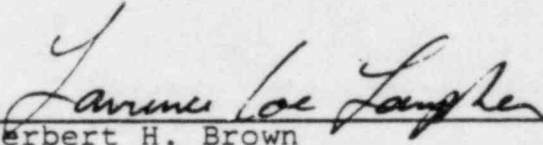
3/ If Mr. Eley could devote full time to the diesel analyses, he could probably be done in one month, assuming prompt receipt of additional documents. However, Mr. Eley is devoting substantial time to the TDI diesel matter; indeed, until May 11, he will be devoting full time to that matter due to the ASLB deposition schedule. Thus, the 45-50 day estimate is a realistic minimum time.

4/ Mr. Weatherwax had previously estimated completion by early June. As Mr. Weatherwax has proceeded with his work, he informs County counsel that his projections are overly optimistic and he will likely need some additional time.

4. The period of time in our schedule between the filing of prefiled testimony and the start of the hearing is roughly the same as the 15-day period provided in 10 C.F.R. § 2.743(b), adjusted so that the hearing will start on a Tuesday, rather than on Friday.

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April 27, 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)

CERTIFICATE OF SERVICE

I hereby certify that copies of the JOINT RESPONSE OF SUFFOLK COUNTY AND THE STATE OF NEW YORK TO THE COMMISSION'S ORDER of April 30, 1984, dated May 4, 1984, have been served to the following this 4th day of May 1984 by U.S. mail, first class, by hand when indicated by one asterisk, and by Federal Express when indicated by two asterisks.

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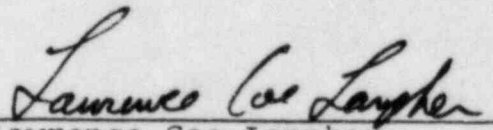
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