

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Appeal Board

DOCKETED
USNRC

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

Docket No. 50-322-01

'85 JUN 17 10:34
OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

SUFFOLK COUNTY AND STATE OF NEW YORK
MOTION FOR STAY OF LOW POWER LICENSE

On June 14, 1985, the Atomic Safety and Licensing Board issued a decision (LBP-85-18) in which it authorized issuance of a license permitting operation of Shoreham at up to 5% of rated power. Suffolk County and the State of New York hereby move the Appeal Board to stay issuance of the license, or should the license be issued, to stay its effectiveness pending Appeal Board review of the County's and State's appeal of the merits of the June 14 ASLB decision or, in the alternative, pending completion of the review by the U.S. Court of Appeals of the County's and State's appeal of the NRC's violations of the National Environmental Policy Act (NEPA), which will be fully briefed by July 1, 1985, and which will effectively be rendered moot if operation at up to 5% power commences. At the very least, the County and State request that the license be stayed until July 2, 1985, to allow the U.S. Court of Appeals to

8506180301 850617
PDR ADOCK 05000322
G PDR

rule within the time provided in its rules on the Emergency Motion for a stay which the State and County are filing in that Court today.^{1/}

The State and County have been unable to find out from the NRC when it intends to issue a license to LILCO, or when the terms of a license will permit LILCO to begin operation above 0.001% power (which was authorized by the license issued December 7, 1984). In addition, despite requests made by undersigned counsel for Suffolk County on June 14 and June 16, LILCO's counsel has refused to tell us when LILCO will be prepared to commence operation above 0.001%, assuming a license has been issued. LILCO's counsel did state on June 14, however, that he was "confident" operation would be possible "within the week" (i.e., by June 21). LILCO's counsel refused to provide the information requested by the County's counsel despite having been informed that the stay motions, for which the information was needed, were being filed by New York State as well as by Suffolk County. Accordingly, we have no choice but to file this motion now since: (1) the June 14 ASLB order was, by its terms, immediately effective; (2) the NRC provided no delay in license issuance or permission to operate to permit Intervenor's to seek expedited judicial review; (3) according to Counsel to the Appeal Board, the NRC Staff will provide to the Appeal Board only 3 hours prior notice of the Staff's intent to issue a license which is insufficient time to seek both administrative and judicial stays; (4) we must seek administrative relief, if at all possible, prior to seeking relief from the Court of Appeals; and (5) in the face of LILCO's refusal to provide any information, we must assume that LILCO will be prepared to begin operations

^{1/} Consistent with past practice in this proceeding (see e.g., Commission Order dated January 7, 1985), in this joint motion Suffolk County and the State of New York have combined their 10-page allotments rather than filing two separate motions of 10 pages apiece.

immediately upon issuance of a license. Because the State and County are operating without access to the facts known only to the NRC and LILCO concerning the actual timing of license issuance and commencement of operations, we must assume that the license could issue as early as noon today (June 17), and that LILCO could begin operations immediately thereafter.

We demonstrate below that the requirements for granting a stay are satisfied.

I. PROBABILITY OF SUCCESS ON THE MERITS

Although the Commission denied the County's and State's previous request that license issuance be stayed pending judicial review, which was filed following the February 12, 1985 issuance of CLI-85-1, we nonetheless ask the Appeal Board to stay license issuance pending judicial review because the NRC's violation of NEPA has been compounded by events since February 12.

The NRC violated NEPA by authorizing low power operation of Shoreham without having supplemented its 1977 EIS.^{2/} The EIS was premised upon the assumption that full power operation of Shoreham would occur, and the NRC concluded that the environmental impacts and costs of Shoreham operation were outweighed by one benefit: the generation of electricity. In 1983, however,

^{2/} The State's and County's demand that the NRC supplement its 1977 EIS has been reiterated on numerous previous occasions: Answer and Opposition of Suffolk County to LILCO's Motion for a Low Power License (June 27, 1983); Suffolk County Response to LILCO and NRC Staff Arguments that the Shoreham Final Environmental Impact Statement Does not Need to be Supplemented (July 29, 1983); Suffolk County Brief in Support of Appeal of Licensing Board Partial Initial Decision (December 23, 1983), at 124-30; Suffolk County and State of New York Motion for Stay of Phase III and IV License (February 12, 1985), at 1-4; Petitioners' Memorandum in Support of Emergency Motion for Stay Pending Review of Nuclear Regulatory Commission Order (February 13, 1985) filed in No. 85-1042 (D.C. Cir.), at 19-27, 49-60; Suffolk County and State of New York Renewal of Request for NRC Supplementation of the Shoreham FEIS as Required by NEPA (March 4, 1985); Brief for Petitioners (April 22, 1985) filed in No. 85-1042 (D.C. Cir.), at 8-20, 40-58; Suffolk County and State of New York Petition for Reconsideration of CLI-85-1 (May 7, 1985), at 38-41.

it became reasonably foreseeable that LILCO could not satisfy the NRC's emergency planning requirements and, therefore, that Shoreham could not be licensed to operate at full power. Thus, from that time on, it was foreseeable that issuance of a low power license for Shoreham would not be followed by full power operation, and that the environmental costs of low power operation would not be offset by any benefits. This significantly changed circumstance required the NRC to supplement the EIS before deciding whether to issue a license which authorized only low power operation of Shoreham.

The NRC's NEPA violation is made even more clear cut by recent court and ASLB decisions. First, on February 20, 1985, the New York State Supreme Court held that LILCO lacks legal authority under the Constitution and laws of the State of New York to implement the offsite emergency response plan it had proposed as the basis for its full power license application.^{3/} Second, on March 18, 1985, the U.S. District Court for the Eastern District of New York ruled that Suffolk County's determination not to adopt or implement an emergency plan for Shoreham was rational and reasonable, and was not preempted by federal law as LILCO had argued.^{4/} Third, on April 17, 1985, the Licensing Board charged with review of LILCO's proposed emergency plan ruled that "the LILCO Plan cannot and will not be implemented as required by regulation."^{5/} This ruling, which flowed from the Board's conclusion "that the activities [LILCO] seeks to perform . . . are unlawful," (PID at 426), constitutes an

^{3/} Quomo v. LILCO, No. 84-1264, slip op. (N.Y. Sup. Ct. Feb. 20, 1985).

^{4/} Citizens for an Orderly Energy Policy, Inc. v. County of Suffolk, No. CV-83-4966, slip op. (E.D.N.Y. March 18, 1985).

^{5/} Partial Initial Decision on Emergency Planning, LBP-85-12, April 17, 1985, at 426.

absolute bar to the issuance of a full power operating license for Shoreham. These consistent and conclusive findings, which have now been rendered in every available legal forum, make clear that there is no basis for the NRC to persist in its view that the denial of a full power license for the Shoreham plant is "too speculative" or "uncertain" to merit consideration.^{6/}

In failing to prepare a supplemental EIS, the NRC violated each of its legal duties under NEPA. The NRC took no look whatsoever at the environmental consequences of low power operation that is not followed by full power operation. It failed to identify, much less to balance, the costs and benefits attributable to low power operation that is not followed by full power operation. In fact, there are no benefits; there are only substantial and irreversible environmental costs.^{7/} The NRC also failed to consider in an EIS an alternative to authorizing low power operation which is compellingly reasonable: to decline to authorize low power operation of Shoreham unless and

^{6/} Even the NRC Staff agrees. See, e.g., NRC Staff Response to Suffolk County and State of New York Petition for Reconsideration of CLI-85-1 (May 13, 1985) at 17-18 ("[T]he recent decisions make it far less speculative that a full power license will not issue in the near future"). Further, the Brenner Board in its June 14 PID states that at this point in time, the NRC's licensing board "has effectively found against LILCO" on emergency planning issues. See LBP-85-18, at 5.

Moreover, the recent action of Suffolk County Executive Cohalan in issuing Executive Order 1-1985 does nothing to change the NRC's obligations under NEPA. That Order was "rescinded, annulled and set aside" in a June 10, 1985 Order of the New York Supreme Court (entered in In re the Town of Southampton v. Cohalan, No. 85-10520) based upon the Court's finding that Cohalan's actions were beyond his authority and in violation of County law, and that the policy and position of Suffolk County concerning Shoreham is as stated in the duly enacted resolutions of the Legislature.

^{7/} See Affidavit of Dale G. Bridenbaugh and Gregory C. Minor, Attachment 1 hereto. See also the affidavit filed by Messrs. Bridenbaugh and Minor in support of the County/State Petition for Reconsideration of CLI-85-1, dated May 7, 1985.

until LILCO demonstrates that it can satisfy the NRC's emergency preparedness regulations. Finally, the cost-benefit balance in the 1977 EIS has been substantially undercut by the fact that Shoreham will likely never be licensed to operate at power levels at which electricity can be generated. The NRC's refusal to supplement its 1977 EIS, in the face of the undisputed new and significantly changed circumstances which eliminate every benefit that had been assumed in the EIS to outweigh the environmental costs of the agency's action, is arbitrary, capricious, and a violation of NEPA.^{8/}

In addition, the license should be stayed pending review by the Appeal Board of the administrative appeal the County and State intend to file with respect to the substance of the June 14 ASLB Partial Initial Decision. Time and space constraints do not permit us to enumerate in detail here the specifics of the issues to be appealed, but, in summary, they involve serious substantive and procedural violations resulting from the Board's handling of the Transamerica Delaval, Inc. ("TDI") diesel litigation. Major errors of the Brenner Board included inter alia, the following: the Board erroneously interpreted the requirements of GDC 17 and arbitrarily excluded evidence proffered by the County and State which would have demonstrated that GDC 17 requires a maximum permitted emergency diesel generator load high enough to absorb loads above the maximum emergency service load added by possible operator errors; the Board also erroneously applied the single failure

^{8/} E.g., Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983); Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1123, 1128 (D.C. Cir. 1971); Scientists Institute for Public Information v. AEC, 481 F.2d 1079, 1092 (D.C. Cir. 1973); Alaska v. Andrus, 580 F.2d 465, 473-74 (D.C. Cir), vacated in part on other grounds, 439 U.S. 922 (1978); Conservation Law Foundation v. Watt, 560 F. Supp. 561, 571 (D. Mass.), aff'd, 716 F.2d 946 (1st Cir. 1983).

criterion of GDC 17 to permit the use of inadequately sized emergency diesel generators.

II. THE COUNTY AND STATE WILL SUFFER IRREPARABLE INJURY IF THE STAY IS DENIED

The irreparable injury standard is satisfied here. First, if the stay is not granted, the pending County/State appeal in the U.S. Court of Appeals will be effectively mooted by commencement of Phase III/IV testing prior to a decision on the merits of the appeal. See NRC Staff Response to Petitions for Review of ALAB-800 (March 18, 1985) at 8 ("the Staff fails to see how issuance of a license could do anything other than moot the very issue involved [in the appeal]"). Although the merits of County/State appeal of the NEPA issue will be fully briefed in the Court of Appeals by July 1, 1985, clearly, any judicial decision reversing the NRC can have no meaningful effect unless a stay is granted, because an irreversible change in the status quo will have occurred. Indeed, the Phase III/IV testing may be entirely completed prior to review on the merits unless a stay is granted. The potential mooted of an appeal constitutes irreparable harm justifying a stay.^{9/}

Second, there is a strong presumption that an injunction should issue when NEPA has been violated. See Realty Income Trust v. Eckerd, 564 F.2d 447, 456 (D.C. Cir. 1977). The need for injunctive relief is particularly compelling in this case since the NRC has been on notice since June 1983 of the need for additional NEPA analyses. The repeated NRC refusal to take the "hard

^{9/} Scrapps-Howard, Inc. v. FCC, 316 U.S. 4 (1942); Zenith Radio Corp. v. United States, 710 F.2d 806 (Fed. Cir. 1983); Public Utilities Comm. v. Capital Transit Co., 214 F.2d 242 (D.C. Cir. 1954); Township of Lower Alloways Creek v. NRC, 481 F. Supp. 443 (D.N.J. 1979). See also, Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB Memorandum and Order, slip op. (May 24, 1984) at 7-8 (FEMA irreparably harmed if appeal mooted by denial of stay).

look" mandated by NEPA eliminates any doubt regarding the balance of equities in this case.

III. THE GRANT OF A STAY WILL NOT HARM LILCO

A stay could harm LILCO only if it impacted the timing of Shoreham's full power ascension (assuming, arguendo, that a full power license eventually were issued). Such impact is not possible here: even if the emergency planning ASLB decision were to be reversed -- merely the first of several prerequisites to the Commission's even considering the issuance of a full power license -- such a reversal, plus achievement of all the other prerequisites to full power authorization, clearly could not occur until well into 1986.^{10/} Thus, the grant of a stay cannot result in any delay of the plant's ultimate operation, since such operation, if it ever is authorized, could only take place far in the future.^{11/}

^{10/} The following events/decisions must occur, and all must be resolved in LILCO's favor, before a full power license could be issued: a reversal of the April 17 ASLB Emergency Planning PID (the Appeal Board argument on the legal authority issues is scheduled for August 12, 1985); a reversal of the New York Supreme Court's Feb. 20, 1985 decision; and a decision on recently reopened emergency planning relocation center issues. In addition, and only after the occurrence of these events, the following are also prerequisites to issuance of a full power license: the conduct of an emergency planning exercise (it normally takes 120 days for FEMA to prepare for an exercise once scheduled, and several months to prepare and submit findings to the NRC); a hearing regarding the adequacy/outcome of the exercise, assuming an exercise is held; a decision on the exercise litigation; and a 30-day immediate effectiveness review.

^{11/} The County and State intend to ask the Court of Appeals to expedite its decision on the merits of the County/State appeal. Based upon events related to the recent Court of Appeals Diablo Canyon decision, an expedited schedule in this case may result in a judicial decision on the merits before the end of 1985. (In Diablo, the NRC authorized a full power license on August 10, 1984 and a final Court of Appeals decision was issued December 31, 1984.) With NRC support in seeking expedition, there is every reason to believe that rapid judicial review can be obtained.

Furthermore, other alleged "harms" which in the past have been alleged by LILCO cannot support a denial of the stay.^{12/} First, as the NRC Staff stated in rejecting LILCO's arguments on this matter:

LILCO also included an affidavit from John Leonard explaining how delay would prejudice LILCO. Much of this prejudice flows from the delay in proceeding to Phases III and IV after having completed testing at Phases I and II. If this affidavit is being offered to justify reauthorization of the license, the short answer is found in the Commission's Order of November 21, 1984 (CLI-84-21) authorizing issuance of a license for Phases I and II. The Commission there indicated that issuance of a license for Phases I and II was without prejudice to any later decisions. (Order at 6). In proceeding with operation at Phases I and II, LILCO proceeded at its own risk that later licenses might not issue.

Response to Petitions for Review of ALAB-800 (March 18, 1985) at 8, n.5. Thus, it was LILCO's decision to risk the incurrence of such costs, and they cannot be asserted as "equities" to support a denial of a stay.^{13/}

IV. THE PUBLIC INTEREST FAVORS ISSUANCE OF A STAY

The public interest does not favor a rush to contaminate Shoreham and moot parties' appeal rights in the face of serious legal issues. The NRC's NEPA decision was on a 3-2 vote, and the Commission has steadfastly refused to

^{12/} See, e.g., Affidavit of John D. Leonard, Jr. filed with LILCO's Petition for Review of ALAB-800 (March 4, 1985).

^{13/} Not only did LILCO choose to risk the delay or non-issuance of a Phase III/IV license, but the alleged "costs" of delay -- e.g., need to purchase new neutron sources, and loss of personnel -- have already been incurred and were solely the result of the Appeal Board's vacation of the February 12 license authorization. Therefore, such "costs" cannot be attributed to a stay, nor can they be considered as equities weighing against the grant of a stay. In addition, as noted in the Affidavit of Dale G. Bridenbaugh and Gregory C. Minor dated March 15, 1985, which was attached to the Suffolk County and State of New York Response to LILCO's Petition for Review of ALAB-800 (March 18, 1985), the costs alleged by LILCO are substantially overstated.

acknowledge that what it originally labelled as "speculation" has now been confirmed in federal court, state court, and by its own licensing board. Clearly, the NRC's NEPA violation is a serious issue which merits meaningful judicial review; however, without a stay, judicial review would be meaningless. There is no need to conduct Phase III/IV testing at this time because LILCO's inability to satisfy the NRC's emergency planning regulations operates as an absolute bar to issuance of a full power license.^{14/} Accordingly, there is no countervailing interest to outweigh that of the public.

Second, both Suffolk County and New York have urged that the public interest requires, at a bare minimum, maintenance of the status quo. The NRC's own practice requires that in considering where the public interest lies, great weight should be given to the views of the State and County who represent the people and the public's interest.^{15/} There is no conceivable public interest in permitting the further contamination of a plant that will never produce electricity or any other benefit to the public. The application of the "great weight" rule requires, at a minimum, the maintenance of the status quo for the period necessary to allow the merits of the State/County appeal to be decided.

V. AT A MINIMUM, THE LICENSE SHOULD BE STAYED
TO PERMIT COURT OF APPEALS REVIEW OF THE
COUNTY/STATE STAY MOTION AS PROVIDED IN
THE COURT'S RULES

^{14/} See also NRC Staff Response to Suffolk County and State of New York Petition for Reconsideration of CLI-85-1 (May 13, 1985) at 18 ("it is clear that the benefits of low power operation stem from preparing the plant for eventual full power operation The recent [court and NRC] decisions . . . indicate that there may well be little or no benefit to low power testing at the present time [and] . . . at this stage [it] . . . would appear to have no real value.")

^{15/} See Respondent U.S. Nuclear Regulatory Commission's Opposition to Emergency Motion for Stay, November 10, 1983, at 34, filed in San Luis Obispo Mothers for Peace v. NRC, 751 F.2d 1287 (D.C. Cir. 1984).

Even if this Board were to find that the traditional stay criteria are not satisfied and therefore refuses to stay the license to permit administrative, or even judicial review of the merits of the County/State appeals -- a decision we submit would be clearly erroneous -- at the very least, this Board must recognize the County's and State's right to judicial redress on the question of the stay itself. Since license issuance and operation with its resulting substantial irradiation and contamination are imminent, without some kind of stay -- at least on an interim basis -- even the Court will have no opportunity to act to protect the rights of the State and County, other than on an ex parte emergency basis. Therefore, at a minimum, this Board should stay the license to permit the Court of Appeals to act upon the Emergency Stay Motion filed by the County and State today.

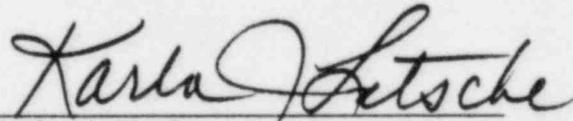
The D.C. Circuit rules look with disfavor on Emergency Motions seeking a decision in seven days or less. See D.C. Cir. Rule 6(j). Indeed, under the D.C. Circuit rules, there is normally a 7-day period for filing responses to motions and then a 3-day period thereafter for filing a reply. D.C. Cir. Rule 6(b) and (c).

Shoreham low power testing is not on any "critical path" toward any later operation of the plant. Even assuming problems were to occur during testing, LILCO itself predicts no more than two months to complete all testing to be authorized by the low power license. Therefore, there is no justification for this Board to refuse to stay the license so that the normal Court of Appeals briefing schedule for motions can be followed. Accordingly, we suggest that the Appeal Board, at a minimum, stay the license until July 2. This would permit the following schedule to be followed in the Court of Appeals:

Today (June 17)	State/County Emergency Motion filed
June 24	LILCO and NRC oppositions filed
June 27	State/County reply filed
July 2	Date by which we ask the Court of Appeals to rule on Emergency Stay Motion

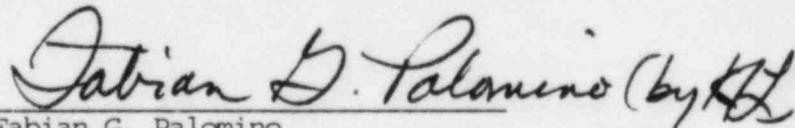
By staying the license until July 2, 1985, the NRC would allow careful judicial consideration of the views of all parties on the Emergency Motion. There is no public benefit to be gained from, nor is it seemly for the NRC to be, preventing the Court from having the time period it customarily requires for such consideration.

Respectfully submitted,



Herbert H. Brown
Lawrence Coe Lanpher
Karla J. Letsche
KIRKPATRICK & LOCKHART
1900 M Street, N.W., Suite 800
Washington, D.C. 20036

Attorneys for Suffolk County



Fabian G. Palomino
Special Counsel to the Governor
of the State of New York
Executive Chamber, Room 229
Capitol Building
Albany, New York 12224

Attorney for Mario M. Cuomo,
Governor of the State of New York

June 17, 1985

ATTACHMENT 1

and licensing matters. Between 1966 and 1976, I was employed by the Nuclear Energy Division of General Electric Company ("GE") in various managerial capacities relating to the sale, service and product improvement of nuclear power reactors manufactured by that company. Between 1955 and 1966, I was employed in various engineering capacities working with gas and steam turbines for GE. Included in my duties at GE was supervision of startup testing of equipment in fifteen to twenty fossil or nuclear power plants. I also was responsible for various nuclear fuel projects ranging from the remote disassembly of irradiated fuel to the supply of reload fuel for operating nuclear plants. I have written numerous technical papers and articles on the subject of nuclear power equipment and nuclear power plant safety and have given testimony on those subjects.

2. My name is Gregory C. Minor. I am vice president of MHB. My education background is in electrical engineering (with a power systems option) in which I received Bachelor of Science (University of California, Berkeley, 1960) and Master of Science (Stanford, 1966) degrees. I have over 24 years of experience in the nuclear industry, including design and testing of systems for use in nuclear power plants. Since 1976, I have been employed by MHB and have acted as a

consultant to domestic and foreign government agencies and other groups on nuclear power plant safety and licensing matters. Between 1965 and 1976, I was employed by the GE Nuclear Energy Division as a design engineer and manager of engineering design organizations. My responsibilities included the design, testing, qualification and pre-operation testing of safety equipment and control rooms for use in nuclear power plants. While with GE, I participated in the pre-startup testing of the instrumentation and control systems for a nuclear test reactor and in numerous system tests.

3. Our experience with the Shoreham plant started when we were employed by GE. At that time we were involved with the design of reactor system components for Shoreham and implementation and resolution of problems related to that design. After leaving GE, we have been involved with the Shoreham case on a virtually continuous basis since 1977, when we were originally retained as consultants to Suffolk County. As consultants on the Shoreham plant, we have performed diverse assignments, focusing primarily on technical reviews and analysis of safety and cost issues. Over the course of the Shoreham proceedings, we have visited the plant on numerous occasions and have testified on diverse issues before the NRC's Atomic Safety and Licensing Board and the State of New York Public Service Commission.

4. This Affidavit is to explain the technical reasons why low power testing to 5 percent power at Shoreham is of little value and, in fact, incurs several irreversible losses while producing no electrical power.

TIMING OF LOW POWER OPERATION

5. Every nuclear plant needs to have fuel loaded and systems tested before it is permitted to operate at power levels where the turbine can be turned and electric power generated. In general, most of the testing is performed at power levels of 5 percent power or less; if the testing is completed satisfactorily and other requirements are satisfied, then the plant is permitted to operate at higher power levels at which sufficient steam may be generated to allow production of electricity.

6. The NRC action to permit Shoreham low power operation at this time represents a deviation from the practice at most other plants. Where nuclear plants are granted an operating license as a result of a single licensing action, fuel loading and low power test activities are then performed and integrated with the approach ("ascension") to full power. Where plants have first been granted a low power license so as to complete the fuel loading and low power testing by the time the full power license is issued, usually the low power testing and the full power licensing are relatively close together in time.^{1/}

^{1/} Of 15 plants licensed for low power operation between March 1979 and June 1984, and also receiving a full power

(Footnote cont'd next page)

7. In the case of Shoreham, the low power license has been requested in not one, but four separate phases: Phase I is fuel loading and no criticality (i.e. irradiation of the fuel) is achieved; Phase II is cold criticality testing wherein extremely low levels of criticality (.001% power) are achieved for a very short period of time; Phase III is initial heatup and operation at up to 1% of full power; and Phase IV is low power testing and subsequent heatups involving operation at up to 5% of full power. LILCO obtained on December 7, 1984 a license for Phases I and II only. LILCO completed its fuel loading on January 19, 1985; it began cold criticality testing on February 15, 1985 and completed it roughly 36 hours later, on February 17, 1985.

IRREVERSIBLE CHANGES IN STATUS QUO
RESULTING FROM LOW POWER OPERATION

8. Before a reactor "goes critical" as it does for the first time during low power testing, neither the nuclear fuel

(Footnote cont'd from previous page)

license, the average time between the low power and full power licenses was less than 5 months. The average time from initial criticality -- which Shoreham achieved in February, 1985 -- to award of the full power license is only 1/2 month (excluding Grand Gulf which was indefinitely delayed). Attachment to Letter from NRC Chairman Palladino to Congressman Edward Markey, June 15, 1984.

nor the reactor or its components, are irradiated or contaminated by radiation. Low power testing, however, necessarily causes irreversible changes to a nuclear reactor and its supporting systems.

9. There is necessarily significant irradiation of the nuclear fuel as a result of low power testing. This irradiation results in the build-up of quantities of fission products within the fuel which requires that the fuel subsequently be handled, transported, and treated as irradiated fuel. Once these fission products have been produced, they cannot be removed from the fuel by any usual means. Thus, the irradiation from low power testing is irreversible. During low power testing other components of the Shoreham plant would also be irreversibly irradiated. These include the 137 control rods and control rod drives, the 31 local power range monitors, a number of source and intermediate range neutron monitors, and other reactor components, equipment, and piping. Once contaminated by substantial quantities of radioactive fission products, special care would be required in handling these items.

10. Because of the unavoidable irradiation and contamination described above, the conduct of low power testing of necessity requires some worker exposure to harmful radiation

during the course of the testing as well as after the testing is completed. The amount of exposure may not be large and unless errors were made, probably would not exceed allowable limits. However, it is an additional unavoidable impact which results from low power testing.

11. During Phases I and II of LILCO's low power testing program for Shoreham, a small amount of irradiation of the fuel and contamination of reactor internals and components occurred. However, the amounts of irradiation and contamination that are involved in Phases III and IV of LILCO's low power testing program are greater by many orders of magnitude. LILCO's cold criticality (Phase II) testing in February, 1985 involved criticality, at 0.001 percent of power, for roughly 36 hours. The amount of fuel irradiation and resulting contamination from Phase II is insignificant when compared to that which would occur during operation at 5% power for roughly two months as contemplated by LILCO's low power testing program.^{2/} The fuel

^{2/} In fact, LILCO has predicted that the amount of time it would operate Shoreham at 5% power could be much greater than that necessary to complete its low power tests. In its Startup Test Program Evaluation for a 5% Reactor Power Limitation (at 4), LILCO stated: "if a delay in receipt of a full power license well beyond the two months [of low power testing] is anticipated, frequent operation at 5% reactor power will be necessary to reactivate startup sources."

irradiation, measured in megawatt days per ton of fuel, was 0.00036 MWDT/Ton from the February 1985 Phase II criticality; it would be over 70 MWDT/Ton, assuming only 60 days of 5% operation. Furthermore, the radiation levels resulting from the brief criticality in February for Phase II, at this time would be even lower than that stated above following initial criticality, since the minimal fission products produced have already had approximately four months to decay. Even if additional criticalities, subsequent to that performed in February, were performed within the Phase II low power license limits of .001% power, the performance of Phases III and IV testing at Shoreham would nonetheless result in a substantial and irreversible change in the status quo.

12. In addition, in its non-irradiated condition, the fuel loaded into the Shoreham core probably had a recovery (or salvage) value nearly equal to the original purchase value (about \$65 million) for that fuel. This fuel, if not irradiated, likely could have been sold to other nuclear plants to use as is, or, if necessary, to have it reconfigured for a different reactor. (For example, some bundles might have required manual disassembly and rod rearrangement or reconfiguration of the pellets for the necessary pattern of enrichment.) The fuel still probably has a salvage value even after the light

irradiation involved in Phases I and II. However, once the fuel is substantially irradiated and there is a substantial build-up of fission products as would occur during Phases III & IV, it makes fuel reconfiguration, and therefore most opportunities for reuse of the fuel, more complicated and costly and therefore far less likely to be implemented. According to LILCO, the cost to LILCO of the Shoreham fuel is \$65 million. Thus, we believe that positive salvage value could be realized from the fuel in its post-Phase II condition (although not as much as if the fuel were not irradiated at all). There would be no such value if the fuel were used for testing up to 5% power.

13. Phases III and IV would also result in the loss of potential salvage value for other plant components that would be substantially irradiated (i.e., control rods, control rod drives, local power range, source, and intermediate range neutron monitors). We estimate the replacement value of these components to be at least \$2 - 6 million. These components are virtually identical in all BWRs and are periodically replaced. Thus, a resale market for them should exist unless they are heavily irradiated. The NRC Staff appears to agree with our opinion. (See Affidavit of Edward G. Goodwin, dated February 20, 1985, filed by the NRC in U.S. Court of Appeals, at 10).

Although as a result of the minimal Phase II criticality, these components have been irradiated to a minor extent, the radiation levels now present would not, in our opinion, preclude altogether their transfer and installation in other reactors, although it would be more difficult and complicated than if they were not irradiated at all. Additional irradiation during Phases III and IV, however, would reduce their marketability to practically nothing.

14. Additional costs resulting from a decision to perform low power testing are the costs of defueling, decontaminating, decommissioning, and disposal of the fuel as well as portions of the primary reactor system following a low power testing period in the event that a full power license is not obtained. The cost of necessary removal/disposal/decontamination efforts could be tens of millions of dollars, depending on the specific disposal requirements. Such efforts also carry with them the potential for additional worker radiation exposure. The irradiated fuel must be disposed of as high level radioactive waste. The U.S. Department of Energy has published expected costs for the receipt and ultimate disposal of irradiated fuel. The costs are currently being collected at a rate of \$.001/kwhr of generation for fuel exposed now to be disposed of by DOE in the future. For fuel with a design exposure of 15,000 MWD

(t)/ton this cost is equivalent to approximately \$120,000 per ton. The potential cost for disposal by DOE of the 100+ tons at Shoreham is therefore approximately \$12,000,000, not counting transportation or possible cost increases. In addition, no disposal facility is planned or expected before about the year 2000, some 15 years in the future. LILCO would therefore be required to store and safeguard the spent fuel on site until that time. Assuming an operations and security staff of at least 10-15 people for this chore, an annual cost of \$500,000 to \$1,000,000 is not unreasonable and is probably low. The cost of spent fuel disposal alone thus becomes a \$20 to 30 million obligation. Reactor component removal, handling and disposal would be additionally required.

TESTING IN PHASES III AND IV IS VERY LIMITED

15. Although according to LILCO 54 systems will be "in service, operated and tested" during Phases III and IV testing, 41 of those systems are already operational and have been checked out as part of Phase I and Phase II testing. Thus, in theory Phases III and IV provide the opportunity to check out only 13 additional systems. However, not even that many systems can be thoroughly or properly checked during Phases III and IV. The main turbine would not be operated during Phases

III and IV. Mr. Gunther, a LILCO employee, stated under oath that LILCO did not intend to try to operate the main turbine during its Phase III and IV testing. Tr. 776, 780; SCLP Ex. 2. And, even if LILCO did intend to operate the turbine, it is highly unlikely that the main turbine could be operated during Phases III and IV. According to LILCO's Vice President-Nuclear, John D. Leonard, Jr.:

When you bring steam down the pipes at five percent, you can test every component of that plant except the main turbine. . . . It's conceivable we are going to look very, very carefully to see if we could possibly spin the turbine. I don't think we can with that small amount of steam. I don't think we can overcome its inertia.

Transcript of Feb. 8, 1985 Oral Argument to the NRC, at 89. And, in an internal evaluation of 5% power tests, LILCO stated:

Certain tests in the Low Power Testing phase, such as turbine roll and HPCI, are normally performed at about 20% CTP [Core Thermal Power]. . . .

The modified schedule moves tests requiring nuclear steam flow to the end of 5% testing. These tests (main turbine roll, HPCI fine tuning, heatup of related piping, etc.) are ordinarily conducted prior to TC-1, but with the system at about 10-15% reactor power. Stable operation of the nuclear plant at 5% power may be difficult and has not been demonstrated during operation of other BWR plants.

"A Startup Test Program Evaluation for a 5% Reactor Power Limitation," SR2-K71-393, Oct. 25, 1983, at p.2. Therefore, the Turbine Generator and the turbine control portion of the EHC systems could not be operated in Phases III and IV. In addition, the support systems, consisting of the Turbine Lube Oil System, Generator Seal Oil Systems, and Steam Seal System, could not be completely or finally checked out until the turbine generator is actually run. Thus, only 8 additional systems could be checked out during Phase III and IV testing.

16. In addition, there are several tests which cannot be properly or completely performed at low power levels (5% or less). These include:

- . APRM/IRM calibration at overlap point
- . Set APRM trip reference point at 55%
- . APRM calibration (inaccurate at very low readings and would have to be repeated at higher power levels)
- . Turbine roll and balance at 1800 RPM
- . Generator exciter test
- . Moisture separator-reheater and drains (dynamic test)
- . Extraction steam (dynamic test)
- . Local power range monitor calibration

Although there are non-standard methods available to permit partial performance of some of these tests and partial testing of some other systems at 5% power, the tests would have to be substantially repeated at higher power levels.

17. Considering that Phases III and IV would only add a few systems to those already checked out, and that other systems require higher power levels for testing, there is relatively little benefit to be gained by pursuing Phase III and IV operation for the sole purpose of system testing. Furthermore, many of the tests in Phases III and IV are one time tests. That is, they must be done at some point prior to higher levels of operation but exactly when they are performed is not particularly important. However, some of the tests which involve the calibration of two systems at their point of overlap would need to be performed again if the approach to full power were substantially delayed (assuming that at some point a full power license were authorized). Accordingly, while it is difficult to be precise, it appears likely that at least some of the proposed Phase III/IV activities would have to be repeated after a full power license were authorized, if the Phase III/IV activities were conducted soon and then followed by a delay prior to full power operation.

THERE IS NO PURPOSE SERVED, AND NO BENEFITS
PRODUCED, BY LOW POWER TESTING TO OUTWEIGH
THE ADVERSE AND IRREVERSIBLE CHANGES IN THE
STATUS QUO

18. The essential purpose of a low power license is to test reactor systems which cannot be effectively tested in non-critical conditions. It is necessary to conduct such testing prior to operating the plant at higher power levels (i.e., greater than 5% power). However, during Phase III and IV testing, the Shoreham reactor would never be put in the "run" mode. Therefore there would be no electric power supplied to the grid as a result of the testing, and there would be no displaced oil or fuel cost savings. Instead, power from the grid would be required to run the plant during the tests. Thus, none of the benefits assumed in the NRC's 1977 EIS for Shoreham would be achieved by low power testing; however, as noted, low power operation would result in environmental impacts, such as plant contamination with radioactive material, the likely loss of the resale value of the fuel and other components once they become irradiated, the cost of decontamination, decommissioning and disposal, and worker exposure.

19. Because low power testing standing alone produces no benefits but does have serious adverse effects, it is our

opinion that there is no reason to conduct low power testing just for its sake alone. Rather, low power testing can be rationally justified only in circumstances where there is no substantial doubt that the plant subsequently will operate at higher power levels so that its benefits (i.e., generation of electricity) will be available to offset the adverse effects (fuel irradiation, radioactive contamination, potential worker exposure) which cannot be avoided. In our technical opinion, the optimum time for performing low power testing of any nuclear reactor is shortly before full power operation is reliably anticipated to begin.

DALE G. BRIDENBAUGH

GREGORY C. MINOR

Subscribed and sworn to before me
on this ____ day of ____, 1985.

NOTARY PUBLIC

My Commission expires:

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Appeal Board

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

Docket No. 50-322-OL

DOCKETED
USNRC

'85 JUN 17 AIO:34

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of SUFFOLK COUNTY AND STATE OF NEW YORK MOTION FOR STAY OF LOW POWER LICENSE have been served on the following this 17th day of June 1985, by U.S. mail, first class, except as otherwise noted.

* Alan S. Rosenthal, Chairman
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

* Edwin J. Reis, Esq.
Bernard M. Bordenick, Esq.
U.S. Nuclear Regulatory Comm.
Washington, D.C. 20555

* Mr. Howard A. Wilber
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

MHB Technical Associates
1723 Hamilton Avenue
Suite K
San Jose, California 95125

* Mr. Gary J. Edles
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

* W. Taylor Reveley, III, Esq.
John Jay Range, Esq.
Hunton & Williams
2000 Pennsylvania Avenue, N.W.
Washington, D.C. 20036

Edward M. Barrett, Esq.
General Counsel
Long Island Lighting Company
250 Old Country Road
Mineola, New York 11501

Mr. Jay Dunkleberger
New York State Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

James B. Dougherty, Esq.
3045 Porter Street, N.W.
Washington, D.C. 20008

Mr. L. F. Britt
Long Island Lighting Company
Shoreham Nuclear Power Station
P.O. Box 628
North Country Road
Wading River, New York 11792

Joel Blau, Esq.
New York Public Service Commission
The Governor Nelson A. Rockefeller
Building
Empire State Plaza
Albany, New York 12223

** Martin Bradley Ashare, Esq.
Suffolk County Attorney
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11788

Atomic Safety and Licensing Board
Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D.C. 20555

Stewart M. Glass, Esq.
Federal Emergency Management
Agency
26 Federal Plaza
New York, New York 10278

Mr. Stuart Diamond
Business/Financial
NEW YORK TIMES
229 W. 43rd Street
New York, New York 10036

** Mr. William Rogers
Clerk, Suffolk County Legislature
Suffolk County Legislative Building
Veterans Memorial Highway
Hauppauge, New York 11788

Stephen B. Latham, Esq.
Twomey, Latham & Shea
P.O. Box 398
33 West Second Street
Riverhead, New York 11901

Hon. Peter F. Cohalan
Suffolk County Executive
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11788

** Fabian Palomino, Esq.
Special Counsel to the
Governor
Executive Chamber, Room 229
State Capitol
Albany, New York 12224

Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

** Robert Abrams, Esq.
Office of the Attorney General
of the State of New York
Two World Trade Center
Room 46-14
New York, New York 10047

Lawrence J. Brenner, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. George A. Ferguson
School of Engineering
Howard University
2300 6th Street, N.W.
Washington, D.C. 20559

Dr. Peter A. Morris
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Karla Letsche

Karla J. Letsche
KIRKPATRICK & LOCKHART
1900 M Street, N.W., Suite 800
Washington, D.C. 20036

DATE: June 17, 1985

* By Hand
** By Federal Express