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February 28, 1985

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FILE NO.

DIRECT DIAL NO. 804 788

BY HAND

DOCKET NUMBER  
PROD & UTIL. FAC.

50-32201

Lawrence J. Brenner, Esq.  
Dr. Peter A. Morris  
Dr. George A. Ferguson  
Administrative Judges  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Dear Judges:

The parties are at an impasse with respect to settlement of the diesel generator litigation. LILCO believes the Board can be helpful in determining whether the impasse can be overcome. At the conclusion of last Thursday's hearing, the Board indicated that the parties could be in touch with the Board in this event. Tr. 28256. Accordingly, LILCO requests that the Board convene a conference of the parties in Bethesda on Friday, March 1, 1985, at a time and place convenient to the Board. In addition to counsel, LILCO will have corporate representatives present. If Friday is inconvenient for the Board, perhaps this matter could be taken up on Tuesday afternoon prior to commencement of the hearing.

LILCO has advised Mr. Reis of LILCO's desire to have a conference of the parties on Friday and Mr. Reis has indicated the Staff's willingness to participate in such a conference. I have advised Mr. Dynner of LILCO's intention to seek such a conference.

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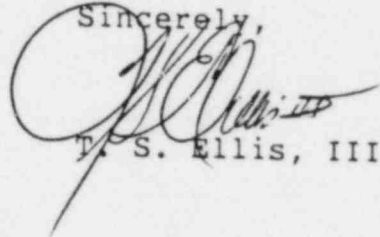
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HUNTON & WILLIAMS

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Attached is a copy of LILCO's proposal. Also attached, at Mr. Dynner's request, are copies of correspondence relating to LILCO's proposal.

Sincerely,



T. S. Ellis, III

75/403

Attachments

cc: Service List

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FILE NO. 24566.3

DIRECT DIAL NO. 804-788-8361

February 22, 1985

VIA TELECOPIER

Alan R. Dynner, Esq.  
Kirkpatrick & Lockhart  
1900 M Street, N.W.  
8th Floor  
Washington, D.C. 20036


Diesel Settlement

Dear Alan:

In response to Judge Brenner's suggestion, we discussed the possibility of further diesel testing with the highest levels of LILCO's management. As a result of those discussions, we are authorized to send you the enclosed settlement proposal. As it reflects, the Company is willing to conduct additional diesel testing and inspections. Any commitments on LILCO's part, however, will only be made if we receive assurances from all parties that successful completion of the tests and inspections will completely resolve all outstanding diesel issues. We believe that the attached proposal forms the basis for just such a comprehensive settlement agreement.

We look forward to hearing from you no later than Tuesday so that we can pursue negotiations immediately and be in a position to report to the Board by the end of the week.

Sincerely,

  
T. S. Ellis, III  
Anthony F. Earley, Jr.

221/765

Enclosure

cc (by telecopier):

Edwin J. Reis, Esq.

Bernard M. Bordenick, Esq.

Fabian G. Palomino, Esq.

Elements of a Diesel Generator Settlement

1. LILCO will agree to perform an additional endurance run on DG-103 at 3500 KW for a period of time sufficient to result in the machine having experienced a total of  $3 \times 10^6$  cycles at or above 3500 KW. The purpose of this test is to demonstrate that the diesel crankshafts are capable of performing their function, even assuming worst case instrument errors and the operation of cyclic loads which the County now claims will cause the diesels to exceed the current qualified load of 3300 KW. This test will be performed using in-plant instrumentation to control load at a median value of 3500 KW. Variations of  $\pm 100$  KW will be permitted.

2. LILCO will agree to perform an inspection of the DG-103 crankshaft after the endurance run. This inspection will be limited to the highest stress areas of the crankshaft connecting rod journals.

3. The criteria for the acceptability of the endurance run will be the acceptance criteria used for the previous endurance run.

4. LILCO will agree to perform surveillance procedures on the DG-101 and DG-102 block tops throughout the life of these diesels to monitor crack initiation and growth, if any.

5. LILCO will agree to withdraw its request that the Licensing Board make findings on the adequacy of the diesels at 3500/3900 KW. The Board will be asked to limit its approval of this settlement agreement to the qualified load rating of 3300 KW and a short term load rating of 3500 KW. This provision would be without prejudice to LILCO's right to ask in the future for approval to increase the long term load rating above 3300 KW based upon the record of this proceeding.

6. Successful completion of the endurance run and associated inspections will be deemed confirmation that the TDI diesel generators meet the requirements of GDC 17 and are acceptable for full power operation of the Shoreham plant.

7. Pending completion of the endurance run, SC will agree that the TDI diesel generators are adequate for low power operation up to 5% power based upon the already completed endurance run of 3300 KW and the substantial inspection and analysis of the diesels performed to date. This portion of the agreement will be effective immediately.

8. Based upon point 7 above, LILCO will agree to withdraw its request for an exemption from GDC 17 and the parties will cease and desist from all litigation associated with the exemption request.

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February 26, 1985

WRITER'S DIRECT DIAL NUMBER  
(202) 452-7044

(BY TELECOPY)

Anthony F. Earley, Jr., Esq.  
Hunton & Williams  
P.O. Box 1535  
707 East Main Street  
Richmond, Virginia 23212

Dear Tony:

We have reviewed LILCO's proposal for a settlement of the EDG litigation and are disappointed that it does not appear to be serious. The proposal fails to address the County's concerns, which are well known to LILCO.

The crankshafts do not meet classification society rules at 3500 kW. Operation for only  $3 \times 10^6$  cycles is insufficient to prove the reliability of the crankshafts at that level, as shown by testimony in this proceeding as well as by the number of hours the EDGs operated before their original crankshafts failed. LILCO's proposed additional testing ignores issues of instrument error and sufficient margin to cover additional loads operators could erroneously add during a LOOP or LOOP/LOCA event. It appears to call for testing for only about 220 hours at a median power level as low as 3300 kW, taking into consideration instrument error ( $\pm 100$  kW) and test tolerances ( $\pm 100$  kW).

The LILCO proposal also ignores our concerns with the cracked blocks of EDGs 101 and 102, since it again selects EDG 103, with the replacement block, as the vehicle for the testing.

We have other problems with the proposal as drafted, but need not discuss them at this point given the proposal's non-responsiveness to the basic issues in the litigation. If, after

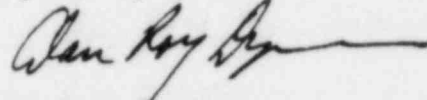


KIRKPATRICK & LOCKHART

Anthony F. Earley, Jr., Esq.  
February 26, 1985  
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reflection, LILCO makes a serious and responsive settlement proposal, as we believe was suggested by Judge Brenner's repeated comments to LILCO's counsel, such a proposal would be considered by us.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Alan Roy Dwyer", with a long horizontal flourish extending to the right.

Alan Roy Dwyer

ARD/dk

cc: Edwin J. Reis, Esq.  
Fabian G. Palomino, Esq.

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FILE NO 24566.3

DIRECT DIAL NO. 804 788-8361

BY TELECOPIER

Alan R. Dynner, Esq.  
Kirkpatrick & Lockhart  
1900 M Street, N.W.  
Eighth Floor  
Washington, D.C. 20036

Dear Alan:

Your response to LILCO's settlement proposal reflects a studied effort on your part to avoid any meaningful settlement discussions. The suggestion that the offer was not serious is completely unnecessary and counterproductive. Moreover, your characterizations of the terms of the offer are inaccurate and misleading. Finally, it is also significant that your letter contains no counterproposals or suggestions.

Contrary to your assertion, there is substantial basis for choosing  $3 \times 10^6$  cycles for additional testing. As you know, Regulatory Guide 1.108 requires testing of diesels for 22 hours at a continuous rating and two hours at a short term rating, a ratio of approximately ten to one. Applying this rationale to LILCO's proposal to use 3500KW as an overload rating leads to the conclusion that  $1 \times 10^6$  cycles constitute appropriate testing at 3500KW. LILCO has gone further and offered to test up to a total of  $3 \times 10^6$  cycles. Further, it is also significant to note, as Dr. Bush's testimony (pages 16-21) in the reopened proceeding reflects,  $3 \times 10^6$  cycles is the upper bound of the values normally used for the high cycle fatigue limit.

Your claim that  $3 \times 10^6$  cycles is inadequate because the original crankshafts failed after similar testing ignores a critical consideration. Endurance testing is intended to



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Alan R. Dynner, Esq.  
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demonstrate that crack initiation will not occur. LILCO has committed to inspect the highest stress areas of the crankshaft following testing to confirm that cracks have not initiated. You will recall that when LILCO inspected the original crankshafts that had not failed, evidence of crack initiation was readily apparent. Thus, the testing proposed by LILCO coupled with inspection following the test is adequate to demonstrate that cracks will not initiate at 3500KW.

Your suggestion that the testing may be conducted at a median level of 3300KW is also incorrect. As you know from testimony, instrument errors are less than  $\pm 100$  KW and are likely to be random in nature. More important, although the operators are given a  $\pm 100$  KW control band, they will be instructed to maintain the median reading as close to 3500KW as possible.

Your assertions to the contrary, LILCO did not ignore the County's block concerns. The purpose of endurance testing is to demonstrate that cracks will not initiate. Once cracks have initiated, as they have in the DG 101 and 102 blocks, further testing to the fatigue endurance limit is not meaningful. What is meaningful is LILCO's crack propagation analysis coupled with LILCO's commitments for surveillance of the block cracks. I should add that the DG 101 block has been tested for 208 hours, essentially  $3 \times 10^6$  cycles, at 3500KW. Thus, further endurance testing on the DG 101 and 102 blocks would be unnecessary and unwarranted.

LILCO's settlement proposal is serious and responsive to Judge Brenner's comments. Given the impasse between the parties, we believe the best course of action is to ask the Board to become actively involved in settlement discussions (see Tr. 28,256). To that end, we intend to submit the settlement proposal and the related correspondence to the Board. We will, of course, make it clear that any settlement discussions before the Board are without prejudice to our respective positions in the litigation. Please let me know by the close of business today if you have any objection to this course of action.

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Alan R. Dynner, Esq.  
February 27, 1985  
Page 3

In any event, let me close by noting LILCO remains open to any reasonable suggestions from Suffolk County concerning settlement of the diesel litigation.

Sincerely yours,

/s/

Anthony F. Earley, Jr.

cc: Edwin J. Reis, Esq.  
Fabian G. Palomino, Esq.

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February 27, 1985

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(BY TELECOPY)

Anthony F. Earley, Jr., Esq.  
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Dear Tony:

Your abrasive reply to my letter of February 26 clearly demonstrates that LILCO's so-called "settlement proposal" was nothing more than amateurish posturing aimed at the Licensing Board.

Let's look at the facts. The County, not LILCO, first proposed settlement of the diesel litigation through a testing program. As you well know, we earlier stated that the crankshafts would be acceptable at particular loads if either they meet classification society rules (which they do not at or above 3500 kW) or, if they have been tested at the true value of such loads for 10<sup>7</sup> cycles (about 740 hours) and been subsequently found to be free of defects. We also said that the cracked engine blocks of diesels 101 and 102 could be acceptable for operation at particular loads if one of those blocks were tested at the true value of such loads for 10<sup>7</sup> cycles and been subsequently found to have suffered no significant ligament or circumferential crack propagation and no initiation of stud-to-stud cracks. These settlement offers have been "on the table" for many months, and were reconfirmed as open offers earlier this month on the record in the presence of the Board. Tr. 27,101; 27,113.

Has LILCO ever responded to these settlement offers? No. Instead, in October of 1984 LILCO chose to test diesel 103, with its replacement engine block, for 525 hours at a nominal load of 3300 kW. Taking into consideration instrument error of + 70 kW, that test run conservatively was at only 3230 kW. LILCO took credit for some 220 hours of prior operation of diesel 103 with the replacement crankshaft and the original defective block which LILCO has since replaced.

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Before LILCO began that test run we strongly urged the Staff, which was acting as a "go-between" to try to arrange some settlement, to persuade LILCO to test either diesel 101 or 102 and at loads higher than 3300 kW. Our position, which I am certain was communicated to LILCO, was that because the replacement block of diesel 103 was uncracked, of a different design and of a stronger material than the cracked blocks on diesels 101 and 102, the test run on diesel 103 could not possibly resolve our concerns with the cracked blocks. We also indicated that testing at only 3300 kW was risky because a maximum load of 3300 kW had not been justified. Because LILCO had maintained that the diesels were capable of safe operation at loads of 3500 kW to 3900 kW, we could not understand why LILCO was unwilling to put its theories to a test.

The Staff responded that LILCO, not the Staff, had selected 3300 kW as the maximum load for testing, and that the Staff had not yet determined whether such a maximum load was justified. The Staff said that diesel 103 was to be tested because cracks on the blocks of the other diesels would preclude strain gage measurements of the cam gallery area; however, the Staff acknowledged that those measurements could be taken in only about ten hours. There was no reason for not running the 10' cycle test on diesel 101 or 102, except that LILCO must have been afraid of the consequences.

On February 22 LILCO sent us its settlement proposal, purportedly "in response to Judge Brenner's suggestion." This proposal did not mention, much less address, the County's continuing settlement offer, despite Judge Brenner's comment about the County's offer. Tr. 27,113. Moreover, LILCO's proposal overlooked Judge Brenner's questioning regarding testing at 10' cycles of diesels 101 or 102, and his statement that if LILCO believes the diesels are acceptable at 3500 kW, why doesn't LILCO "put your money where your mouth is and run it at that load." Tr. 27,098. See also Tr. 27,117. If LILCO had cared to respond to the County's offer in a meaningful way, these comments would have put into context Judge Brenner's suggestion that you discuss with the "highest levels" of LILCO management practical steps that LILCO might take to settle the diesel litigation. Tr. 27,111.

But aside from the LILCO proposal being unresponsive to Judge Brenner's comments, it was also unresponsive to the County's concerns, for the reasons summarized in my letter yesterday. For the sake of clarity, we will respond briefly to the arguments in your letter of February 27.



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Anthony F. Earley, Jr., Esq.  
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First, as to the 220 hours of additional crankshaft testing, we do not accept the Regulatory Guide 1.108 twenty-four hour test as an applicable standard for crankshafts that fail to meet classification society rules. The original crankshafts on your diesels ran hundreds of hours longer than 24 hours before they broke.

Second, Dr. Bush's prefiled testimony has not yet been subjected to cross-examination. We believe his analysis of crankshaft failure modes is faulty and not supportable. Dr. Bush and the Staff witnesses previously testified that the crankshafts should be acceptable at 3500 kW only if tested 10<sup>7</sup> cycles at that load.

Third, inspections of suspect crankshafts after testing is no substitute for adequate crankshafts. If cracks initiate and propagate in a crankshaft during a LOOP/LOCA event, your inspections will have been useless. LILCO's own witness, Dr. McCarthy of Failure Analysis Associates, testified that there would be only a short time between crankshaft crack initiation and the severing of the crankshaft (Tr. 23,009) and that there is little purpose to be served by periodic crankshaft inspections. Tr. 23,065.

Fourth, your letter confirms that your test would be at a "median" level, would allow operators a "+ 100 kW control band," and would disregard instrument error of +100 kW. Hence, the test could be performed at a true value of only 3300 kW.

Fifth, your statement that testing the cracked blocks of diesels 101 or 102 would not be meaningful is absurd. It is based upon LILCO's specious "cumulative damage analysis," which we do not accept. Obviously if one completely accepts that analysis, testing would be superfluous. Let's put the LILCO theory to a real test. The County was willing to test its theory concerning the origin of cam gallery cracks (over LILCO's objections), and we were proved wrong. Why won't LILCO "put its money where its mouth is"? Test one of the cracked blocks for 10<sup>7</sup> cycles and we will all see whether or not your theories are correct. LILCO's refusal to carry out such a test speaks louder than all of LILCO's words.

Your letter closes by stating your intention to submit the LILCO proposal and our exchange of correspondence to the Board. We are already before the Board; that's what this litigation is all about. If LILCO really wanted a settlement, LILCO might have responded to the County's long-outstanding settlement offer. You

KIRKPATRICK & LOCKHART

Anthony F. Earley, Jr., Esq.  
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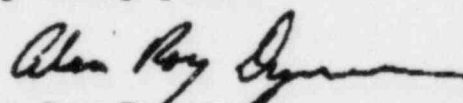
might have given us a proposal which responded to our concerns. You might have suggested we discuss the issues in person or by telephone. Instead, you sent one non-responsive proposal and one intemperate letter.

In our view, taking these matters to the Board will accomplish nothing in the way of furthering a settlement. We cannot stop you from proceeding with your ill-conceived plan, but we will only discuss your "proposal" with the Board if the Board orders us to participate and if such discussions are on the record.

The County has settled most of the issues in the diesel litigation. We settled our contention regarding pistons. We settled our contention on cylinder heads. We settled our concerns with cam gallery cracks. We have made offers to settle the crankshaft and cylinder block issues, based upon the testing of those components for 10 cycles at the true value of the loads they may experience. We will continue to be reasonable, but we will not be influenced by your theatrics.

The State of New York shares the views expressed in this letter.

Very truly yours,

  
Alan Roy Dynner

ARD/dk

cc: Edwin J. Reis, Esq.  
Fabian G. Palomino, Esq.