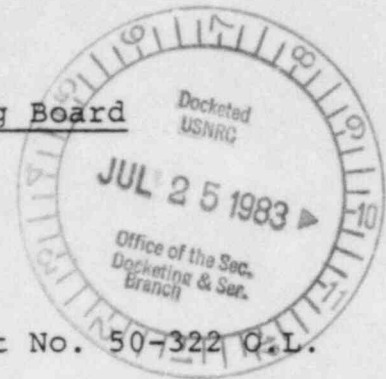


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board



In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

Docket No. 50-322 Q.L.

SUFFOLK COUNTY'S MOTION
TO COMPEL DISCOVERY

I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.740(f), Suffolk County hereby moves that this Board compel Long Island Lighting Company ("LILCO") to identify and produce copies of documents which were requested by the County in its counsel's letter of July 8, 1983 (the "County's Request," a copy of which is attached hereto as Attachment 1). These documents fall into two categories:

1. Documents requested in paragraph 2 of the County's Request, which asked LILCO to "identify and supply copies of all documents relating to or commenting upon any of the documents listed in Appendix A . . .;" LILCO has not objected to this request, but no such documents have been identified and supplied, or represented as non-existent; and

2. Documents requested in paragraphs 3 through 13 of the County's Request, which separately asked LILCO to

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"identify and supply copies of all documents relied upon to support or relating to . . ." each of the "material facts" set forth in LILCO's "Motion for Partial Summary Disposition of SC's Diesel Generator Contention," dated July 7, 1983 (the "LILCO Disposition Motion"). LILCO refused to identify or provide these documents by its counsel's letter of July 11, 1983 (a copy of which is attached hereto as Attachment 2). LILCO's counsel's letter of July 18, 1983 (a copy of which is attached hereto as Attachment 3) also commented further on this refusal.

II. DISCUSSION

A. Category 1: Documents Relating to or Commenting Upon Appendix A Documents, and Neither Identified and Supplied Nor Represented as Non-Existent.

As noted above, LILCO has not objected to the request for this category of documents. Clearly if documents exist which comment upon or relate to the documents listed in Appendix A to the County's Request, they could be relevant and material to the County's contention regarding the diesel cylinder head cracking problem.^{1/} For example, item 14 requests all drafts and the final failure analysis regarding

^{1/} The first sentence of the County's Request expressly states that only documents which relate to the head cracking problem are requested.

the cylinder heads. There could well be letters or memoranda^{2/} which comment upon, support, explain, or even take issue with the failure analysis prepared by Delaval (which, according to LILCO, is the only failure analysis). This is only one obvious example. In fact, all of the documents listed in Appendix A to the County's request are relevant and material to the County's contention regarding cracked cylinder heads, and only a few have been challenged by LILCO as irrelevant.^{3/} Therefore, documents which relate to or comment upon those Appendix A documents are themselves relevant and material.

It is difficult to accept the notion (and LILCO has not asserted) that there are no documents commenting upon or relating to the Appendix A documents. Typically, correspondence or memoranda are generated with respect to items such as reports, quality assurance matters, inspections and audits, and procedures. This is especially so where, as here, the manufacturer has a history of cylinder head cracking problems, and a number of parties -- LILCO, Stone & Webster, Delaval,

^{2/} The word "documents" is broadly defined in the County's Request.

^{3/} For example, Items 1 and 2, the Diesel Generator Operational Review Committee Report (see Attachment 3, at 2) and minutes of any committee meetings. Suffolk County asserts this Report is relevant, as shown by the fact that the Report and its Appendix A specifically address the head cracking problem. The County agrees that Item 16 principally relates to the vibration contention. Other items objected to initially in LILCO's counsel's letter of July 11 (Attachment 2) were apparently withdrawn after the County referred counsel to the first sentence of the County's Request (see note 1 above).

the NRC Staff and its consultant, and other Delaval customers -- have been involved in attempting to solve and otherwise deal with those problems.

Accordingly, Suffolk County hereby moves that the Board issue an order compelling LILCO to identify and supply to the County the documents requested in paragraph 2 of the County's Request, or if no such documents exist, to represent that such is the case.

B. Category 2: Documents Relied Upon to Support or Relating to Each "Material Fact" Asserted in LILCO's Disposition Motion.

In its Disposition Motion, LILCO has attempted to meet the requirements of 10 C.F.R. § 2.749 to demonstrate that there is no genuine issue to be heard as to any material fact, and that LILCO is entitled to a decision as a matter of law. To this end, LILCO has itself set forth a "Statement of Material Facts" appended to and cited in the Disposition Motion. Each statement of a "material fact" is defined by LILCO as material in the context of the County's contention regarding the cylinder head cracking issue. The "material facts" are cited in the "Argument" portion of the Disposition Motion as true and dispositive of the matters raised in the County's contention. Each "material fact" is, moreover, asserted by LILCO to be "undisputed." Disposition Motion at 13-14. In short, in its "Statement of Material Facts," LILCO has itself attempted to narrow the

issues to those which, in LILCO's opinion, are material, dispositive, and undisputed.

In an effort to expedite discovery and focus its requests for documents to include only those material and relevant to the subject matter of the County's contention, the County requested LILCO to identify and supply all documents relied upon to support each of its "material facts" and, in order to obtain documents which might comment upon, explain, or contradict each "material fact," those relating to the "material facts." The County recognized that LILCO's "Statement of Material Facts" cites various paragraphs of affidavits of Richard A. Pratt and Edward J. Youngling; however, the paragraphs cited in those affidavits generally include several statements, and it is unclear which of those statements are relied upon to support a particular "material fact." Accordingly, the County noted that its request should include documents relied upon in the affidavits to support statements therein which LILCO relies upon to support its "material facts." See County's Request at 2, footnote.

By letter of July 11, 1983 (Attachment 2) LILCO rejected the County's request, claiming that the request

. . . is not calculated to focus on key issues; it is an unfocused attempt to find an issue. It also goes well beyond the scope of the admitted diesel generator contentions. In sum, it is overly broad and burdensome.

The letter further asserted that LILCO had already given the County "the principal documents (i.e., failure analyses and barring over procedure) relied upon by Messrs. Pratt and Youngling . . . ," and suggested that it should be the County's task to identify any other facts or references in the affidavits or Disposition Motion.

The County's counsel replied by letter of July 12, 1983 (a copy of which is attached hereto as Attachment 4). The County noted that because LILCO itself had defined the "material facts" as indisputable and sufficient to show that there is no genuine issue to be litigated, ". . . there can be no more precise focusing of discovery than our request" Pointing to the July 22, 1983 deadline for a decision by the County regarding settlement or litigation of its contention, the County stated that this decision

must be based upon complete information and not merely upon those documents which LILCO characterizes as "principal documents" and which it chooses, in its own discretion, to supply to the County.

The County urged LILCO to reconsider and supply the requested documents by no later than July 18, 1983, the deadline for production of documents as agreed by the parties and approved by the Board.

During meetings at the Delaval facility in Oakland, California on July 13 and 14, counsel for LILCO and the County discussed the County's request for identification and production

of the documents set forth in paragraphs 3-13 of the County's Request. Counsel for LILCO urged the County to specifically identify those "material facts" which the County views as important and as to which it really needs the requested documents. The County's counsel responded that, by definition, each fact set forth by LILCO is "material" and "undisputed," and the County cannot say that any are unimportant. The County's counsel pointed out that the County does not know which statements in the Pratt and Youngling affidavits LILCO relies upon to support its "material facts"; therefore, the County is not capable of reducing its request to cover only those statements; that task should be undertaken by LILCO. However, the County's counsel did amend the County's Request to eliminate requests for documents supporting or relating to (1) "material fact" 9 as to the contents of Shoreham Technical Specification § 3.8.1.2, and (2) "material fact" 10 as to LILCO's commitment to replace all diesel generator heads.

By letter of July 18, 1983 (Attachment 3), LILCO again refused to identify or produce the documents requested in paragraphs 3 through 13 of the County's Request. That letter reiterates the claim that the County's request is "unnecessarily broad and unfocused," and again suggests that the County further narrow its request "to specific statements" made in the Disposition Motion or supporting affidavits.

The County has already done so to the extent possible. First, as to the Disposition Motion, the County has only asked for documents relied upon to support or relating to each "material fact" set forth by LILCO and asserted by LILCO to be material, undisputed, and dispositive of the County's contention. Each of these "material facts" is comprised of "specific statements." The County has not extended its document request to any other parts of the Disposition Motion. Hence, the County's request is as narrow, relevant and focused as possible, because it is confined to documents which support or relate to "facts" which LILCO itself by definition regards as the only critical issues.

Second, as to the Pratt and Youngling affidavits, the County has only asked for documents relied upon to support or relating to "specific statements" in the affidavits which in turn are relied upon to support LILCO's "material facts."^{4/} While LILCO's "Statement of Material Facts" refers to paragraphs of the affidavits upon which it relies to support a "material fact," it has not designated which of the multiple statements in a paragraph are relied upon. The County cannot make this designation, because it does not know what LILCO or its affiants have in mind. Instead, the County has asked LILCO to identify each statement in an affidavit paragraph which

^{4/} The County's Request covers and is intended to cover any other affidavits upon which LILCO relies.

is relied upon to support a "material fact," and supply the relevant documents only as to such statements. This request is completely reasonable, and permits LILCO itself to even more narrowly focus the discovery if it wishes to do so.

Finally, in its July 18 letter LILCO's counsel appears to suggest that most or many of the documents requested in paragraphs 3 through 13 of the County's Request have already been supplied:

. . . Messrs. Youngling and Pratt have reconfirmed that the County has been supplied with all documents explicitly relied upon to support the statements made in their affidavits.

Attachment 3, at 6 (emphasis added). Of course, this statement is a far too limited interpretation of the County's Request. The County requested all documents relied upon to support each of LILCO's "material facts," directly or indirectly, and not just those "explicitly" relied upon. Indeed, we do not understand what LILCO means by the word "explicitly" in this context. Obviously if an affiant relied upon no documents to support a statement, none need be identified and supplied. However, the County rejects the proposition that discovery of documents can or should be avoided by an assertion that certain documents were not "explicitly" relied upon.

In addition, the County has requested documents relating to LILCO's "material facts" and the affiant's statements relied upon to support the "material facts." This request is completely ignored in the statement on page 6 of Attachment

3, but it is a critically important request of great relevance to the County's contention. The County is entitled to the identification and production of documents which explain, comment upon, contradict, or support LILCO's "material facts," and not just to those which LILCO asserts it has relied upon.

For example, in "material fact" 2 LILCO asserts that

It is Delaval's experience that cracking of the type found at Shoreham will develop, if at all, within the first 600 hours of operation.

This statement cites paragraph 7 of Mr. Pratt's affidavit, which contains similar statements. The County's Request would require LILCO to identify and produce: (1) all documents relied upon by LILCO to support "material fact" 2; and (2) all documents relied upon by Mr. Pratt to support his statement, to include any reports, surveys, complaints from customers, warranty records, etc.

However, according to the July 18 letter of LILCO's counsel,

Mr. Pratt's statements about Delaval's experience with diesel cylinder heads are based on his overall knowledge of cylinder head performance and not (sic) a specific document or study.

At the July 13 meeting at Delaval and with LILCO's counsel present, the County's counsel, in a discussion regarding the County's need for documents, asked Mr. Pratt to identify the documents he relied upon to support his statements regarding non-cracking of heads after 600 hours of operation. Mr. Pratt

responded, as LILCO's counsel reports, that he did not rely upon any particular documents or studies, but on his "general experience." He also added that that Delaval maintains warranty records which would show some of Delaval's customers' experiences during the first year of diesel operation, but that he had not reviewed those records in preparing his affidavit. Those documents, and perhaps others such as customer complaints, salesmen's reports, etc., could either support or contradict Mr. Pratt's statements as to Delaval's "experience," and therefore could support or contradict one of LILCO's "material facts."^{5/}

To cover just such situations, the County's Request also would require LILCO to identify and produce: (3) all documents relating to "material fact" 2, and (4) all documents relating to Mr. Pratt's statement as to Delaval's experience concerning when cracks in cylinder heads develop. This would require disclosure not only of the warranty records, which we now know exist, but of other possible relevant documents which may exist. In addition to customer complaints, there may be surveys performed by Delaval or others, reports, memoranda, or other documents in Delaval's files of which Mr. Pratt is

^{5/} We note that in its Disposition Motion at 8, LILCO asserts that based upon Delaval's statement that cracks are unlikely to occur after 600 hours of operation, ". . . there is a high degree of assurance that additional cylinder cracks will not occur at Shoreham."

currently unaware. Such documents could show that Mr. Pratt's general recollection is not correct, and that many cylinder heads have cracked after 600 hours of operation.

The relevancy and significance of the County's Request to this single example is equally applicable to every one of LILCO's "material facts" and affidavit statements which support them. It is a revelation to examine the implications as to each "material fact," but to summarize one need examine only "material fact" 1. Are there any documents which suggest that the cracks were not "caused by operating stresses acting upon latent casting defects . . . ?" Do any documents suggest additional causes? What documents exist which show the percentage of casting defects in original model cylinder heads? Are there any documents which demonstrate a "successful operating record" of Delaval diesel cylinder heads at other nuclear power plants? What documents show that "no problems" have been encountered at such plants?

Thus, with respect to this single "material fact" there could be documents which disclose a very different picture than that painted by LILCO, based upon Mr. Pratt's general overall experience and recollections. Suffolk County is clearly entitled to identification and production of documents which might disprove each of LILCO's "material facts," upon which LILCO relies as dispositive of the County's contention. The County's Request in paragraphs 3 through 13 is clearly highly relevant, of great potential significance,

and narrowly focused upon issues defined by LILCO itself as the key issues which are material to and dispositive of the County's contention.

Today the County's counsel received a letter from LILCO's counsel dated July 18, 1983, together with a copy of a memorandum, dated April 6, 1983, from Mr. Youngling to Mr. Jim Rivello, the Shoreham Plant Manager (a copy is attached hereto as Attachment 5). The Youngling memorandum contains statements which appear to contradict some of LILCO's "material facts" and statements in the Youngling and Pratt supporting affidavits. First, the Youngling memorandum states

. . . Delaval has told us for our 24 heads eight on each engine we could expect approximately two to three more cylinder head failures on average. Or a total of approximately five to six failures out of 24. This is a rather high level in my judgment.

This statement seems to contradict "material facts" 1 and 2 and the supporting affidavits. LILCO's counsel attempts to explain the statement in the Youngling memorandum by asserting that Mr. Youngling received this information from a Delaval service engineer, that the engineer was not as familiar with cylinder head operating records as Mr. Pratt, and that the service engineer's statements "may have" reflected the number

of hours the Shoreham diesels had then operated. With all respect, counsel has no personal knowledge of these matters and is not giving an affidavit. The explanation involves factual issues in dispute to be resolved by testimony from Mr. Youngling, the service engineer, and Mr. Pratt.

Second, the Youngling memorandum appears to contradict LILCO's "material facts" 5, 6, 7 and 8 and the supporting affidavits, which assert that water leakage would be unlikely to impair diesel operability and reliability. According to the Youngling memorandum:

I must also point out to your that water leakage into the cylinder head is what could be a catastrophic type failure should the cylinder head essentially go "solid with water." However, Delaval has given us assurance that the cylinder head is a dished configuration thus the dish area would fill up and the cylinder would overflow down past the piston rings into the lube oil sump which gives additional difficulties in that there could be water contamination of lube oil.

This statement suggests that there is reason for serious concern regarding the leakage of water from cracks in cylinder heads, and that notwithstanding its "undisputed material facts," LILCO knew of these reasons.

The existence of the Youngling memorandum and the significance of its contents emphasize the critical relevance and importance of the County's Request for identification and production of documents requested in paragraphs 3 through 13.

III. RELIEF REQUESTED

As set forth above, Suffolk County requests that the Board issue an order compelling LILCO as quickly as possible to identify and supply copies to the County of the documents requested in paragraphs 2 through 13 of the County's Request. In addition, the County respectfully requests the Board to adjust the extremely tight discovery and litigation schedule agreed by parties and approved by the Board in its "Memorandum and Order Regarding Schedule," dated July 7, 1983.

The County agreed to reach a decision by July 22, 1983, whether to settle the head cracking contention or to litigate it, and if the latter, to file its answer to LILCO's Disposition Motion by July 22. This agreement was based upon the agreement that LILCO would produce all requested documents no later than July 18, 1983. The County's experts would then be able to evaluate the discovery documents and discuss them with the other parties to form a conclusion by July 22, allowing five business days to do so.

However, LILCO has not even completed supplying the County with documents it agreed to produce. See Attachment 3. If the Board grants this Motion to Compel Discovery, the County is likely to receive many additional documents to review and consider, some perhaps as significant as the Youngling memorandum. The County will clearly be unable to reach a decision regarding possible settlement by July 22,

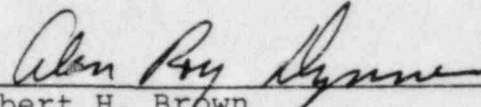
because LILCO has failed to produce the relevant and material documents, and accordingly the County does not have all of the information necessary to reach a reasoned and supportable decision. See Attachment 4. Similarly, it would be unfair to require the County to answer LILCO's Disposition Motion, when LILCO has refused to provide the documents it relies upon to support or relating to LILCO's "material facts."

Accordingly, the County requests that the Board change the July 22 date for the County's decision regarding settlement and answer to LILCO's Disposition Motion to a date five (5) business days after LILCO has identified and supplied the County with copies of all documents requested in paragraphs 2 through 13 of the County's Request, and has supplied the County with all other documents agreed to be provided. The five business days are to allow County consultants a short but reasonable time to review and digest the discovery documents. The County requests that, if litigation thereafter becomes necessary, the litigation schedule continue as provided in the Board's schedule order, but keyed off of the decision/answer date, i.e., depositions, if necessary, to commence 3 days after the decision/answer date and conclude in one week, written testimony to be filed 10 days after depositions are scheduled to conclude, and the hearing to commence one week

or more later at the Board's convenience.

Respectfully submitted,

David J. Gilmartin
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Attorneys for Suffolk County

July 19, 1983

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July 8, 1983

(BY TELECOPIER)

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

Re: SC Contention Regarding Diesel
Generator Cylinder Head Cracking:
Request for Production of Documents

Dear Tony:

In accordance with the schedule agreed by the parties and approved by the Board, Suffolk County hereby requests LILCO to produce by July 12, 1983 the documents listed below which relate to the County's diesel generator contention concerning the cylinder head cracking problem. This request, of course, does not cover documents previously supplied to the County by LILCO. Further, we understand that although LILCO will use its best efforts to furnish the County with the requested documents by July 12, some documents will only be available for inspection at Transamerica Delaval during the visit scheduled to start on July 13.

For purposes of this request, the word "documents" is to be given its broadest meaning, to include without limitation correspondence, memoranda, reports, notes, computer printouts, and other forms of written data and material, all whether in draft or final form.

1. Please supply copies of all of the documents identified in Appendix A hereto. For your convenience, documents which have been identified as available only at Delaval bear an asterisk.

2. Please identify and supply copies of all documents relating to or commenting upon any of the documents listed in Appendix A hereto.

Anthony F. Earley, Jr., Esq.
July 8, 1983
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3. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 1" set forth at page 15 of LILCO's "Motion for Partial Summary Disposition of SC's Diesel Generator Contention," dated July 7, 1983 (the "LILCO Motion"). */

4. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 2" set forth at pages 15-16 of the LILCO Motion.

5. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 3" set forth at page 16 of the LILCO Motion.

6. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 4" set forth at page 16 of the LILCO Motion.

7. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 5" set forth at pages 16-17 of the LILCO Motion.

8. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 6" set forth at page 18 of the LILCO Motion.

9. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 7" set forth at page 18 of the LILCO Motion.

10. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 8" set forth at pages 18-19 of the LILCO Motion.

11. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 9" set forth at page 19 of the LILCO Motion.

*/ We recognize, of course, that at least some of the documents relied upon to support the "Material Facts" are affidavits, including those of Messrs. Youngling and Pratt attached to the LILCO Motion. Hence, this request also covers all documents relied upon to support the statements which are relied upon in affidavits.

Anthony F. Earley, Jr., Esq.
July 8, 1983
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12. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 10" set forth at pages 19-20 of the LILCO Motion.

13. Please identify and supply copies of all documents relied upon to support or relating to the "Material Fact 11" set forth at page 20 of the LILCO Motion.

Very truly yours,



Alan Roy Dynner

ARD/dk

cc: All Parties
Edward Youngling

APPENDIX A -- DOCUMENTS

1. All drafts and the final Diesel Generator Operational Review Committee Report.
2. Minutes and agenda of the Diesel Generator Operational Review Committee meetings.
3. Diesel generator preoperational test turnover package.
- *4. Diesel engine cylinder head strain gauge testing results and program.
5. Any and all documents providing a description of the barring over air jack and the procedure for its use.
- *6. Material and manufacturing specifications for the diesel cylinder heads.
- *7. Design drawings for the diesel cylinder heads.
- *8. Vendor's instruction manual for diesel engine operation and maintenance and all revisions that have been made to that manual.
- *9. Specifications for torquing diesel engine bolts.
- *10. QA requirements and test points and results on the manufacturing/casting process for the diesel cylinder heads.
11. Nuclear Applications Engines Manual and all revisions that have been made to that manual.
- *12. Manufacturing procedure to Transamerica DeLaval Specification 9010-03-360-03-OF, "Foundry Practice Procedure."
13. Any and all documentation regarding LILCO's inspection and audit of the DeLaval manufacturing process for the diesel cylinder heads.
14. All drafts and the final failure analysis for the diesel cylinder heads, whether prepared by Transamerica DeLaval, LILCO, Stone and Webster, or outside consultants.
15. Master Punch List for the diesel generators.
16. Any and all backup documentation to the LILCO trend analysis for the diesel generators.
- *17. Documentation disclosing the heat number for the diesel cylinder heads.
- *18. Specifications and supporting documents for the heat number.

*19. Documentation disclosing the weight and volume of the diesel cylinder heads.

*20. Description and drawings for the cylinder head molds, including gates, risers and chills.

*21. Specifications for the cylinder head mold sand.

*22. Data on any heat-treating performed after the casting for the diesel cylinder heads has solidified.

*23. Documentation disclosing the mold designer, i.e., the person or organization that designed the mold for the cylinder heads.

*24. Any and all drawings depicting the cracks and the crack locations on the failed diesel cylinder heads.

*25. Any and all documentation regarding the changes made in the procedure or procedures for curing the defects in the DeLaval casting process for the diesel cylinder heads.

*26. The DeLaval QA/QC program detail for the diesel cylinder heads.

* Documents which may have to be reviewed at DeLaval's Oakland facility.

8-Pages.

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FILE NO.

DIRECT DIAL NO. 804-788-

July 11, 1983

Alan R. Dynner, Esq.
Kirkpatrick, Lockhart, Hill,
Christopher & Phillips
1900 M Street, N.W.
Washington, D.C. 20036

Dear Alan:

My understanding of the purpose of informal discovery in this proceeding is to avoid the generally sterile and burdensome exchanges that take place in formal discovery. The Board has encouraged all of us to focus on identifying the key issues and resolving them where possible. Regrettably, your discovery request is not calculated to focus on the key issues; it is an unfocused attempt to find an issue. It also goes well beyond the scope of the admitted diesel generated contentions. In sum, it is overly broad and burdensome.

Let me be more specific. Items 3 through 13 of your letter ask for all documents relied upon to support or relating to the material facts set out in LILCO's motion for partial summary disposition. As is readily apparent from the motion,

HUNTON & WILLIAMS

Alan R. Dynner, Esq.

July 11, 1983

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these facts are based on the affidavits of Messrs. Pratt and Youngling and include specific paragraph references to the relevant portions of the affidavits. The affidavits contain references to the principal documents (i.e., failure analyses and barring over procedure) relied upon by Messrs. Pratt and Youngling, which LILCO has already supplied to the County. You now ask for all "documents relied upon to support the statements which are relied upon in affidavits." This request is too broad to be dealt with in any reasonable fashion. If there are specific facts or references in the motion or the affidavits about which the County has additional questions, we will attempt to answer them. We will not, however, voluntarily undertake the burdensome task of attempting to locate documents that may be pertinent to each and every statement in the motion or affidavits.

Items 1 and 2 of your request relate to the list of documents in Appendix A of your letter. While this listing is more specific than items 3 through 13, it does go beyond the contention. Our response to Appendix A follows:

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Alan R. Dynner, Esq.
July 11, 1983
Page 3

1. The Diesel Generator Operational Review Program covers all aspects of the operation of the Shoreham diesels and, as such, is well beyond the scope of the admitted contentions. Thus, LILCO is under no obligation to produce it. I did, however, agree to provide the County with a copy of the final report which will be sent to you by Federal Express. I did not agree to provide drafts of the report.

2. As noted, the Operational Review Program is beyond the scope of the contention. Moreover, the County is under the misimpression that there was a diesel generator "task force" or "committee". While a number of people were assigned to resolve the diesel generator issue, there was no formal committee or task force structure. Thus, as far as I can determine there are no records of committee meetings such as minutes or agendas. John Kammeyer is on vacation this week and I will confirm this with him when he returns.

3. The Board denied the County's request for a contention on preoperational testing of the diesels. Therefore, LILCO objects to this request as outside the scope of the admitted contention.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 11, 1983
Page 4₄

4. Delaval will provide this information in Oakland on Wednesday and Thursday.

5. LILCO has already provided the County with the draft surveillance procedure which includes barring the engines over. LILCO will provide a copy of the final procedure as soon as it is available. LILCO will also provide the portion of the relevant instruction manual which describes the barring over device and the its use. Although I will attempt to provide this information by the 12th, it may not be available until later in the week.

6. See 4 above.

7. See 4 above.

8. LILCO objects to this request as beyond the scope of the contention. Delaval will, however, make available the cylinder head assembly drawings which are included in Delaval's instruction manual.

9. This request is also overly broad because it is not limited to the cylinder heads. Delaval will have available information about cylinder head bolt torquing.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 11, 1983
Page 5

10. See 4 above.

11. Delaval does not have a document entitled "Nuclear Applications Engines Manual." Moreover, general information manuals are not within the scope of the contention. Nonetheless, LILCO will provide the general information document entitled "Position Report: Transamerica Delaval Diesel Generators in Nuclear Standby Service."

12. This request appears to relate to the casting procedures used by Delaval which will be made available to the County in Oakland.

13. LILCO has already provided SC with the results of an inspection and audit of the Delaval manufacturing process for cylinder heads (FA-1627). LILCO will review its files to determine if any other inspections or audits relating to the cylinder head manufacturing process are available.

14. LILCO has already provided SC with the final failure analysis reports for the diesel generator cylinder heads prepared by Delaval (see Pratt Affidavit). These are the only failure reports prepared for the cylinder heads. To the best of our knowledge, no drafts of the reports exist.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 11, 1983
Page 6~~e~~

15. LILCO objects to this request as beyond the scope of the contention.

16. The Board declined to admit the County's contention regarding trending. Therefore, LILCO objects to this request as beyond the scope of the contention.

17. See 4 above.

18. Delaval is not sure what documents are requested by this item.

19. See 4 above.

20. Delaval will make this information available for the current casting process.

21. See 4 above.

22. See 4 above.

23. Delaval is responsible for the integrity of the design of the diesel generator heads, including the mold design. Delaval does not believe it is necessary to search its records to determine the names of personnel involved in the design process for the molds.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 11, 1983
Page 7*

24. See 4 above.

25. Neither LILCO nor Delaval has reported any "defects" in the Delaval casting process. If this request refers to the changes made in the casting process as the state of the art developed, Delaval will be prepared to discuss such changes in Oakland.

26. See 4 above.

Much of the material that will be made available to the County at Delaval's facility in Oakland is proprietary information. Delaval has not agreed to provide copies of the material but will permit the County to review it with the understanding that the County's lawyers and consultants are willing to hold this information in confidence and will not use or divulge it outside the Shoreham licensing proceeding. If this understanding is incorrect, please let me know immediately.

I will see you in Oakland on Wednesday, July 13, at 10:00 a.m. Transamerica Delaval Inc. is located at 550 85th Avenue which is in the vicinity of the airport Hyatt. When you arrive ask for Dick Pratt.

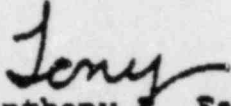
HUNTON & WILLIAMS

Alan R. Dynner, Esq.

July 11, 1983

Page 8.

Sincerely yours,


Anthony J. Earley, Jr.

221/403

cc: Bernard M. Bordenick, Esq.

HUNTON & WILLIAMS

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FILE NO.

July 18, 1983

Alan R. Dynner, Esq.
Kirkpatrick, Lockhart, Hill,
Christopher & Phillips
1900 M Street, N.W.
Washington, D.C. 20036

Diesel Generator Discovery

Dear Alan:

The purpose of this letter is to summarize the status of discovery on the cylinder head cracking issue.

In addition to the documents accompanying my June 27 letter, I also sent you copies of the Diesel Generator Operational Review Report and a Delaval document entitled "Position Report: Transamerica Delaval Diesel Generators in Nuclear Standby Service." Pursuant to our schedule agreement, we met last Wednesday and Thursday at Delaval's Oakland, California, facility to conduct additional informal discovery. As part of that discovery, we made available a number of Delaval personnel to answer questions put to them by you and your consultants. Our meetings included tours of the machine

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 18, 1983
Page 2

shop and foundry to observe the manufacturing process for the diesel cylinder heads. Finally, a number of documents were made available for the County's review. The documents produced include those listed in Attachment 1. Copies of selected portions of the documents were provided to your consultants. It is my understanding that with respect to the documents listed in Appendix A of your June 8 letter, the County's request has been met with only a few outstanding items. These items, which are keyed to your Appendix A and which were left for further resolution, are discussed below.

Item 1: The Diesel Generator Operational Review is not within the scope of the admitted contention. In an effort to resolve the cylinder head issue, however, LILCO provided the County with the final report. In the same spirit, LILCO provides portions of a draft of that report which deal with the cylinder head issue. To our knowledge, this draft is the only remaining draft version of the report.

Item 2: I have confirmed that no minutes and agenda exist that are responsive to this request. John Kammeyer was aware of notes of conference of a meeting concerning the Diesel

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 18, 1983
Page 3

Generator Operational Review Program. I will review these notes and provide you with a copy of any portions relevant to the cylinder head issue.

Item 3: Marc Goldsmith asked for results of preoperational tests on the cylinder heads including any hydrostatic tests. I am still working on this request.

Item 4: These documents were reviewed by Professor Christensen in Oakland and are now available on Long Island for his further review if necessary. Please ask him to contact John Lynch (516-733-5165) at LILCO to make arrangements.

Item 13: LILCO has reviewed its reports of audits and inspections of Delaval. Other than Field Audit FA-1627 which has been provided to the County, none of the audit/inspection reports deals explicitly with the manufacturing process for cylinder heads.

Item 15: In Oakland, Marc Goldsmith indicated that his interest in the master punch list was prompted by the amount of time LILCO estimates it will take to install the new cylinder heads. LILCO's estimate of approximately one day per head is

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 18, 1983
Page 4

based upon actual experience replacing heads at Shoreham. I have been told that the limited amount of space in the diesel generator rooms for the laydown of equipment is one of the controlling factors. Other than the replacement of the diesel generator heads and head studs, I have not identified any other MPL items related to the cylinder heads, but my inquiries are not yet complete. On this issue, it is also worth noting that LILCO is continuing to examine the feasibility of completing the installation of the new heads prior to fuel load. If LILCO determines that it is practical to do so and commits to doing so, this will obviate the need for any litigation or further discovery on the adequacy of the old heads. We will, of course, advise you if LILCO is able to make this commitment.

Item 21: The County received the specifications for the cylinder head mold sand now in use and received verbal information concerning the mold sand used for the original cylinder heads. The specifications for the original mold sand are no longer available, but, at the County's request, Delaval is reviewing purchase orders to see if information on the original mold sand is available. That effort has not been completed.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
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Page 5

Item 26: The County reviewed Delaval's quality assurance manual in Oakland last week. At that time your consultants requested a copy of the Delaval QA Manual in effect at the time Shoreham's original cylinder heads were manufactured. Delaval's QA Manager was engaged on another matter last week and I was unable to discuss the request with him. I will talk to him today.

In response to your letter of July 12 and in furtherance of our discussions in Oakland on the 13th and 14th, let me make a few observations with respect to items 3 through 13 in your July 8 letter. It is clear that we have a basic disagreement concerning the appropriateness of these requests in light of the specific circumstances involved in the litigation of this issue. In our view the request is unnecessarily broad and unfocused. We believe it is entirely appropriate and reasonable for the County to help focus the informal discovery process by narrowing its document request to specific statements made in the motion for summary disposition or the supporting affidavits. Given the consultants available to the County and the amount of information already produced, such an effort is manifestly reasonable.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 18, 1983
Page 6

It would not be productive for me to set out the arguments we both advanced in support of our respective positions. Despite our disagreements, I did agree to reconsider our position and to have Messrs. Youngling and Pratt confirm that they have identified all documents explicitly relied upon in support of the statements made in their affidavits. With respect to the latter point, Messrs. Youngling and Pratt have reconfirmed that the County has been supplied with all documents explicitly relied upon to support the statements made in their affidavits. As I told you in Oakland, many of the statements made in the affidavit are based upon general knowledge of the subject matter and not specific documents. For example, Mr. Pratt's statements about Delaval's experience with diesel cylinder heads are based on his overall knowledge of cylinder head performance and not a specific document or study. His statements about improvements in the casting process are also based on his overall knowledge of developments at Delaval. Obviously, this type of general knowledge is drawn indirectly from his familiarity with Delaval's records.

HUNTON & WILLIAMS

Alan R. Dynner, Esq.
July 18, 1983
Page 7

Under the County's request, it would be necessary to search extensive records with no clear focus other than all records associated with cylinder heads that might relate to matters raised in the motion. I have carefully reconsidered the position set out in my July 11 letter and discussed in our conversations in Oakland and have decided that as long as the County refuses to narrow the issues by asking for information about specific factual statements, LILCO will not voluntarily respond to the type of excessively broad and unfocused discovery request set out in items 3 through 13 of your July 8 letter.

For your information, I have enclosed the final version of the diesel generator surveillance procedure (SP 27.307.02). I will call you later today to discuss discovery matters and the schedule for the remainder of the week.

Sincerely yours,

Anthony Earley / JWE
Anthony F. Earley, Jr.

221/765

ATTACHMENT 1

- (1) Production Routing Sheet for cylinder heads
- (2) List of changes to production routing sheet
- (3) List of changes to casting procedures
- (4) Delaval Instruction Manual
- (5) Delaval QA Manual
- (6) Delaval ASME/QA Manual
- (7) Delaval Internal Procedures Manual
- (8) Foundry Practice Procedure
- (9) Production Routing Sheet for reworking cylinder heads
- (10) Detail drawings of original and new cylinder heads
- (11) Drawings of the pneumatic barring device
- (12) Cylinder head and valve assembly drawing
- (13) Delaval welding procedure
- (14) Delaval hydrostatic test procedure
- (15) Strain gage test program results
- (16) Photographs of cracks in LILCO cylinder heads
- (17) Indicator line diagram with pressures

- (18) Rocker arm capscrew drawings (old and new)
- (19) Chemistry heat sheets and heat cards for the 3 cracked heads, 3 original heads and 3 new heads
- (20) Delaval specifications for No. 1 and No. 7 steel
- (21) Inspection sheets for 3 cracked heads
- (22) Listing of TDI diesels in service
- (23) Diesel Generator Specification

KIRKPATRICK, LOCKHART, HILL, CHRISTOPHER & PHILLIPS

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July 12, 1983

IN PITTSBURGH

KIRKPATRICK, LOCKHART, JOHNSON & HUTCHISON

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(BY TELECOPIER)

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

Dear Tony:

I have just received by telecopy your letter of July 11, 1983 relating to the County's discovery request for documents pertaining to the diesel contentions, as set forth in my letter to you of July 8, 1983. I will not attempt to respond to your comments regarding items 1 and 2 of our request at this time. However, I must say that I am completely shocked at your total refusal to furnish to the County any of the documents requested in items 3-13.

Items 3-13 request LILCO to identify and then to supply all documents which were relied upon to support each of the "material facts" set forth in LILCO's motion for summary disposition of the County's contentions. LILCO's allegation in its motion is that each of these "material facts" cannot be the subject of a dispute with the County and, therefore, there is no genuine issue to be joined in litigation regarding the diesel contentions. Accordingly, there can be no more precise focusing of discovery than our request for the documents upon which LILCO is relying to support each of its "material facts," together with such documents that relate to those "material facts," even though they may not support LILCO's statements. Therefore, it is LILCO, not the County, which in the LILCO motion has defined the pertinent issues relevant to the diesel generator contentions and the County is simply asking for the documents which form the foundation for those issues as they have been stated by LILCO.

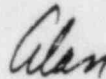
Anthony F. Earley, Jr., Esq.
June 12, 1983
Page 2

The County has shown its willingness to proceed to attempt to reach a settlement concerning the diesel generator contention regarding the cracked cylinder heads and has agreed to make a decision by July 22, 1983. However, as I have stated to you several times, that decision must be based upon complete information and not merely on those documents which LILCO characterizes as "principal documents" and which it chooses, in its own discretion, to supply to the County. In order to do a conscientious and accurate job, the County's consultants must have available all of the documents relevant to the "material facts" which were used by LILCO and its consultants in making factual conclusions. Your unwillingness to supply all of the relevant documents relating to the narrowly defined issues, as LILCO itself has defined them, will make it difficult for the County's experts to reach definitive conclusions. Therefore, I hope you will reconsider and supply the requested documents to the County as early as possible and no later than July 18.

I look forward to seeing you in Oakland and hope that the trip to Delaval will be useful and informative.

Best regards.

Sincerely yours,



Alan Roy Dynner

ARD/dk

cc: Bernard M. Bordenick, Esq.

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FILE NO.

DIRECT DIAL NO. 804 788-

July 18, 1983

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

Diesel Generator Discovery

Dear Alan:


My letter to you earlier today set out the status of diesel generator informal discovery. As that letter reflects, we have, at the moment, not reached complete agreement on the appropriateness of your July 8 discovery request. In the course of trying to respond to your other discovery requests, a document has come to my attention which appears to be (but is not, in fact) inconsistent with statements made in LILCO's motion for summary disposition and the supporting affidavits. Notwithstanding our discovery disagreements, fairness dictates that I send you this document even though the facts stated in the affidavit are correct.

The attached memorandum from E. J. Youngling to J. Rivello dated April 6, 1983, indicates on page two that LILCO might experience two or three cylinder head failures in

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addition to the three already discovered. Mr. Youngling based this statement on information he had received from a Delaval service engineer. This information was incorrect. The service engineer in question did not have Mr. Pratt's familiarity with the overall operating record of the cylinder heads. Moreover, the service engineer's statements may have also reflected the number of operating hours on the Shoreham diesels in late March and early April. Since that time a significant number of operating hours have been accumulated without additional failures. Thus, Mr. Pratt's statements in his affidavit concerning the likelihood of additional diesel cylinder heads leaks are accurate.

Sincerely yours,


Anthony F. Earley, Jr.

221/765
Enclosure

msf
April 6, 1983

Mr. Jim Rivello

Re: Emergency Diesel Generator Cylinder Head Replacements

As you are aware there have been difficulties with the Diesel Generator Cylinder Heads supplied by Delaval. To date Shoreham has experienced difficulties with 5 of the 24 cylinder heads supplied with the three Diesel Engines. Four of the failures were due to either thin wall sections in the head assembly or casting imperfections while the fifth failure was due to the manufacturer and installation of the head resulting in a gouge in the cylinder head gasket area causing bypass of that sealing surface. The major way that a cylinder head failure is detected is by water leakage from the jacket water system into the cylinder piston. This leakage is detected in one of two ways. Either during barring the engine over prior to operation or a result of a high consumption of jacket water during operation. The five cylinder heads which have failed have been sent to Delaval for failure analysis and the failure mechanisms have been reported as described above.

Delaval has informed Lilco that the heads originally supplied with this engine are of an older design and considerable improvements in the manufacturing and casting of the heads have resulted in a superior product which is available. For purposes of this letter I will refer to this superior head as the new cylinder head. There are several courses of action which are available to Lilco which I will describe as Options I, II, and III with Option I being to remain as is. Option II being to upgrade the existing cylinder heads supplied with the diesel engines as delivered to an improved product and three to purchase new cylinder heads for the entire engine.

Delaval has informed us that it is possible for us to take the original supplied cylinder heads and return them to the factory for refurbishment. (Option II) This would be a process similar to that done on cylinder heads after many hours of operation and would be done as a result of valve seat wearing and general degradation of the cylinder head due to prolonged operation. In the case of Shoreham since our engines only have approximately 500 hours of operation on them this upgrading process would really be accomplished to provide the additional quality checks to the cylinder heads which were not performed as a part of the original delivery. These quality checks would include ultrasonically checking the various cylinder head casting areas and beefing up those areas as required and hydrostatically testing the heads to a higher hydrostatic pressure. In addition the heads would receive a more comprehensive visual inspection than was originally provided. In all this process of refurbishing our original heads would run as quoted from Delaval approximately \$10,000 per head.

The new cylinder heads (Option III) represent a significant improvement in our estimation since they are many more quality and manufacturing checks performed during their manufacturing process. These checks include the following: Higher hydrostatic testing than performed on our heads 75 psi versus 100 psi, ultrasonic checks for cylinder wall thicknesses not performed on our heads, stress relieving and pickling of the heads not performed on our heads. But perhaps one of the biggest improvements is the fact that the casting techniques used by Delaval with the new cylinder heads are accomplished by a new core design which gives Delaval a much higher confidence level that the various cores in these cylinder heads will result in better thicknesses of various areas resulting in improved head performance and longevity. In addition, the fire wall or the area of the cylinder head which takes the pressure pulses due to the engine firing cycle is also beefed up to provide better performance with longevity.

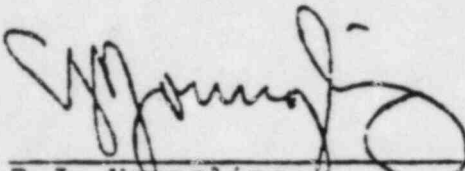
Attachment 1 to this letter shows the general cost associated with the three options as described above.

As you are aware we have reported to NRC a potential reportable item in accordance with 10 CFR 50.55e which describes the cylinder head failures at Shoreham. Although the final response to this item has not been put in place as of this time it is my feeling that this response will generally be as follows: If Shoreham was to maintain the original heads in place there would be no doubt that we would have to put in place some sort of a monitoring program to insure that the diesel engines heads are not leaking. This process would be accomplished as follows as recommended by Delaval: after diesel engine operation the diesel would be shut down and for a period of four, eight and twelve hours afterwards the engine would be barred over and the cylinder cocks would be checked for water leakage. It is Delaval's feeling that water leakage only occurs during engine operation and that once we prove the engine is tight after being operated it would be tight during the standby service and therefore a successful engine start would not be inhibited due to water leakage into the cylinder head. I must also point out to you that water leakage into the cylinder head is what could be a catastrophic type failure should the cylinder head essentially go "solid with water". However Delaval has given us assurance that the cylinder head is a dished configuration thus the dish area would fill up and the cylinder would overflow down past the piston rings into the lube oil sump which gives additional difficulties in that there could be water contamination of lube oil. In addition Delaval has told us for our 24 heads eight on each engine we could expect approximately two to three more cylinder head failures on average. Or a total of approximately five to six failures out of 24. This is a rather high level in my judgement.

It is my recommendation that Option III be pursued and that new cylinder heads be purchased for the Shoreham Diesel Generators. We should purchase 24 cylinder heads which would give us a full replacement of the 24 cylinder heads in service with two cylinder heads in transit. This spare level would be consistent with our original plan for the project.

The price of a new cylinder head which has been negotiated with Delaval is \$16,000 and represents a considerable cost saving above the price for a new head of \$28,000. However, should Lilco wish to pursue a further settlement that is perhaps back charging Delaval for the \$10,000 cost for refurbishing the heads and bringing them to a higher quality level more consistent with the new manufacturing and quality checks performed I feel that that negotiation process should be done outside of the efforts to bring the plant to fuel load. Therefore I would recommend that we follow through on that process with appropriate engineering and purchasing personnel at a later date after we have a full scope of the diesel engine problems and can develop a total strategy towards recovering some of the costs which we have had to incur as a result of the startup of the diesel engines.

It is my intent to purchase these heads as quickly as possible since 29 heads are available in the factory in Oakland. It is my intent to change these heads out on a not to interfere basis and that any retesting would be similar to that performed as part of the normal plant surveillance process and this should not interfere with the preoperational testing performed in accordance with Reg Guide 1.108. I will wait your approval of this recommendation so that the diesel engines can be brought to a higher design state, and thus give Lilco additional assurance of reliability and continued performance of this most important equipment.



E.J. Youngling
Startup Manager

EJY:ym

cc: M.S. Pollock

ATTACHMENT I
(ALL COST X \$1,000)

OPTION I: Retain Existing Heads

| | Cost |
|---|------------------|
| A. 24 heads in service | NA |
| B. 2 spares - original order | NA |
| C. Purchased 5 new heads during Startup Testing (5 X \$26,000) | = \$140,000 |
| D. Repair and upgrade 5 failed heads (5 X \$10,000) | = 50,000 |
| E. NOTE: per manufacturer could expect up to 3 additional head failures on average o o add additional \$30,000 for repairs to these failures | = 30,000 |
| TOTAL COST OPTION I | = <u>210,000</u> |
| Less \$140,000 already invested) | 140,000 |
| Total Addition Expenditure Option I | = <u>70,000</u> |

End Product: TOTAL: 31 Heads
 5 New Heads
 5 Upgraded Heads
 21 Original Manufacture Heads
 (24 Inservice, 7 Spares)

OPTION II: Upgrade Original Heads

| | |
|---|-------------|
| A. Repair and upgrade 5 failed heads (5 X \$10,000) | = \$ 50,000 |
| B. Upgrade 21 original heads - including 2 spares (21 X \$10,000) | = 210,000 |
| C. Purchased 5 new heads during Startup Testing (5 X \$28,000) | = 140,000 |
| TOTAL COST OPTION II | = 400,000 |
| (Less \$140,000 already invested) | 140,000 |
| End Product: Total Additional Expenditure Option II | = 260,000 |
| TOTAL: 31 Heads 5 New Heads 26 Upgraded Heads (24 Inservice, 7 Spares) | |

ATTACHMENT 1

Continued

OPTION III: Purchase New Heads

| | | |
|---|---|-----------|
| A. Purchased 5 new heads during Startup Testing (5 X \$28,000) | = | \$140.000 |
| B. Purchase 21 new heads (21 X \$28,000) | = | 588.000 |
| C. Delaval to provide \$12 credit for each original head supplied (26 X \$12,000) | = | 312.000 |
| NOTE: (Normal Delaval Credit \$4,000) | | |

| | | |
|---------------------------|---|----------------|
| Net Total Cost Option III | = | <u>416.000</u> |
|---------------------------|---|----------------|

| | | |
|-----------------------------------|--|---------|
| (Less \$140,000 already invested) | | 140,000 |
|-----------------------------------|--|---------|

| | | | |
|--------------|---|---|-----------------------|
| End Product: | Total Additional Expenditure Option III | = | <u><u>276.000</u></u> |
|--------------|---|---|-----------------------|

TOTAL: 26 New Heads
(24 Inservice, 2 Spares)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,
Unit 1))

) Docket No. 50-322 (O.L.)

CERTIFICATE OF SERVICE

I hereby certify that copies of SUFFOLK COUNTY'S MOTION TO COMPEL DISCOVERY, dated July 19, 1983, have been served to the following this 19th day of July 1983 by U.S. mail, first class, except as otherwise noted.

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U.S. Nuclear Regulatory Commission
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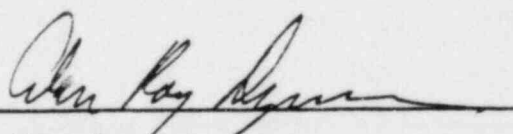
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DATE: July 19, 1983

(*) By Hand 7/19/83