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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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In the Matter of:

SHOREHAM NUCLEAR POWER STATION LONG ISLAND LIGHTING COMPANY

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Date:

July 5, 1984

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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
3	ATOMIC SAFETY AND LICENSING APPEAL BOARD
4	
5	In the Matter of:
6	SHOREHAM NUCLEAR POWER STATION LONG ISLAND LIGHTING COMPANY
7	
8	Thursday, July 5, 1984
9	The Licensing Board met, pursuant to notice, at 10:30 a.m.
10	
11	APPEARANCES BEFORE ADMINISTRATIVE JUDGES
12	JUDGE BRENNER CHAIRMAN JUDGE MORRIS
13	JUDGE FERGUSON
14	ON BEHALF OF NRC:
15	C. BERLINGER R. GODDARD
16	B. BORDENICK
17	ON BEHALF OF NEW YORK STATE:
18	L. LANPHER F. PALOMINO
19	ON BEHALF OF SUFFOLK COUNTY:
20	A. DYNNER
21	D. SCHEIDT
22	ON BEHALF OF LONG ISLAND LIGHTING COMPANY:
23	D. TARLETZ D. DREIFUS
24	E. FARLEY O. STROUPE
25	A. EARLEY B. MCCAFFREY

PROCEEDINGS

JUDGE BRENNER: Good morning. Let's get the appearances of counsel, first, starting on the Board's left with the staff.

MR. GODDARD: Richard J. Goddard and
Bernard M. Bordenick, the Office of Executive Legal
Director, NRC staff. At counsel table is Mr. Carl
Berlinger.

MR. PALOMINO: Fabian Palomino, State of New York.

MR. DYNNER: Yes, I'm Alan Dynner, counsel for Suffolk County. With me today are Mr. Lawrence Lanpher, on my right. And on my left, Mr. Douglas Scheidt.

MR. EARLY: Anthony Earley of Hunton and Williams, representing Long Island Lighting Company. With me today, Judge, on my right are Odes Stroupe, Milton Farley, David Dreifus and Darla Tarletz, all of Hunton and Williams, representing the licensing company, the lighting company.

Also with me today is Brian McCaffrey from Long Island Lighting Company.

JUDGE BRENNER: All right. Thank you. Our purpose today is to evaluate for the purposes of admissibility of the proposed issues, the specification

of contentions filed by Suffolk County. And we have the written filing as well as the answers thereto of LILCO and the staff.

As a preliminary reminder, our February 22, 1984 bench order, which begins at Transcript Page 21,611 and continues thereafter, among other things established the guidelines and framework for the specification by the county and the state of instances of diesel problems upon which the overall contention that are diesels are undersized and over rated and improperly designed and manufactured would depend.

Among other things, we required a statement by the proponent of the contention of the (inaudible) to Shoreham (Phonetic) of each instance specified, and that discussion begins at Transcript 21,620.

We did note that where the problems relied upon, where those arising from the shoreham diesels themselves, then the explanation can probably be rather short. We also noted that another possibility of reliance would be upon instances of other diesels, diesels other than the Shoreham ones, in which case, the specification would have to show that the other diesels were sufficiently similiar to the shoreham diesel; with respect to the particular occurrence of a problem being relied upon.

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And our purpose for that Nexus (Phonetic) requirement was, of course, to evaluate the relevance to the decision of whether or not to authorize for purposes of the diesel issues the issuance of a license for shoreham of any alleged contentions. And we would evaluate the basis and specificity of the contentions proposed, including the basis and specificity of the alleged relevance of Nexus to Shoreham.

With that framework we're prepared pretty much seriatim to proceed through the issues being raised by the county in their Roman II and then thereafter the other sections.

If there are any brief, emphasis on the brief, preliminary remarks by the other parties, we'll permit them at, at this time. County?

MR. EARLY: Judge Brenner, ..

UNIDENTIFIED SPEAKER: Judge Brenner,..

JUDGE BRENNER: We'll call on the county, first. Then we'll go to you, Mr. Early.

MR. EARLY: I have some preliminary matters in the nature of status reports on various things that might be helpful to get to before we get to arguments on the contentions.

JUDGE BRENNER: All right. Let's take that. Then, we'll go back to you, Mr. Dynner.

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MR. EARLY: Judge, since we haven't met in some months, I thought it would be helpful to give a brief rundown of the status of various items that relate to this proceeding.

The first thing that I'd like to cover is
the DRQR Owners Group Program. That program has now
been completed for the Shoreham TDI engines. All
reports, including individual component reports and
Phase II report on the DRQR Program, has now been
issued. And I believe all the parties in the proceeding
have been supplied with copies of that report. So,
that program has now been done for Shoreham.

with respect to the TDI diesels themselves, preoperational testing has been completed on diesel generators 101 and 102. That testing program included a modified integrated electrical test that the Board may recall from various submittals, that the integrated electrical tests test the diesels along with all of the electrical systems in the plant.

That test was run using machines 101 and 102, while the 103 machine was being worked on. So, that test has been completed for those two machines.

Diesel generator 103 had a new block installed in it. The block has been replaced. That diesel has been reassembled, returned to its diesel

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generator room where the initial stages of testing are in process, the check-out and initial operation tests.

The schedule calls for completion of all of the testing included, including the integrated electrical test with all three machines to be done right around the middle of September. I think the date is September 17th right now.

The next item of information for the Board involved the Colt diesel generators. That, those are the three diesel generators that are being installed on the side and they're manufactured by Colt Industries. The engineering work on those three diesel generators is essentially completed.

Construction work is now in progress. The underground cabeling and piping runs have all been installed, and the actual diesel generator building that will house those three Colt diesel generators is under construction.

The reenforcing bar is all in place, and
I believe concrete work is in progress. Two of the
three Colt engines are now physically on the site, and
they'll be installed in the rooms as soon as they're
co. pleted.

The Colt schedule calls for completion of installation and testing of the Colt diesel generators

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in May 1985. Until the actual hookup of those diesel generators is made, and I believe at the last prehearing conference or our last conference of the parties, we noted that the company preliminarily intends to hookup those diesel generators at the first for fueling outage, that until that hookup is made, and that's a process that takes I believe on the order of eight to twelve weeks, that that construction has no impact on the rest of the plant or the TDI diesels themselves. That's kept separate.

One other item that I'd like to raise now is the company submitted a letter, SNRC 10-65. It was dated July 3, 1984. And I believe copies were telecopied to the Board and the parties. And it involves a revision of the loads that are assigned to each of the emergency diesel generators.

As a result of the testing on the diesel generators, the company decided to review the actual loading of the diesel generators, and it was determined in looking at the loading that it was possible to delete one reactor building service water pump from the loading of diesel generator 103.

There are four such pumps in the plant.

Two of the pumps were connected to the 103 diesel.

That diesel then had a significantly higher total load.

I believe it's on the order of about 350 KW above the other diesels.

In reviewing that matter, it was determined that those two service water pumps did not both have to start automatically. So, the company is, is proposing having one of those pumps in standby service, that it won't start automatically, thereby reducing the load on the 103 machine from a 10 minute load of approximately 3880 down to the range of 3442. And information on that has been included in that SNRC 10-65. And I just wanted to bring that to the Board's attention.

That, that change wil result in, in the company being able to lower the kilowatt rating at which the diesels are tested for overload purposes, I believe, down to approximately 3500 rather than 3900 that they had been tested at.

And .nose are the only preliminary matters that LILCO thought might be helpful to bring to the Board's attention.

JUDGE BRENNER: Well, as to the last point, we had. the information we had not received, that letter. You mentioned it now. Mr. Dynner?

MR. DYNNER: Yes, Judge Brenner. I just have a brief comment and then a brief report on a

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meeting which was held among the counsel for the NRC, LILCO and the county last Tuesday to discuss, as the Board had, had ordered us to do, the June 11th filing and the issues that flowed therefrom.

Mr. Early has just mentioned to the Board the letter from the Long Island Lighting Company to Mr. Denton, dated July 3. It was received by telecopy in our office at 6:00 on Tuesday afternoon, right before the holiday.

It represents, in our view, a complete changing of the standards by which we had proceeded to, to judge the diesels since it involves, in effect, a derating of the diesels.

We view this matter with a great deal of seriousness insofar as the basis underlying our contentions go to the adequacy of the on-site electric emergency power system at Shoreham. And from what we can gather from this brief letter, it is now proposed by LILCO to further reduce or to change that power system.

It also may involve, although we have not, of course, had a chance at all to study this matter, a degradation of the, of the safety of the on-site system and how it's going to operate. As soon as we receive the letter on Tuesday afternoon and it was, I

emphasized to you, the first time that we had heard that there was even any possibility of LILCO taking this approach in derating the engines or reducing their load in this matter or any other matter.

We sent off by Federal Express copies of the letter with its attachments to county consultants. The attachments, I must say that we have are in many cases illegible. We'll be asking LILCO to give us legible copies as well as any background that might be available to justify the changes which are being proposed.

In essence, we think that after eight and a half years without warning to suddenly unload on us an issue that totally changes the standard for the on-site power system and the standards for the diesels will involve a careful examination by the county in order to determine its impact, if any, on the litigation.

And I wanted to bring the matter to the Board's attention so you would not think that this was something that we had any notice of whatsoever and had any opportunity to review because we didn't.

I would now like to briefly advise the Board of the discussions which were held on Tuesday.

In the first place, the county clarified by responding

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to questions from LILCO, some of the matters addressed in the June 11th filing.

First of all, the County made clear that with regard to Part II of the filing, that it is the County's intention, it was only the County's intention to litigate the design of four of the sixteen significant component problems that had been identified by the owners group, that namely the replacement crank shafts, the cylinder blocks, the cylinder heads and the AE pistons.

Some confusion had apparently arisen by

Item 5 on Page 10 which is labeled, other components,
and which is a more general, if I will, can call it
a sort of context under which this litigation is
taking place. And I'll further describe that when the
Board wishes.

But the important and significant point to make is that while the January 27th contentions addressed and specified instances going to the overall design of, of the engine and all of its components, after the period that we had gone through of, of depositions and examination of documents and review of the owners group reports that had been issued on the 16 components and bearing in mind the resources that the County has available to it and in an effort to

sharpen the issues and make the litigation as direct as possible, we have limited the litigation to those four major components.

In addition, we have addressed the issue of the over rating and undersizing of the engines which is now, of course, connected to the issue of the June, the July 3rd letter that LILCO has filed, proposing to reduce the load on the diesels and change the configuration of the on-site power system.

With respect to the matters addressed in Part III, I must say...I'll back up a moment and say that with regard to the four major components, if I can call them that, we also answered many questions that LILCO had with respect to matters of evidence, what the County has found wrong, what the County intends to do.

I think most, if not all of those matters, probably all of them, were covered in the, more than ten days and 1450 pages of depositions that LILCO has taken in this case, but there were a few matters that were specifically addressed. There were, specifically, some changes made in the crank shaft issues to make it clear that what the County was doing was, would be on the crank shafts, principally addressing the strength, if I can use that word loosely

and nontechnically, of the crank shafts under the Loydes ABS, who rules the draft rules of the International Association of, what's it called, Classification Societies and the German criteria used by LILCO's own consultants.

JUDGE BRENNER: Mr. Dynner, if I could interrupt for a moment. Even though the crank shaft are the first ones, let's not get too far ahead of ourselves --

MR. DYNNER: Okay. Sure.

JUDGE BRENNER: -- because as we go through each one, we may have some questions about some.

MR. DYNNER: All right. I won't go, I won't go into any detail, Judge Brenner, at this point about further elucidation that we gave LILCO at the meeting on those specific items except to say that there was a good deal of discussion about those matters.

With respect to the Owners Group Program
plan and the matters that the County wants to address
in the DRQR, I should say that at the time this
document was filed, we had not received the DRQR for
Shoreham. It, we learned, consists of nine volumes.
Was delivered to our office on Saturday, June 30th,
and this week earlier we sent our, our one copy to one

of our consultants. We have extra copies that LILCO 2

DROR report does make it clear.

has kindly agreed in its own reproduction of the documents, to make available to us.

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It may be, as LILCO has said in its response, that some of the matters that we were concerned about in the program plan.. for example, the extent to which inspections were made on various components..will be addressed in the DRQR report and, therefore, while as we said, for example, that the plant itself makes it unclear what those inspections were, it may be that the

We will need, obviously, some time to review those nine volumes. Secondly, that DRQR report apparently does address the quality of manufacturing issues which we were unable to previously examine except with respect to, to some extent the four components in the context of this litigation.

The last matter that I will refer to in, in our discussion involves the additional information matters. We have been told by United States Steel Corporation that any information that we want to get concerning the Gott..that's G-O-T-T..will have to be subpoenaed in that they will not give us any information voluntarily, including, for example, our request as to whether the, the piston, the crown which, which

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cracked was, in fact, an AE crown or an earlier model crown.

We've also been informed by the State of Alaska that due to their, what they regard, I should say, as a good business relationship now and a favorable contract with (inaudible) for the servicing of the engines on the MV Columbia, that they will not be prepared to give us further information concerning the engines; specifically, the cracked blocks on the Columbia except with respect to answering the subpoena.

And, third, we have been trying throughout this period to get information from the ABS concerning the letter which we received in discovery about ten days ago regarding the replacement crank shafts. The ABS people gave us only some information. They told us they did not regard that letter as a certificate that they normally give in these cases.

We said we wanted to talk to them about the information that they reviewed concerning the crank shafts and what their criteria were and other matters which go directly to the heart of whether, in fact, the ABS has approved or not approved to replace the crank shafts.

We learned on July 3rd from them that they were not prepared to talk to us except under subpoena.

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They felt that given the fact this matter was going to litigation, that that was the appropriate approach.

And I so informed, immediately, LILCO that we would be seeking to subpoen the ABS people whose names we learned about ten days ago in this, in this matter.

And, finally, I had a conversation with Mr. Goddard concerning the illingness or unwillingness of the NRC staff to assist us in obtaining information from some of the foreign owners/operators of TDI diesels with regard to the specific matters mentioned in Part IV. And, apparently, Mr. Goddard feels that the staff will not be able to assist in this matter, but he can elucidate you on that, if he wishes.

At the close of this rather lengthy meeting, I think that the result was that we gave LILCO and the staff quite, quite a bit of additional significant information. The position of, of LILCO, I think it's fair to say, remains unchanged from that stated in its response to the June 11th filing.

of our questions in the normal course will cause you to give us some of that additional information to assist us in evaluating the specificity and bases of the proposed contentions and the alleged nexus to Shoreham of, of those contentions.

And I think the course of the discussion will make it obvious as to where you should do that. You and your own can make that judgement, also.

Do the staff have any preliminary comments?

MR. GODDARD: The staff would only respond
to Mr. Dynner's reference to his conversation with
me, reference the staff's willingness or unwillingness
to assist Suffolk County in obtaining information from
foreign users.

I do not want it to appear on the record that the staff is unwilling to assist persons in developing matters which may be in the public interest; however, as can be gleaned easily from the affidavits which accompany the staff's response to Mr. Dynner's filing, the NRC does not feel that information from the non-nuclear foreign based users would be essential. And it's not to say that might not be of some assistance, but it certainly is not essential in the NRC staff and its consultants reaching a conclusion as to the qualification of the Shoreham TDI (inaudible).

Other than that, the staff has no statement.

JUDGE MORRIS: Mr. Goddard, did I understand the import of the staff's June 21st filing, that
you would admit all of the contentions that are
submitted by the County and the State?

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MR. GODDARD: As to all of the contentions, if that is..that is correct as to the diesels themselves. We would oppose any separate litigation of the DRQR which is set out in Part III.

As to the contentions as stated in Part II of the County's filing, the staff would not oppose those contentions.

JUDGE MORRIS: I would just like to comment that we would have appreciated it if the staff had given us some reasons as why they took that position on each part of those contentions.

MR. GODDARD: Judge Morris, the, the staff position as to the alleged bases for the contention was, in the opinion of the staff, a matter properly considered as a question of admissibility of evidence at such time as information regarding the specific engines which were cited as a basis were introduced.

As far as the contention themselves, the staff felt that there was sufficient basis, that it would not oppose the admission of the, the admissibility of the contentions.

That is not to say that we accept the evidentuary basis thereof as being relevant or material in each and every instance.

JUDGE MORRIS: Well, of course, we under-

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stand the difference between evidence and the basis and specificity for admitting a contention and both the applicant and the County went through some pains to state their positions on those matters. It would have been very helpful to the Board for the staff to have done so also.

JUDGE BRENNER: All right. Let's turn to Roman II of the County's filing and as ..

MR. EARLY: Judge Brenner?

JUDGE BRENNER: Yes.

MR. EARLY: If LILCO may, could we make the preliminary remarks on, on the substantive matters that we gave a status report?

JUDGE BRENNER: All right. Do it briefly because I think we know the positions of the parties pretty well, and I want to get to the specifics, but go ahead.

MR. EARLY: Yes, Judge. Let me clarify one thing and then I'll ask Mr. Farley to make LILCO's preliminary matters on the statement, on the substantive matters.

Mr. Dynner in referring to LILCO's July 3rd letter kept talking about a change in the configuration of the on-site power system. The only thing we're talking about is having one reactor building service

water pump in what is, in effect, a standby condition.

All pumps that are controlled from the control room

can be placed in lockout so they won't start automatical
ly. There are no physical changes to the on-site

power system that are involved. It is not any type

of modification or hardware change, and I think the

Board ought to be aware of that.

And with that, I'll let Mr. Farley address LILCO's position.

MR. FARLEY: Just briefly, Judge Brenner.

The counsel did meet on July 3. Mr. Goddard, essentially, had take the position that he was unable to make any agreement at variance with the NRC staff filing because I think Mr. Berlinger had been preoccupied with other matters and could not attend.

So, we couldn't very much accomplish, we couldn't accomplish very much with, with the staff.

As far as the, the County is concerned, there was this discussion, essentially as Mr. Dynner has enumerated to the Board, but the fact of the matter is everything that he says is by way of enumeration and not limitation.

He always reserves the right to add components or add issues in connection with his contentions. So, we're unable to, to narrow anything

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with him either by the filings or, or by the, or by the conference.

We think that they have patently disregarded your order of February 22nd. They disregard the law on the role of specifications of, of contentions. I think they pervert their position as intervenors in this proceeding, and they basically take the position that even though they have these consultants, they're not required to do anything. They're not required to look at anything. They're not required to make any calculations. They're not required to furnish us with any specifics.

All they do are take pot shots at whatever LILCO produces. And I respectfully suggest to the Board that that is not appropriate or reasonable in, in these proceedings.

On the, the other components, while Mr. Dynner did mention that this alleged pervasiveness argument would deal with the four principal ones that he enumerated, he was not willing to limit himself to that.

On the, the over rating and undersizing, nothing more was said that, that is anymore specific than what you see in the County's filing which we respectfully contend is, is very evasive in general.

On Number 3, on the Owners Group Program,

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while he did not have the final draft of the Owners
Group Program until it was delivered to him Saturday,
he had ample information about the, the context and
the structure and representatives of the County
attended owners groups meetings. And there was no
reason in the world why he could not have complied
with your order that he specify in that filing of
June 11th what elements of the DRQR that related to any
of the specific components that, that he was complaining
about.

He, he's had an opportunity to depose everybody. He's had all the documents. And it, it's just inexcusable that on the basis of all that material that he could not have complied with your order and have been specific with respect to the, the various components.

On the additional information, on Number 3, the staff supports our position, and we think the Board should, should rule that way, that the, the DRQR Phase II will not be a separate issue for, for litigation.

On the additional information, again,
Mr. Dynner was not precluded by your order of
February 22nd from coming back to the Board with
respect to a specific request on any of these other

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TDI owners. And he just simply elected not to do so or he simply elected to wait, again, until the last minute and then contend that he needs this further information and this further discovery.

And both the staff and LILCO are opposed to that and, again, we would respectfully urge you not to permit anymore discovery by way of depositions or, or by way of subpoena in connection with that alleged additional information.

We are prepared to file the testimony before the end of this month. That's what the Board said in its May order, that everybody better be prepared to do. That's what we want to do, and we want to get on with showing that these diesels are capable and reliable and they will protect the public health and safety.

JUDGE BRENNER: Well, we'll come back to all these items in the course of a somewhat more detailed discussion of each one, the schedule, the last to the extent it's pertinent. For example, LILCO also has another alternative request. That is that the County file its testimony first.

MR. FARLEY: Yes, sir.

JUDGE BRENNER: And that might affect your last statement. The discovery of a deal of our



customers, we did discuss it at Transcript Page 21,624.

And we'll come back to that in the particular context
and so on.

So, I think it would be most helpful to us now to just proceed through the individual items, bearing in mind the framework that we had in the written filings as reemphasized in your oral introductory remarks today.

Under the County's Roman II, that is the general and now combined, EDG contention, which is, we understand it, is meant to combine the previous contentions did discuss and admitted at the February 22nd conference regarding over rating and undersizing of the diesels and their alleged improper design and manufacture.

As I stated in my introductory remarks here and as we had established in the February 22nd bench order, this general contention exists only insofar as a particular instances relied upon exist, and those instances form the basis for the proof of it and establish the framework and (inaudible) of the contention.

And, so, there's no point in discussing the worrying of the general contention now, in any event, and maybe at no point. And what we want to

get to is, in fact, the definition of what will encompass totally the contention under the specific subparts.

And we'll start in the order that the County has it with the crank shafts.

The first item is the allegation as to the improper design, and the County also includes its notation O for..that's the shorthand for allegation that it..the diesels that were oversized and..

UNIDENTIFIED SPEAKER: Over rated.

JUDGE BRENNER: Overrated and undersized.

I knew I'd get that confused at some point. Once we established that over rated had no dcuble meaning in February, I thought I'd keep it straight.

In any event, this contention goes to the original crank shaft which are now being replaced and our preliminary review is that is no longer relevant as an end in itself. And, apparently, the County at least in 4 recognizes that by the second sentence of that Part A. So, we'd like to ask the County why would it be relevant to litigate that at this point?

MR. DYNNER: I'm sorry, did you say why it would be or would not be?

JUDGE BRENNER: Why would it be?

MR. DYNNER: All right.

JUDGE BRENNER: And maybe you can..

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MR. DYNNER: I think what I'm going to have to do..

JUDGE BRENNER: Maybe you could explain your second sentence in the course of that.

MR. DYNNER: I think what I'm going to have to do to put the specifics in context is..if you'll bear with me, make it quick..statement about our interpretation of your February 22nd ruling which might explain some of the differences stated here.

And for the record, I think Mr. Farley mischaracterized my position and the County's position. And that's this, Judge Brenner. We..Transcript Page 21617, the Board ruled that there are sufficient proper bases and that the contentions should be admitted.

The Board then required a specification of instances, and that's the Board's word, on which the County will (inaudible) prove its contention so the parties will not be surprised as to what items will be addressed in testimony. That's on Transcript Page 21,617 and 618.

Now, in its January 27th filing, the County listed many, many instances of TDI failures and defects in nuclear marine and nonnuclear utility service. What we tried to do in the June 11th filing was to narrow and reduce that significantly. And we,

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we did that in terms of what we regarded you meant by instances. And I think that there is a misunderstanding or that we did not, from what your comments today have been, adequately understand what the Board meant.

On Transcript Page 21,621 and 622, that the Board said that it required a list of "instances of apparent problems either on the Shoreham diesels themselves, in which case, of course, the explanation by the County can be rather short and support of nexus, or instances of occurrences which the County believes have occurred on other diesels which are sufficiently similar to the Shoreham diesels with respect to the particular concern arising from the particular occurrence that it would be relevant to the Shoreham diesel.

And we would limit the instances to those. Now, ..

JUDGE BRENNER: I think you're repeating what I said at the outset, all of which was not to repeat what was said on February 22nd.

MR. DYNNER: Well, what I'm trying to do is to explain how we..in fact, what we construed you were saying was, for example, that you didn't want them to be surprised that we were going to refer to a crank shaft that might have broken out in Saudia

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Arabia without listing that that crank shaft broke.

We do not interpret what you were saying as a requirement that we were to list elements of evidence that in each and every case we would rely upon. We focused on what..and thought what you were saying was..instances of defects or instances of failures because we listed so many of them, and we knew the Board had said you had to have this next. So, we did not in this filing on June 11th, for that reason, go into the details of all the evidence that had been adduced to that time which LILCO is well aware of because it had taken 10 days of depositions of all of our consultant.

Now, in that context..

JUDGE BRENNER: Well, let me comment at that point. You're discussing the (inaudible) tension and NRC juris prudence between how much evidence you have to put forward at the contention admission stage.

And including the (inaudible) that you don't have to put all your evidence forward at the beginning. That's not very helpful. Everybody recognizes that.

There are still basic minimum requirement to establish the bases and specificity of a contention.

If what you had said was true, there would be no reason for us to have imposed that nexus requirement because

simply listing the instances would have taken care of the surprise element.

It does not take care of the surprise element fully just to say you want to talk about Instance A and Saudia Arabia or anywhere else for that matter unless you show what it is, in particular, that you think is relevant about that to Shorum, and that both assists with the surprise element, so the other parties know what aspect of that matter you're going to want to rely upon, and it's also perhaps more significantly, from the point of view of our rulings on admissibility, necessary to judge the relevance, as I said at the outset.

One slight misstatement you had but perhaps a significant one, when you quoted our ruling at 21,617 regarding the bases and specificity, we said that there was enough in the subparts set forward in that January filing to show that there is minimum bases and specificity for the general propositions. And we also emphasized we weren't going to distinguish and we thought it was not important to distinguish between the, at that point, between the design allegation or the manufacture allegation or the undersized and over rated allegation. But looking at those three allegations together, there was at least

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some minimum instances being set forward which would supply the bases and specificity.

We also said, and I'm reading from my own notes, although I could easily pull out the transcript, but I know we explicitedly stated we were not ruling that each and every instance had the requisite sufficient bases and specificity. And now is the time when we're going to go through each and every instance and make that ruling. I think that's accurate also.

MR. DYNNER: I quite agree that, that, with what you've said in that it's a matter of drawing the line. The point I was trying to make, Judge Brenner, is that when you use the word instances and in the citations I've given you to the transcript, we interpreted those as instances.

Now you get to the point..for example, on the cylinder heads let's say..and this is just an example..we know the cylinder heads are cracked.

JUDGE BRENNER: Well, let's go through each one and we'll evaluate it.

MR. DYNNER: All right, we will. I'm, the point I'm trying to make is that the instances, the way we interpreted your, your words, were not the same as listing all of the evidence. Not instances

of failure, but evidence to say, well, we think that the, that the crank shaft is, is undersized and not strong enough because the web on the fourth journal is a quarter inch too thin.

And it's that level, when we get down to that level of evidence in detail that we didn't go into.

JUDGE BRENNER: Well, you may need some of that level to have an admissible contention, just discussing it as an abstract proposition. And it depends on the subject matter.

The word instance was not set forth in a vacuum. It was defined by the other requirements which we have now discussed several times today and discussed thoroughly in the February 22nd bench order including the nexus, the absence of surprise, emphasis that I just alluded to.

And I will give the quote now since you come back to it. On Line 17 on Page 21,000, 617. In addition, we do not necessarily agree that all of those items, referring to the specifications, are a proper bases.

And a line or two below that, we go on to refer to the specification of the instances upon which the County would depend to prove its contentions

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one, two and three, and I'm paraphrasing a little bit now, would have to be provided after discovery and prior..which is now, that is the time of your written filing.

And we have had permitted, in our view, extensive discovery, both as to time and, and quality. And that discovery was more than enough for issue identification, especially since it was intended as discovery on the case for preparation of testimony.

And, so, we have a different setting six months later, approximately, in which to evaluate the level of detail in terms of judging the relevance of the allegations.

And in that sense, it may not be sufficient.

In fact, would not be sufficient to simply say, for example, we want to talk about the new crank shaft because we want to hear what LILCO has to say about it as opposed to specifying what you think is incorrect in the design, manufacture or whatever of the new crank shaft, but that will be Subpart B.

We're still, still struggling to get through the first subpart.

MR. DYNNER: Okay.

JUDGE BRENNER: With all that context back and forth now, maybe more context than we need, what's

relevant about discussing the old crank shaft, and I refer, again, to the fact that the County seems somewhat ambivalent about it also, given the way you phrased it.

MR. DYNNER: No, the ambivalent..we don't intend to litigate the old crank shaft or why it failed. The reason this is in here is because the fact is that the old crank shaft did fail. We didn't want to ignore that point and say we can't refer to that on the record, that there was, in fact, a, a poorly designed crank shaft that was not properly designed and that the engine was already..now, maybe what you're saying is we don't have to put down everything in this filing that we may refer to..

JUDGE BRENNER: Well, just be careful about that because our object is to get more down, not less down.

MR. DYNNER: Okay. So, that's why I'm saying that, that we're referring to that because it seems to us that's part of the record, that there was an undersized crank shaft that was not properly designed by TDI that did fail. We don't think there's anything to litigate, and we don't..about that. It is a matter of record, and we don't intend to litigate why it failed.

JUDGE BRENNER: Well, what is the relevance to having this (inaudible) to any decision we have to reach on the merits of the acceptability of the reconstituted, if you will, TDI diesels at Shorum?

MR. DYNNER: Okay. Because it goes directly to TDI's ability to design the crank shaft properly, and they designed the new crank shafts as well. It's a matter of the background and history of this, of this record.

The context of this record, as we view it, is not that Shorum now has three diesel engines and that the County says that there are design problems with four components and that the engines are oversized and stop there.

The record, it seemed to us,..the record at least should show that this is not a blank slate, that TDI has a history, as shown by the fact that there was an Owners Group Program in the first place, that the staff has said that it wouldn't license a plant with these diesels, that there are numerous Board notifications and other documents which demonstrate that there is, and I think that, that this is a, a statement the staff made at some point, a broad pattern of problems or defects with TDI diesels.

It seemed to us that, that at least the fact

that the..one, if there was a single major event which triggered this, this process of the Owners Group Program and of the staff's enhanced investigation into the diesels and everything else, it was the fact that this crank shaft was not properly designed by TDI, a matter which I gather LILCO agrees with from the FAA report that it is (inaudible).

JUDGE BRENNER: Yes, but you told me at the outset, I think, in a follow-up to my opening remarks that the items you were setting forth, at least in part Roman II and I think in your entire pleading, if I interpreted your remarks correctly, but we'll get that later on the other items, you were limiting it to the requirement of a nexus either at Shorum or at diesels sufficiently similar to Shorum for the problem alleged.

And we have not had occasion to discuss the other possibility because as we read the County's pleading, at least as to Roman II, the other possibility was not raised by it. And that was that you would want to allege something that did not have a nexus to Shorum's diesels but had, was related to TDI.

And we discussed that possibility, and it was only a possibility because we didn't see anything like that put forward in February, but the County

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didn't want to preclude the possibility, and we felt in the abstract we would not preclude it either. We would permit you the opportunity to come forward with the particulars on something that was so fundamental and inherent to TDI's involvement that adverse instances about anything, TDI would do, could and should (inaudible) from it.

And we said that if you were going to use something like that and this is, I think, at.. in fact, I'm sure..at Transcript Page 21,622, a very special showing. And you certainly have not attempted to make that nor did you want to as we understood your opening remarks; am I correct?

MR. DYNNER: That's correct.

JUDGE BRENNER: All right.

MR. DYNNER: This is not in the..this is in the context. This is in the context issue. What is there that we're..that's going to be on the record that we can refer to?

The Board, specifically, noted in the transcript on February 22nd that a part of the entire case of the County was the general ability of TDI to design and manufacture diesel engines adequately.

And the context ..

JUDGE BRENNER: I guess I just don't

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remember that in the abstract, anything like...

MR. DYNNER: It's Transcript ..

JUDGE BRENNER: Let me, let me finish and then, and then you can show me where I'm wrong.

MR. DYNNER: Okay.

JUDGE BRENNER: Anything like that would have been in the context of adding either before or after as to bind by the specific instances set forth by the County and/or the State, I believe, but you can, you can show me where we didn't do that.

That's certainly our purpose today. And if I misstated it back then, I'll have to do something about it, but you show me where I made a statement that we could litigate in the..in general, TDI's competence and ability without being defined by specific instances.

MR. DYNNER: Well, I'll, I'll tell you what I was referring to, specifically. And that's on Transcript 21,635, where you said, Judge Brenner, that this is going to be a specification of the contention and the proof would be limited to the specification.

JUDGE BRENNER: That's exactly my last point.

MR. DYNNER: That's exactly what you said. Then you went on to say that you look at the, that

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we're going to have a look at the DRQR to see whether and if so, when, there will be an opportunity for the possibility of further specification being added.

So, that is the Part III that we added here.

But that's the purpose of the specification, so everybody knows what points the proof has to be addressed. And then you went on and said, now, the contention, however, is not just that this list of items is wrong. It also includes that important element of the County's contention that and once you've looked at this list of items and see the extent and cumulative nature of all the things that have gone wrong, that this tells you that you have no reasonable assurance that other things would not also be wrong, that the things wrong are so significant and so pervasive that even if the particular individual items are repaired or changed, that there is still no reasonable basis for confidence that the diesels can reliably perform their function.

We recognize that important element in the County's contention and agree with it, unquote.

JUDGE BRENNER: Yes.

MR. DYNNER: We read that to mean that the Board was not going to approach the issue of the specific components and items which LILCO and TDI



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said they now repaired with a clean slate as if there was no context for this litigation, as if there had never been a pervasive pattern of difficulties and problems.

And that's why we put in this Item 5, and that's the only reason we put in Item 5 of our filing on Page 7, which refers to the, the issues, the pervasiveness of, of defects and deficiencies in the Board notification, in the DRQR reports and documents themselves because they have a history of these and they say when they're relevant and not relevant.

And we don't intend and don't think we have a need to litigate each and every one of those and have said we don't intend to, but it is the context. We're not writing on a clean slate. And we, we took your remarks to mean that the Board recognize that also.

JUDGE BRENNER: Well, we..

MR. DYNNER: That's the context of the failed crank shaft.

JUDGE BRENNER: All right.

MR. DYNNER: The same thing.

JUDGE BRENNER: Well, you've explained your view. Now, let me explain that statement, both generally and in particularly as applied to crank

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shafts since that's the first example before us.

It was a remark as to context, and it recognized that cumulative element, if you will, of what the County wanted to show. It was, however, still in the context of remaining particular items which would have nexus to Shorum. That's my general explanation.

The particular explanation as applied to Shorum would be you seem to recognize and, in any event, we believe that your Item A under crank shafts would not be relevant as an end in itself and, therefore, would not be admitted as a contention, but it may be that parties may include aspects of what went wrong with the old crank shaft in their evidence, where it is relevant to the adequacy — the design of the supposedly repaired and corrected new crank shaft.

(END OF TAPE 1)

C.R. NRC/69 Tape 1 good. We still have to have some particular allegation with basis, and access to Shoreham, which we'll get to in a moment under Subpart B, as to what's wrong with the new crankshaft, then under those particulars, when you want to bring in some details of evidence, and that could await the details of evidence as opposed to the contention stage, that, ah, there are things that went wrong in the, ah, post mortem, which we discovered in the post mortem, of what went wrong on the old crankshafts, which still have not been adequately addressed, with respect to the new crankshafts.

So, if that's all you meant, ah, then we're on common ground.

MR. D'YINNER: Okay.

JUDGE BRENNER: But I don't know if that's what you meant. In any event, that would be our ruling. Ah, I guess I'll give you an opportunity to say if that's what you meant.

MR. D'YINNER: That's what I meant.

JUDGE BRENNER: Alright. Let's go to B then, which everything will turn on with respect to the crankshaft litigation.

MR. D'YINNER: As I, um, stated we added some additional information or some clarifying information to this in the meeting. I'm not going to bother saying every time we said something at the meeting; it will shorten things up, but I will tell the Board about this, ah, specific intentions

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JUDGE BRENNER: Alright, well B-1, just to set the stage, has a few, ah, subparts, although they are not separately numbered, and ah, the first two are as follows. One is that you allege that the replacement crankshafts are not designed for operation at the overload rating and that the design is marginal for the full load rating. That's one. The second would be the replacement crankshafts will adversely effect and be effected by other engine systems, such as, a phrase that we have discussed before in this proceeding, but passing that for now, such as bearings and piston pressures. So, our question would be, as to those two, what's your basis for those allegations? We understand the nexis to Shoreham, that's easy on this part; you're talking about the crankshafts that are in present machines at Shoreham. So, that's the kind of example where you get by the nexis rather easily. But you still need a basis for the allegation, and specificity often goes hand-in-hand with basis, so I'll add that phrase, also.

MR. D'YINNER: Okay. Um, in the first place, the position, the basis is that the crankshafts, the design standards for these crankshafts do not meet the standardly acceptable design standards set by the ABS, Lloyds Register. The attempt to encompass a, all of a whole variety of design standards for crankshafts, as set by the draft rules of the International Association of Classification Societies

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JUDGE BRENNER: Alright, now, the last reference on the German consultant, you're not talking about an alleged or recognized industry or tradegroup or insurance group standard, you're talking about LILCO's own consultants.

MR. D'YINNER: Is this we're talking about LILCO's consultants or the standards that they apparently apply when they review crankshafts in Germany.

JUDGE BRENNER: Now, they don't meet any of the standards? That's your allegation, are there particular standards that they don't meet?

MR. D"YINNER: Well, as I understand it, these are the design standards for crankshafts, and they are set

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by the classification societies, and we maintain that A) a crankshaft, in order to be reliable and in order to operate properly at these loads should meet those standards, and that the, number two, that the replacement crankshafts do not.

JUDGE BRENNER: Okay. Do you want to tell me a little bit about your basis for saying that the crankshafts do not meet those standards?

MR. D'YINNER: Ah, one by one? Experts, consultants have taken and made calculations, and determined by virtue of those calculations, which are done in accordance with equations set forth in the rules, that the crankshaft design does not meet the points, that it does not meet IACS draft rules. That, with regard to the ABS, that there is a letter from ABS, but that is shown in the FAA report on the crankshafts, that the materials submitted to the ABS is, ah, deficient, that the values used for the crankshafts, ah, strength in various ways, um, were values that were set by TDI that have been, demonstrated to be substandard. That if the same values that FAA set were the correct ones called Tn values had been used by ABS, that those values would have resulted in a calculation that would have been inadequate, that, further, we are unsure as to what extent the overratings, I'm sorry, the overloadings of 3900 KW requirement of the current engine specifications were taken into consideration by the ABS. And, finally, the data that was submitted, did

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not accurately reflect the firing pressure in the cylinders of the engines in which the replacement crankshafts will be operating.

JUDGE BRENNER: Are there particular, you used the term "strength" as a general type meaning, and I'm comfortable with that for now, too, although my colleagues on the Board might not be. Are there particular criteria for strenth withing those standards that you allege the crankshafts do not meet, or are you saying, some of the points you have raised are, ah, relevant to all the, test of strenth under all the criteria?

MR. D'YINNER: My understanding is that are particularly rigid standards in Lloyds and IACS that have to be met that are not met. And that there are similar standards in ABS, although ABS will in effect, I use the word loosely, negotiate, that is they will hold discussions with the applicant, in this case I believe it was TDI that submitted the figures. There was a meeting that was held with TDI, though we don't know what went on in that meeting.

JUDGE BRENNER: At this point can you list the particular standards which are not met. You don't have to tell us in detail the numbers, but just the category.

MR. D'YINNER: It's, I understand, the complicated, complicated calculations resulting from an equation. It's not like, I suppose you've heard or seen, for example DEMO,

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where you have this sum of the orders being 700 psi and that's it. My understanding is this is not at all that one simple standard type thing; it is a complex calculation arising from particular equations that determine whether the crankshaft is sufficiently strong.

JUDGE BRENNER: Alright.

JUDGE FERGUSON: Mr. D'Ynner,

MR D'YNNER: Yes, sir?

JUDGE FERGUSON: Just as a matter of clarification, did I understand you to say that there were certain criteria, I think you used the word equations relating to these standards, that your consultants used, and based on the calculations your consultants, it is your determination that the crankshafts do not meet the criteria. Did I understand you correctly to say that?

MR. D'YNNER: That is true with respect to Lloyd's and IACS, sir.

JUDGE FERGUSON: I see. So, the crankshafts do not meet the standards based on your consultants calculations using the criteria, is that correct?

MR. D'YNNER: That is correct, sir.

JUDGE FERGUSON: Thank you.

MR. D'YNNER: And my information is that these are rather standard, I mean I could never do it, but anybody that knows how to use a little bit higher math than I'm

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capable of, can run it out. I'm not sure depositions are elsewhere that anybody's ever disputed the fact, that, for example, they don't meet Lloyds. The battle on that is going to be whether they ought to or not, and we say they ought to.

JUDGE BRENNER: I thought your colleagues read the table to do those kind of calculations for you, as we discussed them.

MR. D'YNNER: Better, but they're not here.

JUDGE BRENNER: I meant your presently present

colleagues. Ah, what about the second sentence of that B-1?

MR. D'YNNER: I've striken it.

JUDGE BRENNER: What about the third sentence?

MR. D'YNNER: That is still part of the contention.

We have evidence that the shot peening (phonetic) of the replacement crankshafts, in two out of the three crankshafts, was report i by TDI, that it was done inadequately, and had to be over. Franklin Institute, which is the NRC's, ah, an NRC consultant concluded in it's report that the shot peening had problems, that may result in subsurface nucleation sights, which could, as a result of the second shot peening process, would be difficult, if not impossible, to ascertain. The shot peening process in general is on which is recommended some people that LILCO talked to and recommended by others.

TDI, for example, recommends that it be done, although, as

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I recall, they said that because they didn't think it would add measurable less than 5% to the strength of the crankshaft. But we feel that on the basis of the evidence that we've seen that the shot peening may be detrimental, both in terms of having resulted in the creation of nucleation sites because of the incorrect way in which it was done the first time, and in general, because the, when a crankshaft of this size is shot peened, it makes discovery of a nucleation site extremely difficult, if not impossible.

JUDGE BRENNER: But, can you be a little more specific in the context of the way you might word the issue meant to be put forward by that sentence three, that is that shot peening of the replacement crankshafts may be detrimental, I guess may have been detrimental, because, in that, specifics,

MR. D'YNNER: Because the, ah, because the ah, the shot peening of two of the crankshafts was incorrectly done, resulting in the possible creation of nucleation sites, and further, because the shot peening of the replacement crankshafts makes any existing nucleation difficult, if not impossible, to discover.

JUDGE BRENNER: Can you tell me a little more about what was incorrectly done?

MR. D'YNNER: Well, I don't have the Franklin Report with me, sir. But, ah, it does go some detail about it.

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JUDGE BRENNER: Can you give me a reference?

MR. D'YNNER: There is a report, I don't have it with me, that was done by the Franklin Institute for the NRC staff. My colleague tells me it's on page 65 of that report, in which there's a discussion of the fact that there was almost

that we don't have to be totally steeped in the technicalities of it, and I'll admit that I'm not, and you can make your own admission or not make the admisssion, I don't care. For you to be able to tell me, it seems to me, whether the shot peening was bad because they hit it in the wrong place, they hit it too hard, they should have never done it, ah,

MR. D'YNNER: I think the result was that it was a very ragged type of a surface that resulting. The shot peening is supposed to be blasted out so that you get a hardening of the surface, and in this case, instead it was jagged, if I can use that word.

JUDGE BRENNER: The surface of the crankshaft, the resultant surface of the crankshaft was jagged after the shot peening process. Whereas it's your allegation that the shot peening should leave a smooth surface.

MR. D'YNNER: Yes. I don't know whether jagged is the right word. There was another word, I'm trying to remember I can't recall, right now. (PAUSE)

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JUDGE BRENNER: Alright, ah, let's get the responses of LILCO to the oral allucidation, if you will, ah. Part B, we've already denied part A for the reasons agreed upon, I think, as a contention in itself.

MR. STROUPE: Judge Brenner, speaking to B-1, let me say first of all,

JUDGE BRENNER: Yes, I meant B-1, thank you.

MR. STROUPE: First of all, our problem, LILCO's problem with this particular contention is that, ah, as Mr. Farley indicated earlier, we don't think it's been there at all, from the primar contention. Basically, what Mr. D'ynner has told us today and told us at the July 3rd meeting of coursel that we had, is that, as far as the crankshafts are concerned, the county's contention is that by virtue of the fact that we don't meet allegedly several design codes, ah, the crankshafts cannot be reliable, and they are deffectively designed. Number 1, we know of absolutely no rule or requirement in this country that a crankshaft meet any of these codes, for that matter. The fact that the crankshaft may not meet any particular code, whether that be a German code or some international classification society, in our estimation is not determitave of the issue in this proceeding. There are hundreds of codes throughout the world, and these codes are basically designed to make a determination, and a short hand determination to insure

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for insurance company purposes that a particular vessel is going to be sea worthy, as far as its propulsion system goes. That's precisely what these codes are for. They make no attempt to go into detail and to get at design criteria. All they do is give a short hand, ball park estimate of whether a particular crankshaft, in fact, comes under the code, and is sufficiently strong enough, large enough or whatever to satisfy that particular code.

JUDGE BRENNER: But do they have quantified criteria by which, on which they make that judgement?

MR. STROUPE: Well the criteria, Judge Brenner, are basically empirical formulas that don't require a lot of ingenuity. You just plug in the design; you plug the various parameters of the crankshaft, ah, such as the size of the web, things of that nature. It's no detailed determination of whether a crankshaft is a well designed crankshaft or is not a well designed crankshaft. It's just a short hand determination. We don't think that is something that should be litigated in this proceeding. We're not afraid to litigate the liability of these crankshafts. Our experts say, and Mr. D'ynner has had full opportunity to depose all of our experts on crankshafts, and they say these crankshafts are sufficient. The way the contention is worded right now, and particularly when Mr. D'ynner's explanation is had, we don't know what they say is wrong with the crank-

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shafts. We don't know whether that they are contending that the crank pin is too small, whether the webs are too small, whether the configuration of the crankshaft is wrong. We just don't know what they're saying. All they're willing to say is well we think that there are four classification codes that you ought to meet, and we think you don't meet them. Our experts have made these calculations, and by the way, I might add, I'm rather surprised to hear Mr. D'ynner say that. I've spent several days with Mr. Christianson, who is one of his chief crankshaft experts. I've spent several, at least a day and a half with Mr. Ely, who is crankshaft expert, and perhaps a day with Mr. Bochi, trying to find out what their calculations were. I was never able to get anything. We've asked for these calculations; we don't have them. So, I'm rather flabbergasted to hear that they now have calculations that show that presumably these crankshafts do not meet these codes. I might add that the ABS, my understanding, has, in fact, approved the replacement crankshafts, and has issued a certificate to that effect, and Mr. D'ynner has a copy of that. And, my understanding is that they found it, the particular engine with its components, including the crankshaft, suitable for the purposes of ABS. Now, again, that is the American Bureau of Shipping, and that applies to shipping standards, in effect. Suspiciously absent from Mr. D'ynner's discussion

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were the DEMA requirements, Deisel Engine Manufacture Association. All our people say we meet DEMA. If there is anything that American Engine Manufacturers applied to their own engines, it is the DEMA requirements. But we think we're entitled to something more than the mere allegation that we don't meet these four codes that he has set for us. That doesn't give us the opportunity to prepare ourselves to know exactly what we have to show the county and this board to be able to prove that the crankshafts are reliable and adequate for their intended purposes.

JUDGE BRENNER: Is ther a fourth code that has been referred to as your German consultants? Is there a code that they're using?

MR. STROUPE: Well, the way Mr. D'ynner characterized that, I think was incorrect, your honor. What our expert, who is Dr. Franz Pischenger told Mr. D'ynner's associate Mr. Mike Miller was that there is a German classification code that is more an internal sort of thing that certain manufacturers and certain people in Germany use. It is a very, very conservative code, maybe the most conservative code in the world, and it considers things that, in our experts' opinion, are not important as far as crankshafts we're talking about today are concerned. And the fact that the crankshaft may be marginal as far as that German code goes, as Mr. D'ynner I believe put it, does not concern our

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expert at all. He feels pretty strongly that these crankshafts are suited and fit for their intended purposes.

Getting to the second aspect of the crankshafts, and that is
the common instance which Mr. D'ynner has listed in Saudi
Arabi, again,

JUDGE BRENNER: But, could I back you up to the shot peening, and I don't think I asked Mr. D'ynner about the B-2.

MR. STROUPE: Alright. Well, let me say this about shot peening. I think Mr. D'ynner is incorrectly characterizing the Franklin research report. I don't believe that that report says what Mr. D'ynner has said it says. I think what the report said was that, the person who authored that report apparently did not or was not able to have a sufficient look at the shot peening that was done to come to any conclusion about the shot peening, and I believe all the report said was that if the shot peening was done incorrectly, the shot peening was done incorrectly, it could be, it could be detrimental. Now, I know of now one shred of testimony or anything else in this proceeding indicating that there is a problem with shot peening. The evidence as I understand it, is that TDI personel shot peened a couple of the crankshafts when they were received by LILCO. We had shot peening experts look at those crankshafts, and they made a determination that additional shot peening needed

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to be done to insure that what was trying to be accomplished by the shot peening, and that is to remove the surface stresses on the metal, the material, in fact, was accomplished, and we had what we believe is a world-reknown, at least reknown in this part of the country in this part of the United States, expert on shot peening come in and do that. And we know nothing that was done improperly, and no reason why that shot peening shouldn't, in fact, add some margin to the crankshaft. And we believe, again, as with the first part of this contention B-1, that we're entitled to hear from Mr. D'ynner, for the purpose of being able to adequately litigate this issue, if indeed it is to be litigated, what they contend is wrong with shot peening. We haven't heard one word as to specifically what is wrong, and contrary to what Mr. D'ynner says, I do not believe we will find that in the Franklin Report. So again, we think we should be given the basis that Mr. D'ynner and Suffolk County believe bares out that contention.

JUDGE BRENNER: Well, I'm sorry, have you completed, on that point? Using this as an example to add to add to our already lengthy but somewhat too general discussion of basis, ah, where the county is alleging that the shot peening is improperly done, and that contention is based on a reference to a report, certainly the minimum basis would have been to reference the report, and if, attach the

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page or pages, or if we have the report, at least, quote the pertinent portion as a basis in support of the contention, and this is just what we're talking about. In terms of basis, we certainly have pages and pages of depositions attached, which appear to be less directly relevant to basis. Passing that, that was for purposes of illustration, ah, staying with the particular, but more to the point, does anybody have a copy of the exert, the report that's pertinent that we could look at here today?

MR. D'YNNER; Judge Brenner, I'm reminded by my colleague that probably that the information on the nature of the shot peened after the first attempt is not included in the report, but would be testimony from a witness.

me a basis that I can look, in terms of what's wrong with shot peening, other than the allegation. And I'm putting that to you so you could come back and give me a basis.

Mr. Stroupe, you referred to what you think the report says.

Do you have a copy of the portion of the report that you have in mind?

MR. STROUPE: I do not have that with me because, quite frankly, I did not know in advance that that's what Mr. D'ynner was relying upon for the basis for this contention.

JUDGE BRENNER: Well, have you read it?

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MR. STROUPE: I have read that report, yes, Judge Brenner. My recollection, as I have stated earlier, is that the question that was raised in that report was because of the author's lack of familiarity with, in fact, how the shot peening was done, not specifically that anything was done improperly.

JUDGE BRENNER: We have the report, but I'll be candid to admit we have a stack of reports. And whether or not I know that I can pull it out for myself from our joint board records during the break, the lunch break, I'd frankly want to spend the break doing other things pertinent to this case, than document search.

MR. D'YNNER: Do you want me to identify the name of the individual who gave us this information, is that what, I'm having a real hard time with some of the things that Mr. Stroupe is saying in differentiating between contention, which has a basis, and knowing all the evidence.

JUDGE BRENNER: Well, I know ..

MR. D'YNNER: I'm also having trouble with somebody telling me it's not enough to say the crankshaft is no good because it doesn't meet an international standard a, but somehow we have some responsibility to tell him how it should meet that standard by increasing the crank pin by a quarter of an inch or whatever.

JUDGE BRENNER: Okay. Hold it, see, my mind just

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doesn't work that well, I have to stay with one point at a time or I run into trouble, and you'll have to forgive me for that. I understand, I think, quite well, your disagreement on your allegation, and the first part of that B-1. You've explained the basis for your allegation in terms of the standards, and I understand LILCO's objection to it, and I was discussing a smaller point, and want to stay with that as a basis for the shot peening sent/ Now, in the abstract that might sound silly or not, I don't know, I'm not an expert. I'm glad to hear that in this age of specialization there apparently are such things as shot peening experts, of which I am not one. But I do want to understand what the basis is for the sentence because, before we go marching off to a litigation, ah, based on, what I've characterized as a mere allegation that the shop peening was done incorrectly, and I don't know how giving me the name of somebody who would be a prospective witness for you, just that would help me.

MR. D'YNNER: I don't know what else I could tell
you. Our experts say, A) the shot peening in general, B)
that the shot peening in this particular instance was
incorrectly done, and had to be done over, and C) we have
a witness, who will way, who was there, who observed it, who
saw the surface that says he thinks there are nucleation sites
and it was a mess. Now, I don't have anything else.

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JUDGE BRENNER; Well, you could tell me what their basis is so that I could have an objective evaluation, or you could have attached an afadavit and left open that possibility, it's not required, depending on what you could come up with without an afadavit. But, again, I'm looking for an ascertainable basis. Especially, if Mr. Stroupe's version of the report, which is what you had originally referred to, Mr. D'ynner, is accurate, because then you not only do you not have a report that supports you, then the only report we might have on it would contradict you. And, again, we would look at it only in the context of basis, it may be you have a basis for disagreeing with that or any other report on a subject, but we need to look at that basis. I guess at some point we're going to have to get the pertinent page or pages from the report that you referred to, Mr. Stroupe, and sooner rather than later.

MR. STROUPE: Well, Judge Brenner, I think, you know, one of the problems I have with,

JUDGE BRENNER: I'm not criticizing you for not having it with you, I'm just pointing it out.

MR. STROUPE: No, I understand that. One of the problems I have with the county, one of the many problems I have with the county came from the "loosey-goosey", if I may use that word, nature. Because, for example with the shot peening, they dont' say the shot peening with

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replacement crankshafts is detrimental. They say may be detrimental. Now, are we to litigate something that may be, or are we going to litigate things that are? I think, generally that's the problem we have throughout this filing that the county made.

JUDGE BRENNER: Alright, if you could accomodate us somehow, and there are telacopy machines available that my secretary can put whoever you want in touch with if you want to do it that way, I'm not going to require that, or maybe you can get something to us as soon as possible after today,

MR. STROUPE: Are you asking me to get the report to you? The portion of the report that deals with shot peening. We will give that to you.

JUDGE BRENNER: Right. I think we have the report somewhere, and Judge Morris recalls reading it, but I don't want to trust our recollection, and although you've given us your recollection I'm sure in good faith, I don't want to base a ruling on your recollection.

MR. STROUPE: Sure, I understand that. We will get that to you as soon as possible.

MR. GODDARD: Judge Brenner, Mr. Burlinger has advised me that he's going to try and obtain a copy of that report at this time, and have it brought over.

JUDGE BRENNER: Okay, I appreciate that Of course,

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my comments were meant generally. Incidentally, Mr. Palomino, any time you want to jump in after we run through the primary proponents and apponents, feel free to do so. Maybe this is a good time to clarify what may be just a minor procedural point or maybe more important. The state had the opportunity to put forward its own issues from that February ruling, as you understand. The county made a filing, and, I guess, as I understand it, the state does not want to put forth any of its own issues, but does want to support the county's issues.

MR. PALOMINO: We work with the county on it, and we'll support the county's issues. And if I feel it appropriate, I'll discuss it with Mr. D'ynner, or otherwise, I will interject.

JUDGE BRENNER: Are you planning to put on your own separate, well not separate, but your own state witnesses as a case if any of these issues are admitted?

MR. PALOMINO: I don't think so, your honor.

JUDGE BRENNER: Okay. Mr. Stroupe, you wanted to talk about the oil pressure plugs in Saudi Arabia, and I'll let you do that, then I'll get back to Mr. D'ynner on that same subject.

MR. STROUPE: Well, again, I think our position is pretty simple, Judge Brenner, and I think it's exactly as you explained the Board of intents in its February 22nd

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order, and that is, have the county make some sort of an explanation of the nexis relationship between an instance something going wrong with a component that the county decided to litigate, and the particular component on Shore-As far as I can tell, based on what has been said in this county's filing, we don't have any explanation on how it relates to the replacement crankshafts in Shoreham. just says, as a matter of fact, an adequate crankshaft always has its plugs on a replacement design crankshaft damaged pistons, and that's it. We don't know the operation conditions; we don't know the hours of service; all we know is that he is listed it as a common instance, apparently one of which he intends to rely upon, to show that the crankshafts are not adequately designed for the Shoreham engines. Again, we think the litigation of this requires more, that we should given the specifics of how this impact on the Shoreham replacement crankshafts, because as it stands, again, we don't know what to litigate about oil passage plugs.

JUDGE BRENNER: Well, now you know something about it, I infer, because in your answer arguing that the contention should not be admitted, you alleged,

MR. STROUPE: We know we don't have that problem.

JUDGE BRENNER: Yes, and you allege that the oil
plug design in Saudi Arabia was different. Am I recalling
that correctly?

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MR. STROUPE: Correct.

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JUDGE BRENNER: Ah, it's the same engine type as the Shoreham deisels, correct? I infer that from the DSR-48 designation. They have the new size crankshafts in ther, at least the county so alleges. I don't know if LILCO knows what size crankshafts.

MR. STROUPE: I'm not sure they really know.

JUDGE BRENNER: Well, do you have access through TDI to information about this incident, using this,

MR. STROUPE: We have whatever the county has, I believe, and that is the service records or the failure analysis reports that TDI maintains, that we all went out to Oakland, California back in March, I believe, and went through and obtained, which were I assume is where this came from.

JUDGE BRENNER: Well, do you know what's different about the oil plug design in Saudi Arabia such that one could not infer that the same problem would arise on the oil plug design in the Shoreham deisel?

MR. STROUPE: I don't know the answer to that, Judge Brenner.

JUDGE BRENNER: You see it's said, just for purposes of the framework, you said their oil plug design is different.

Now, I could have the oil plug design, to site an absurd example, being the color red in one and the color green in

RLH NRC 69 T2 23 the other, and that may be a difference, but it's a difference without a distinction in terms of the problem. And I don't know anything about the different oil plug design, and I'm looking at it in terms of a possible argument on Nexus.

MR. STROUPE: Well, I believe, Judge Brenner, that as we stated in our filing, and of course when we made this filing, we relied to a large extent on some of our experts, but our indication is that it is a different designed oil passage plugs on the Shorehams that they have checked. The problem has been found, and a certainly know that we haven't had piston failure as a result of the oil plug passage problem.

JUDGE MORRIS: Uh, Mr. Stroupe, did the information that you saw define the problem that occurred with the oil plugs in Arabia?

MR. STROUPE: I believe that, my best recollection,
Judge Morris, is that the plugs that were used in the replacement of the crankshafts at Saudi Arabia were a thinner plug,
a much thinner plug, as I understand it. The Shoreham
crankshafts have thicker plugs, and thus, I believe, would
be less susceptable to any sort of problem, such as apparently
occurred at RAFFA, the electricity coroporation.

JUDGE MORRIS: Well, did TDI do an analysis to show that it failed because of lack of strengths due to improper dimension? Did it go that far?

MR. STROUPE: Quite frankly, Judge Mocris, from

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memory, I can't answer that question. I think, probably there was either some sort of failure analyses report that TDI did that we obtained access to, or there was some sort of indication in their service record that this problem had occurred, and in most cases where we were looking at records of that nature, you could get a general idea of what the problem was. If you put that with the failure analysis report, you would get a specific idea of what the problem was.

JUDGE MORRIS: Was there any indication of whether this was a unique problem or whether that particular design was, ah, general,

MR. STROUPE: I can say this, in all honesty, I don't believe we know of any other instances of piston damage as a result of failure of oil passage plugs.

JUDGE MORRIS: Was that design common to other engines, do you know?

MR. STROUPE: I believe so.

JUDGE BRENNER: I inferred from your written answer, LILCO's written answer, and one was there was some sort of analysis done because the answer was that it wasn't an oil plug failure, but it was an overspeed accident, number one. So, that there is knowledge available to TDI, and presumably therefore to LILOCO about it, and, well, I'll stop there. But something you said today is apparently, or may be not

RLH NRC 69 T2 fully consistent with that because you recall something about a thinner oil plug design.

MR. STROUPE: Well, if certainly my recollection is, if we said what you're saying about overspeed in our filing, I would assume that is the most correct answer. My memory certainly would not superceed our filing. (PAUSE)

Judge Brenner, I'm not sure, it may appear to be an inconsistency, but my colleagues tell me that they believe that the overspeed problem caused the thinner plugs to cause the additional problem that resulted in the piston failure. So, I think it's part of the same problem.

JUDGE BRENNER: That's one explanation that occurred to me also just now. Mr. D'Ynner, we're evaluating this in terms of the Nexus to Shoreham, it's an occurrance at another deisel generator. You've alleged to it without contradiction that it's a DSR -48, so we'll accept that. You've alleged without contradiction that it's the new design crankshaft, at least the new size, and again without contradiction, so we'll accept that.

MR. D"YNNER: Now, the plug is, the first we heard of it was in this filing, where they're saying the plug is a different thickness. The drawing that we had from TDI, which proports to be the drawing of the oil passage plug on the replacement crankshafts, is of the thickness which concerns our experts, and is as far as we know, is of the

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same thickness. We've not seen any drawings since this occurrence, which would indicate that there was a change in the thickness of the oil pressure plug.

JUDGE BRENNER: Well, if the oil passage plug, if they are different, in fact, which we should be able to ascertain, short of a litigation to ascertain that, does that take away from the basis because at the time you filed this you believe the oil passage plug design was the same?

MR. D"YNNER: Well, I keep having this trouble with what's a specific basis and what's the evidence because, their giving evidence, and if they have that kind of evidence it seems to me they ought file a motion for summary disposition of this thing. We have, our consultants looked at this in connection with looking at the crankshaft. They looked at the drawing, and concluded that based upon their own analysis of this element that it's so thin and it's designed in a manner that creates a problem, a potential problem, with breakage or corrosion or cracking. And, then we looked around and said well, did this happen any where else, and we looked through the information that we were able to find from discovery, and we came up with this as the only example where we could find where there was a failure of the oil passage plug. Well, it's kindof like saying, well, we looked for that, and every instance we probably can't find it. When we're an analysis of design you may come up with,

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your experts may come with a conclusion that this design is no good. And, that's based on their expertise and experience in the design of deisel engines, and in particular components, and then you something else to put the nail in the shoe, and in that case this is all we could find. In most other cases that we've cited here, I mean all things that have gone wrong at Shoreham, so we haven't had to look for specific things and say, well, that's the only case. This is a rarity, and it couldn't have happened at Shoreham, because they didn't have this model crankshaft in place until recently.

JUDGE BRENNER: Was that the sequence of approach by your experts, or was it rather that you had this occurrence at Saudi Arabia, and based on that occurrence, you want to, and your belief that the oil plug design was the same, that therefore, you, would allege that there is an apparent problem at Shoreham.

MR. D"YNNER: My recollection is that my consultants said we think there's a problem with, looking at the whole crankshaft, we think there's a problem with the thickness of this oil, I can't, I don't remember what the exact sequence was.

JUDGE BRENNER: Alright, well, the only reason that I asked was you seemed to emphasize the sequence in your remark.

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RLH NRC 69 T2 MR. D"YNNER: I didn't mean to emphasize any sequence, I just, in my mind that's the probably of what would have happened, but I'm not going to swear to it. It maybe the reverse. It maybe somebody came across this and said maybe we better have a closer look at this particular element, I can't, I can't answer that.

JUDGE BRENNER: Well, if the design of the oil plugs are materially different, that would affect our evaluation of Nexus. Now, I understand that if you felt

basis, if, in fact, your belief is true, that is you've got the same type of machine, you've got the same size of the new crankshaft, and I'm assuming that's true because LILCO has not contradicted that aspect, the size of the crankshaft, and your belief that the oil plug design is the same. Now, we don't have to await summary disposition, of anything further if we can ascertain fairly readily whether the premise upon which you're basing the contention is, in fact, not correct, although you believed it to be.

MR. D"YNNER: We believe that it's the same engine, that it's the same crankshaft. Based upon the fact that the drawings don't show any changes, we know what the drawing thickness is for this and we don't believe, we have no reason to believe that there was an earlier design that went into this engine that was thinner. Now, we get into

the issue, my saying, well, gee, we'd like to talk to these people. We've written letters and asked them what problems have you had. We've asked for some assistance. We don't think, I mean frankly this is one element which is a relatively minor element. We're not going to win this case or lose this case because the oil pressure, the oil passage plug is too thin or not, and I'll be the first one to admit it. But, it is, in fact, an element that appears to us, from everything we've been able to adduce, is a problem area and an area which our consultants tell us, if we're right, if one of these crack, you can have disasterous effects. That's the other thing we've tried to do in paring down our contentions, to try to look at something and say, it's not a question of where, it's a question of something that could really throw a monkey wrench into the operation of this machine during an emergency. That's one of the reasons, for example, that we took out the second sentence of this, this of this B-1 contention about the effect of the bearings, because we decided that in the long run, that while we think it may have that effect that it's the kind of thing you probably could spot and repair, so we don't want to bother with that.

JUDGE BRENNER: Alright, you said several things very quickly in that statement. One of it is more information from Saudi Arabi would be nice, or useful, or maybe helpful

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Apparently, there's enough information available through sources here, to what, at least, persons who did the analysis believe occurred, and we can learn something about that information beyond what we know to determine if there's even a reasonable basis in Nexus for the contention. And, you've had enough about to believe you had a basis for a contention, and as I said, we might be willing to find a basis for a contention if your premise is correct. But, I think the parties being possessed in great ingenuity, we know, in this long proceeding, can come up quickly with some good way of at least what the experts or attorneys or both, whether or not the oil passage plugs are the same design or not, and what is different about the design, a couple of simple facts. And, if the parties can't, maybe we can come up with some way, but the parties can think about that for now. As to the staff, frankly I'm not anxious take up too much time today with the staff's views because Judge Morris has already given you the view which I share as to the quality of the staff's assistants in its legal pleading. Now, we know what your general position is, and we're giving the other parties, that is primarily the county and LILCO, the opportunity to fill out their written pleading, which written pleadings were of a quite a large amount of assistance to us in evaluating the detailed positions of the parties, and we're supplimenting that, and allowing the parties to

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supplement that, but anything we hear from the staff is going to be brand new from the first, for the first time, in terms of any details, and that's not helpful, when we have to react suddenly like that. It's difficult to know when even remarks in supplementation are somewhat new, and we'll be here more than today if we start getting a lot of brand new things, unless the staff has something really significant to add, and if you do please let us know and we'll allow you to do so. I'm not going to turn to the staff, as a matter of course, given the nature of the staff's legal pleading, and Judge Morris mencioned it, and now I've had occasion to mention it again, and it's not for purposes of belaboring the past, but if you're going to be a party in this proceedings, you being the staff, you better get in step with the quality of the work of the proceedings that we need to reach our judgement.

JUDGE MORRIS: Uh, Mr. Goddard, was Mr. Burlinger able to find that document?

MR. GODDARD: There is a copy being brought over here at this time.

JUDGE MORRIS: I see, I just, ah, if possible, perhaps the parties could share that with you over the lunch break.

JUDGE BRENNER: We're going to take a lunch break until one thirty. We expect to move somewhat more expeditiously

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as always. We don't move as fast in the beginning as we might have hoped, and time is taken up by introductory remarks, and after awhile, I think, the tenor the remarks will be, the deficiency of the remarks will be assisted by reference back to some of the previous remarks as we go through it. We'll give you enough time to eat in Bethesda, which sometimes takes a little bit of time, and to think about things you might want to think about, so we'll break until one thirty.

RLH NRC 69 T2 (END OF TAFE TWO)

JUDGE BRENNER: Back on the record. The staff has provided us with a copy and, during the break. Judge Morris was also able to locate his copy of the Franklin Research Center report entitled Evaluation of Diesel Shoreham

Generator Failure At / Unit 1, Final Report, Failure

Cause Evaluation dated April sixth, 1984 and I guess the parties, I hope the parties have had an opportunity to briefly look at this at least if not discussed it.

You haven't? You have it now in front of you?

You can have this copy. We have another one to share. I

thought Mr. Goddard, we were going to get copies of the

pertinent pages to the other parties.

MR. GODDARD: I told Mr. Dynner that the report was available approximately ten minutes ago

JUDGE BRENNER: I thought you were going to come in here with copies of the one or two or three pertinent pages though. It doesn't seem to say exactly what either Counsel told me. Mr. Stroupe, do you have a copy?

MR. STROUPE: Your Honor, I looked at it briefly a few minutes ago, particularly that language that related to the photographs of the shot peening that was done by Metal Improvements and I thought in my own view that it was pretty well consistent with what I tried to represent to the Board in that I believe the Franklin Research Center came to the conclusion that based on the photographs they

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had seen, the shot peening that was done by Metal Improvements would have created a situation where the shot peening would be effective if in fact all of the shot peening were done in the manner as indicated in the photographs and I believe he then put a disclaimer on that he had not had access to look at all areas of the shot peening and thus could not reach any final conclusion on that.

JUDGE BRENNER: That's essentially what you said before and it's essentially accurate as far as it goes and I'm just looking at an instant paragraph here and I may be -

MR. STROUPE: Well, I didn't have an opportunity to read the whole thing. There may be something, somebody else.

JUDGE BRENNER: Okay. Let me give you something in here and there may be context elsewhere that relate to this that I'm ignorant of, also. But I thought you also said earlier that the conclusion was that the shot peening performed may not have been acceptable in part because the inspector didn't get to see everything or the analyst didn't get see everything that might be pertinent to it.

But actually the comments that you just stated after lunch is accurate as related to the rework shot peening as I read this paragraph. However, the conclusion is also in that same paragraph and this is the third full paragraph on page 65 of the report.

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It is stated that inspection of crank shaft No. 693 and 694 revealed inadequate initial shot peening. So, it did go further than to say he didn't know.

MR. STROUPE: Yes. I don't think we dispute that.

That's why we reshot peened ourselves as a matter of fact.

JUDGE BRENNER: Okay. I guess you knew that when you gave the earlier comments, but I didn't know about that phrase and didn't infer it from your earlier comments.

MR. STROUPE: I'm sorry. That's certainly what I meant to say. Again, I would just say if that is in fact the authority that Mr. Dynner is relying upon for the basis of his contention, I do not think it accurately supports that contention and would form a basis. It certainly does not give us in my view the requisite information that I believe we need to litigate that.

MR. DYNNER: Well, you know, I've said before that we had a witness who was going to testify as to what that looked like to him and he's somebody that's significant and also testify to what our own consultants -

JUDGE BRENNER: Excuse me, Mr. Dynner. Could you speak up just a little?

MR. DYNNER: I'm sorry.

JUDGE BRENNER: We've got a ventilation fan back here which is louder to us than to you.

MR. DYNNER: Sure. Well, I said that I'd, we keep

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PC 25 NRC-69 T-3 going further and further into the evidence. I said initially that the bases for the specification of why we were concerned about shot peening is that they were inadequately done initially on two crank shafts by TDI, that our consultants believe in any case that shot peening may cause problems by hiding nucleation sites and making it difficult or impossible for them to be discovered and third, that we had, after the Board asked me some questions about it, a statement from a witness who said that the initial shot peening had been so deliterious that it created or would be likely to create the possiblity of nucleation sites.

And then we went into the evidence and you asked me about the report and I told you and Mr.Scheipt remembered it was page 65. In fact, as I peruse this document, the inadequacy of initial shot peening is dealt with and referred to on a couple of pages.

It is stated in the report that it was, that they looked at some photographs and insofar as the photographs, inspected a representative of all the shot peened surfaces that it's acceptable to Franklin. You know, to that extent these are matters it seems to us that are issues of fact and to be joined in the litigation.

We've had the same situation here, I guess, you know, both sides saying what they recall in the evidence and who said what and what evidence there is and what

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evidence there is on the other side and it's almost, I must say, as though we're involved in an evidentiary hearing and it seems to me, I thought the standard was is the basis specific enough to support the general contention. And if it is, it's in.

I thought they were in. I thought we needed to specify some additional instances and not go through and state all the bases of evidence because then you get to the initial dispute that we had that I thought was resolved on February twenty-second where LILCO was saying what's the bases for yourbases and what's the bases for the bases of the bases and we were saying -

JUDGE BRENNER: Mr. Dynner, I really don't want to belabor it because we've discussed it. We've both referred to the transcript -

MR. DYNNER: All right.

view of what our ruling is and I think it's quite clear from the ruling and I thought that frankly when I reviewed the ruling while out of town at another hearing and decided it presented no problem because it was quite clear and I continue to believe that. So we've stated our view and for the most part it's, the standards, at least, are consistent with your view although not fully and the main difficulty is in applying the standard and we've even had that kind of

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PC 25 NRC-69 T-3 conversation I think with you and certainly with other

Counsel throughout this hearing, even long before February

twenty-second and the fact is you don't have to put forward

all your evidence, but on the other hand a bare allegation

is not sufficient. Even if it's specific enough to understand

the allegation a basis is still required.

MR. DYNNER: Well, we're making an allegation. I think we're stating the basis and what's happening repeatedly here and in LILCO's response is they're challenging as a factual matter the evidence that we're stating from the basis and it seems to me that's appropriate for either a motion for summary disposition or for litigation and trial. That's the only point I wanted to make.

JUDGE BRENNER: That's one way of looking at the argument and the other way of looking at the argument which LILCO presses upon us is they don't know what it is about shot peening the county thinks is deficient and not cured and I asked you that question and you've given us your view of what you think you have to tell us about that. I think we can move on to cylinder blocks unless somebody over lunch knows something more about the oil plug design in the Saudi Arabia DSR-48 than was known before lunch.

MR. STROUPE: We were unable to obtain the information, Judge Brenner.

JUDGE BRENNER: I'm not surprised. I thought I'd

stop and ask just in case.

JUDGE MORRIS: Mr. Stroupe?

MR. STROUPE: Yes, Judge Morris?

JUDGE MORRIS: If you were to find that the design of oil passage plugs was exactly the same in the Saudi Arabia machine as it is at Shorem and the crank shaft was identical in every other respect, would you agree that that was sufficient basis to allow this contention?

MR. STROUPE: No, Judge Morris. We think we're entitled to know more than just that because we think a nexus has to be shown as the Board has used that term as to why there is reason to believe that just because a crank shaft that happens to be identical to the crank shaft at Shorem caused a piston problem, how does that relate to what might happen at Shorem.

And our believe is that based on the contention as presently stated, even if those factors be true, it does not sufficiently inform us as to what we're going to be required to litigate. We don't, and I guess to further explain what I'm saying, we quite frankly don't know any of the specifics of that particular instance other than what has been discussed here today, you know, whether there was a sandstorm and the sand coming in through the intake had something to do with it.

We had heard allegations in various documents

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that some of these engines tend to be run without oil from time to time. There are all sorts of factors that could affect whether or not this bears any nexus to the Shorem and we say without some of that information provided to us, it's very difficult for us to be prepared to litigate that.

JUDGE MORRIS: Well, doesn't this put the county in a Catch-22 situation? They're barred from discovery direct to that company.

MR. STROUPE: No, Judge Morris, I don't think so and the reason for that is the county had the opportunity to depose a gentleman named Shilling who is the failure analysis expert for TDI and they could have asked him any questions they saw fit to ask him about any particular common instant or anything else that they had information on.

And Mr. Shilling was not the only individual from TDI that the county deposed. They deposed numerous individuals and they could have asked these questions very simply and could have discovered that information. They had probably better access to it than we do from that point of view.

MR. DYNNER: If I could respond very briefly to that. Number one, as you well know when we were deposing both of the TDI witnesses, it was the same week I recall we were arguing the issue before this Board of having

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additional time to depose and needing additional time for discovery because we'd just gotten fairly recently before that those depositions were taken, thousands upon thousands of documents from TDI. The document regarding the Raffa plant was one, obviously, of those thousands of documents.

Number two, Mr. Shilling didn't do from the documents that we had, we knew he had not done any failure analysis on this particular case. And I really don't want to get into the deposition of Mr. Shilling except to say that he didn't remember very much anyway.

But I won't go further than that because I think what Mr. Stroupe said is not relevant. I think that what's relevant is let them explain what would they have to know in order to be apprised and aware of what we're going to litigate because I think the answer is going to be very clear.

They want to know every single piece of evidence; why we're going to use it; who said it and then they're still going to say it's not relevant because they disagree with the issue of litigating these points. I think time and again, you know, we say this is what our experts think.

This is an inadequate design for this reason. We don't have to tell them because it's an inadequate design now what should you do to fix it; should you change the crank pin width; should you increase the oil passage plug

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thickness by a sixteenth of an inch and then it will be okay.

JUDGE MORRIS: Mr. Dynner, I don't think we're interested in that, either, at this stage of the proceeding. What we are looking for is a clear and precise basis for a contention as to why this design plug, if it's the same at Shorem, makes that machine unacceptable.

MR. DYNNER: Yes, sir. And of course our position is that I think what we said is about as much as we can say at this point because we don't have the information that would more particularize the failure at Raffa. But we know it occurred and we believe it was the same design oil passage plug and our experts tell us that in any case the oil passage plugs in their judgment based on their expertise are inadequately designed because they're too thin.

If they don't know now that what we want to litigate is the design of the oil passage plug into it's manufacture because we don't know what causes failure in that particular case based upon its thickness or thinness and what may and might not happen as a result of that, I just don't know what level of detail is going to satisfy them.

JUDGE BRENNER: Let's turn from crank shafts to cylinder blocks if we could which is your item 2 under the Roman II. LILCO in Court in opposing the admissibility of this contention states that the county's wrong, the cracks

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who much you want to tell us about that at this point, but I take it that there's no dispute that cracks or indications of cracks have occurred in all three, some portion of all three blocks and that the block on EDG103 has been replaced but that the block on 101010, the blocks on 1010102 have not been replaced. An I correct so far?

MR. STROUPE: Yes, that is correct. I guess we would, as we've stated in our filing, we would disagree with the general language that cracks have been found in the cylinder lining area. We were a little more specific I think in where we've located the actual cracks in our filing.

JUDGE BRENNUR: Where were the actual cracks?

MR. STROUPE: Well, I believe as we say, they
occur between the stud hole and liner counterbore in the
101 and 102 blocks and in the 103 the cracks also extended
from between the stud holes.

JUDGE BRENNER: That refreshed my recollection a little bit. If you could continue to do that I'd appreciate it. Do you disagree with the allegation that cracks have also been observed in the cam shaft galley area of the block?

MR. STROUPE: No, we do not disagree with that allegation. Again, I suppose Mr. Dynner wants to speak to

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speak to this, but our position is that there's been no specificity in this as to what affect the county is contending those cracks have for one thing.

At our meeting that we had with the county, the indication was that the county thinks the cracks in 101-102 blocks may grow. At this point we don't have any calculations from the county. We don't have anything but the bare indication that they believe the cracks may grow.

And they cite common instances so to speak. I

think there are about fifteen of them, starting on page 5

and going over through page 6 which appear to be mostly all

of them are either marine or non-nuclear situations and

basically we don't even know where the cracks occur from

the filing other than the county says the cylinder blocks

Shoreham

cracking are similar to that in the / EDG's.with some

sixteen cylinders, V's, various configurations of engines.

And again, there's no attempt to relate these crackings or so-called crackings to the Shorem engines. As far as I can see there's no indication that these engines aren't continuing to operate properly. I think their own experts have said that marine situation is vastly different from a nuclear standby situation with conditions being much more severe in terms of operation.

And I believe the staff has said that. Dr. Berlinger has indicated that and the P and L people to some

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extent have indicated that. We don't see any explanation in the specification as to what the county's belief is as to how these cracks in the 101 and 102 blocks will affect the operation of the engines.

MR. DYNNER: Well - I'm sorry. Have you completed?

MR. STROUPE: No specification as to that. We believe that we are entitled to know specifically what the county's contentions is, contentions are as to the cracks that are in the 101 and 102 blocks and with regard to the 103 block and the cracks that occur in that block we don't believe that that should be litigated because that block as qute frankly as we all know has been replaced.

There is a replacement block with some improvements on it. The county says that they believe this replacement block has been, it a new design which is unproven. Again, we don't really know what they mean by that.

I think the situation is that this is not a new design block. It's a block that is similar in many respects to the blocks in the 101 and 102 engine. It has apparently deeper stud bosses and is a different grade of material or metal.

But other than that there are certainly very few differences between the blocks. It's certainly not a block

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which is unproven in DSR-48 engines because it is based on the design that has operated for many years in various R-48 engines. We think we're entitled -

JUDGE BRENNER: Well, wait a minute. I thought all those engines sufficiently different from 'Shoreham' so as not to be comparable, so why rely on them for good experience when you don't want the county to rely on them for bad experience?

MR. STROUPE: Well, the only way we would rely upon engines, R-48's similar to the R-48 that is at Shorem is in the situation where we've had data to indicate that the conditions were as severe if not more severe than those at Shorem. And if you don't have a failure in that situation then I think that's some pretty good evidence.

What the county is relying upon is situations where we don't know what the operating conditions are, whether they're less or different or what and only the failure situation. So that's what we would to a certain extent rely upon.

But as we look at these fifteen instances or I guess there are fifteen blocks and ten instances, again, other than the type of engine that is indicated, whether it be a six cylinder, eight cylinder or a V of some sort, that's all we know about it. And other than the fact that by looking at what the county has set out, we can make a

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PC 25 NRC-69 T-3 fairly good determination of whether it's a marine situation or whether it's some sort of municiple or generation of electricity situation.

Other than that, we don't know where these cracks are located. We don't know the conditions under which they may have occurred and we don't even know whether the engines are continuing to operate and perform reliably. I would guess that most if not all of these engines are still operating properly.

So again, we are faced with a situation where we don't really know what the county intends to show by listing all these common instances.

JUDGE BRENNER: Staying with the part A for the moment of the cylinder blocks which is the Shorem instances and not the common instances that you've also discussed, can you remind me of what the R-5 design designation means?

Am I correct that those are changes made but still are to the same basic engine, that is, the DSR-48 engine?

MR. STROUPE: Yes.

MR. DYNNER: Excuse me. I'm sorry. I didn't quite get that.

JUDGE BRENNER: I was going to ask you the same question so I'll do it now. I'm asking whether the R-5 designation is an engine where changes have been made in different components, but yet nevertheless it's still the

DSR-48 engine, that is, it's an in-line 8TDL engine?

MR. DYNNER: Well, my understanding is that I don't remember whether it's an in-line eight cylinder engine, but it's my understanding that it's a completely different design of engine. It's their new prototype. It has different heads.

It's got a different block. It's got different, many different features about it. It's designed to run at a much higher horsepower per cylinder and it is their next, it is a prototype now. It's my understanding it hasn't come out yet to be sold to the public and it's again, if your question is asked in the context of the block, I mean, again we get into testimony.

We have testimony from TDI that the design of the replacement cylinder block for engine 103, we refer to it as that, was never tested in a DSR-48 engine at all. We have testimony that there are many different features in that design for that block and it depends on how you use the words in the English language.

One side says, well, all they did is they added some thickness in the material on top here and a different grade of the metal and they made the holes a little bit deeper here and there, but basically it's the same thing. Another side's experts are going to say that those changes are fundamental and important changes and that it's never

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it in EDG 103 and it's an untested, new design.

It's a matter of evidence. Is it a new design? Is it a modified design? We have evidence that that block is cast, testimony that it's cast in one piece. So it's not something that was rivitted on or welded on. So, a new design, old design, I don't know what the answer is. It's a question for evidence.

JUDGE BRENNER: All right. Well, your explanation has helped and I asked the question imprecisely because I wasn't sure of the situation and I could understand your view on behalf of the county and I can understand Mr. Stroupe's view on behalf of LILCO and still get the sense of what it is and I was in part testing my own recoblection that components from the R-5 were sufficiently interchangeable with the DSR-48 such that they could be applied to it. For example, I think the new piston skirt design may have come out of the R-5 if I remember correctly.

MR. STROUPE: Judge Brenner, I think that's precisely correct because I believe if memory serves me properly, the AE piston was tested in the R-5 engine, so I think the components are basically interchangeable.

JUDGE BRENNER: I think there's also something about the cylinder heads also in that regard.

MR. DYNNER: But a different crank shaft. It's a

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different - I think the connecting rod is - I mean

JUDGE BRENNER: I understand your point. There's enough differences where you say the block in an R-5 in the county's view is not the same as testing it and proving it in a DSR-48. And if the engines are sufficiently similar to be adjudged as valid testing, you want to hear the evidence as to why.

MR. DYNNER: Yes, sir.

JUDGE BRENNER: Or test the evidence as to why.

MR. STROUPE: Again, Judge Brenner, my problem

with that and LILCO's problem is they say the replacement

cylinder block for EDG-103 is a new design which is unproven

in DSR-48 diesels and has been inadequately tested. Now,

what is their view of adequate testing?

Again, we don't know. What do they mean by inadequate testing? We're left with the point of trying to come up ourselves with something that we think will respond to whatever they may in fact try to show which is a guessing game.

MR. DYNNER: Judge Brenner, I'd just like to make a real quick response to that because it goes to a number of things which should be said. There isn't any guessing going on here from LILCO's point of view. LILCO knows how long the engine block has been tested and under what circumstances it's been tested.

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PC 25 NRC-69 T-3 They probably know a lot more about it than we do because they've been working with TDI. So when we say it's inadequately tested, what is inadequately tested? They know exactly what the testing is that we say is inadequate.

When LILCO says it doesn't have any idea what we're talking about about these 15 cylinder blocks, they have these documents.

Mr. Stroupe said so before. They've got all the documents that we got from TDI and if they want to know precisely what we're talking sout all they have to do is look at the documents which refer to the cylinder block cracking in each of these instances because they have these documents. I did not think that this June eleventh filing was supposed to be filled up with appendices listing all of those documents and reciting what they say because LILCO knows that.

JUDGE BRENNER: Okay. I want to stay with those kinds of arguments in the particulars of each instance as we go through, not in the abstract. Let me just comment also briefly, that that was well and articulately said, as you often do, Mr. Dynner, from the point of view of your client.

And the other side of the coin is, LILCO is saying from their I int of view that you're asking them to disprove a negative in effect and while they may know a lot

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about it, this technical substance, they don't know what it is about it that the county wants to focus on and they don't want to find cut for the first time on the fourth day of cross examination of their witness and we've been through that on other issues in this hearing, also. So I think we understand the competing interests and arguments.

MR. DYNNER: Yes, sir. We don't LILCO to disprove. We want them to prove that the cylinder blocks are okay. The burden of proof is on LILCO. And we're saying that they've cracked all over the place. LILCO knows precisely how they've cracked.

There are other instances of cracking. It's up to them to prove that these blocks are reliable and satisfactory and will not crack. And I'think that's where the burden of proof is, sir.

JUDGE BRENNER: You have changed the focus of Mr. Stroupe's comment and I'm not going to let him respond, but I recognize that you've changed the focus, that he was talking about being surprised by what you meant by inadequately tested. He didn't say he know about the cracks. Give us a moment.

(Off the record.)

JUDGE BRENNER: We can give you a ruling at this time on 2A and B with respect to the cylinder blocks.

Briefly, we're going to admit A as an issue in controversy

and not admit B with the following explanation.

We think that as to A the county has stated a sufficient bases both as to the subject matter of the contention and the nexus. The nexus is easy. It has occurred on Shoreham the diesel. The reason that it continues to be easy is that even though the block on 103 is replaced, it is still the same design block on 101 and 102 and therefore it would be certainly pertinent to evaluating the continuing to exist 101 and 102 blocks to hear about what happened with the previous 103 block since it was the same design.

That would cover the first two sentences. To the extent the location of the cracks may be different, we're going to ignore that. We think LILCO certainly and sooner if not later the county know where the cracks have occurred Shoreham in the cylinder blocks for the / diesels.

And if it would assist things to simply reform the first part of the first sentence to say cracks have occurred on the cylinder blocks of all EDG's, we'll do that. And if it turns out that it's the studal area of the blocks LILCO already knows that and the county if they put in testimony that erroneously describes the areas, then their witnesses will be in quick trouble, obviously, if they don't have their facts straight and vice versa, same for LILCO.

As to the last sentence, we'll leave it in. We think the county could have said more about it, but in

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evaluating, that's going to be true about everything and we have to evaluate when enough has been said to determine whether there is adequate bases and specificity and we think in this case the allegation that this is a block that has not been extensively if at all utilized in the DSR-48 diesel is sufficient and LILCO can put on proof showing why in LILCO's view the test, why the testing done be it in the R-5 or any other means, is adequate and we'll hear on the 8 merits the applicability of the testing to the present in-9

tended useage and so on.

We do recognize the possibility of some element of surprise as to the last sentence because to some extent it is asking LILCO to disprove a negative. LILCO does have the burden of proof. We are giving serious consideration to requiring that the county file its testimony first and we will come back to that at the end and judge that based on the nature of the contentions we have admitted.

But by admitting contention A, particularly with respect to the last sentence, that would militate in favor of requiring the county to file its testimony first. we did that, though, we would not strictly follow the 7B procedure.

We would still require the staff and LILCO to file their tes imoney prior to the cross examination of the county's testimony. So we won't have a hearing and then a

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hiatus and then come back. There are many reasons for that.

In the first case, we don't think it would be as necessary here given the comparative concedely broad scope of 7B as opposed to the degree of alleged broad scope of some of these issues which we might admit. In addition, we have a luxury there of being able to fill in the hearing with other issues and that's no longer the case so it's a practicality, also.

And unless somebody wanted to request that further relief, we wouldn't apply it on our own, but we are giving of requiring the county to file first and the state if it files testimony. But we'll come back to that at the end and we want to evaluate that in context of all the issues.

As to B, we haven't belabored or permitted much of a discussion on it because we don't think it's necessary given our ruling on B. Let me start out by saying that B is an example of where the county could have and should have said more about the nexus of the occurrances on the cylinder blocks in these other engines to Shoreham.

Now, the county did begin to make that showing,

I might say, in the last paragraph on page 6. However, we
would not admit this in any event as a contention in and of
itself. If the county believes that some of these occurrances are relevant to the cracking of the blocks in the 101
and 102 engines and may continue to be relevant to the

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replacement block on the 103 engine, the county's experts can rely on some of these other instances in putting together their proof.

And that would be another reason for requiring the county to file its testimony first. And then to the extent the county used some of these instances in its testimony, the LIICO would be on notice that the county has put forth some evidence as to why they think the instances on these other cylinder blocks are probative of our decisions on the merits of the quality and adequacy of the Shorem cylinder blocks.

Now, LILCO still has the burden of proof and it might be that the county by cross examination may attempt to go into some of these. We're not going to preclude that absolutely if it's not in the county's testimony, but we will judge the extent to which we will allow relatively collateral inquiries into other instances by cross examination of, cross examination taken by the county in light of what the county's own experts have seen fit to put forward in their own direct evidence.

Now, the obvious balance is that the county has quite a bit in its testimony on these other instances, enough to show the apparent relevance, then we'd be more willing to allow the county to go into it in some detail on cross examination of LILCO or staff witnesses, even if

LILCO and the staff chose not to discuss it very much in the direct testimony, notwithstanding the notice they will have had of the discussion of it in the county's testimony if we follow the sequential filing. Mr. Dynner?

MR. DYNNER: Judge Brenner, if I could just ask two points on this. Number one, I want the Board to be aware of the fact that as I mentioned earlier, in the case of United States Steel Corporation and the State of Alaska, we could not get additional information because they said they could only reply in the event we could get a subpoena.

We do know that in the case of U.S. Steel we have a document that indicates that there was significant from the American Bureau of Shipping about the cracks in the engine block on the GOTT and the propagation of those cracks, but we would like to find out more about it and we can't. In the case of -

JUDGE BRENNER: We'll come back to your request for additional information which I think is your Roman IV at the end.

MR. DYNNER: Yes, and I just want to point out to the Board there were those two cases and then we've been unable to get the information from Saudi Arabia, the over-seas people. Second point, here we have to list all these instances of where there have been cracks or defects that we're going to rely on. Is LILCO going to have to list the

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instances that it's going to rely on to say that the operating history has been okay?

mony where you'll have to cross examine them. It's a different situation because you hav 2 to come forward with the instances that you're going to use to show there's something wrong and we're evaluating in terms of bases and specificity.

In this case we said your subpart A has sufficient bases and specificity to admit although in an area where at least I am willing to recognize that things are not always so clear cut, I gave you some indication of the matter of degree and it varied between the first two sentences and the last sentence. Nevertheless, we did admit all of A.

We're not admitting B as a separate contention and we're not requiring the county to say what instances it's relying on, which of these instances it's relying on. And to the extent relevant to A, you can put what you think is relevant in the contention, in the testimony I mean, I'm sorry.

But we're worried about the element of disproving the negative in the last senterce and that, and we'll evaluate at the end what we have admitted and not admitted. But that would miliate in favor of having the county file its testimony first, recognizing that LILCO still has the burden of proof, at least this will reinforce the equities

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of the situation in our view where the bases or more particularly the specificity is not as strong as we would like but where we think it's unfair to require the county to have more specificity in terms of meeting admissibility requirements, but nevertheless being anxious to avoid surprise by cross examination.

And we're taking into account that the county throughout this has stated that they have experts who have certain beliefs and have looked at things and we're not dealing with a pro se intervener coming in saying I want to talk about A, B and C. And the county, it's reasonable to charge the county to have its experts support what Counsel has been saying can be supported in the direct written testimony because when you start talking about other instances, the inquiry can quickly become collateral and we'll judge whether it's collateral, somewhat relevant, but too collateral to go into in terms of the, you know the obvious balance, the time spent on it versus the probative value towards deciding the issue on the merits and we'll make that judgment in part based on what's in the county's testimony, direct written testimony.

MR. STROUPE: Judge Brenner, just to respond to one of Mr. Dynner's comments about whether the Board is going to make LILCO specify instances that they're going to enlarge upon, we'd point out lest anyone feel sorry for

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Suffolk County and Mr. Dynner that he has in his possession and has had for some time numerous, lengthy, well documented reports by FFA and, FAA and other people which goes into much detail on the various things that we are in fact going to rely upon. And I would be a fool if I told you anything else, but that to a great portion our testimony will be based on those reports and I think Mr. Dynner certainly knows that.

JUDGE BRENNER: That's a correct statement in our view and I didn't want to belabor discussing the discovery and so on, but this is a case where beyond the discovery that the county chose to ask for, there is a plethora of reports and documents and so on. The county is still free to allege with bases and specificity, in -- and nexus what they don't like about those reports or what they think is still deficient in those reports and that's what we're still looking at in terms of the issues.

But I don't think the county can claim surprise very easily as to what elements LILCO believes supports the conclusion, even though the county is still free to point out why it believes those elements in fact to do adequitely support the conclusions. Let's turn to item 3 which would be the cylinder heads. Similar to our discussion on the old crank shaft, why should we talk about the old cylinder heads as an issue in itself, Mr. Dynner?

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PC 25 NRC-69 T-3 MR. DYNNER: Nothing has changed, to my knowledge, with respect to the admission and specificity concerning the cylinder heads now and the contention concerning the cylinder heads which was originally admitted by the Board. The Board at that time, as you'll recall, we were about to go to litigation on the issue of the cylinder heads with all parties on the Board knowing that by that time LILCO had changed the cylinder heads, including a group of heads that had been manufactured later on.

ment or uncertainty as I recall as to whether or not LILCO would in fact make the changes in the cylinder heads before they went to litigation on it and we pointed out somethings that would be pertinent if the heads were not changed and somethings that might remain pertinent if the things were changed.

MR. DYNNER: Well, they have changed the heads, Judge Brenner by that time I believe and I think that our position was and our testimony would have shown what I'm about to say now which is that -

JUDGE BRENNER: They didn't change the heads at the time we admitted the contention and that's my recollection but we talked about certain -

MR. DYNNER: Okay. But they did subsequently - JUDGE BRENNER: Yes.

and it

MR. DYNNER: And I think in subsequent discussions

and it was --.

JUDGE BRENNER: And then the adjustments that I mentioned came into play. Go ahead.

MR. DYNNER: The design, the basic design of the head as we've said is the same and I don't think that's contested by anybody. What LILCO has been arguing is that there were changes in the way the heads are manufactured, in the processes and the gates, the risers and there were improvements in the QA processes under which the heads were inspected.

JUDGE BRENNER: But, I'm sorry, you see, what stimulated my comment was, let me say you're telling me things I already know -

MR. DYNNER: All right.

JUDGE BRENNER: And what stimulated my comment was the third sentence of A wherein you say you don't want to litigate them to the extent the other party cried mea culpa.

MR. DYNNER: Well, what I'm saying is, again, this is I think part of the enditia of the confusion as to what you meant by instances. What I was trying to say there is that we could have looked many, many instances of cracked cylinder heads as in fact for example FAA did in its report on the cylinder heads where it's quite clear that there were

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very heavy problems with cylinder head cracking at least in the period for heads that were manufactured prior to 1978.

There was some problem they indicated from '78 to '80 and they said that the post-1980 heads didn't have that problem, by that time that the problems had been solved.

We contend that that's not the case, that these are essentially the same heads and design, that the changes made with respect to manufacturing processes has not been effective to solve the problems and that the changes made if any in the inspection of the quality of the heads have not been effective.

And that I think is the same position we took before. You'll recall that one of the big issues in the earlier discussion was whether the barring over procedure that had been proposed by LILCO would be sufficient and our experts took the position and filed affidavits in the summary disposition proceedings on the cylinder head litigation that showed that we believed that barring over would not be sufficient. Now that we have some contrasting -

JUDGE BRENNER: That was, let me just make sure we're on the same wavelength. We've issued several desisions relevant to diesels and I think I recall some of them but I'm sure you can help me out when I recall some incompletely or incorrectly, but our statements on the barring over procedure which I think was on the June twenty-second

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or June twenty-third 1983, I'm sorry. It was in the order after that.

It was in the order denying summary disposition when we discussed that again which I guess might have been July or August of '83. And in denying the summary disposition we said that they hadn't, well, it was in the first instance, in the June order, we set forth what types of things LILCO might have to show in order to be able to receive a license depending on the diesel prior to the litigation of the adequacy of the replacement cylinder heads or in fact it would also be pertinent if they wanted to go to operation with some of the old heads still in.

And what we said was their surveillance procedures which LILCO asserted would give them assurance of being able to catch any problems that might occur could be looked at as providing the assurance not that no problems would occur, but that if problems occurred they'd be caught before anything adverse to safety happened and that's why that barring over procedure was discussed. But we're passed that now because now -

MR. DYNNER: I don't think we are JUDGE BRENNER: All right. Go ahead.

MR. DYNNER: Because we've got a contradictory views testimony from FAA and LILCO as to what the recommendations are. We have testimony from Dr. Wells that even

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with the, number one, they've only looked at in terms of the operating history of the post-1980 head, the sixteen cylin—Shoreham der heads at ./ and then they looked at some brand new heads that had never been used at Cataba and that's the only operating history analysis that they've done. Dr. Wells testified in his deposition —

JUDGE BRENNER: Wait. Let me stop you there because you're talking about the dispute as to whether the
post-1980 heads have solved -

MR. DYNNER: I'm going on to your next point. The next thing Dr. Wells said in his deposition was that FAA would recommend that all cylinder heads of whatever vintage must be subjected to the surveillance of the barring over procedure because they could not state with any certainty that cracking would not occur.

JUDGE BRENNER: Where do you have that in your issues set forth here?

MR. DYNNER: I don't. I think these are matters of evidence. I don't see where, you know, LILCO's - there's a report that was issued subsequently where apparently they changed their mind and they say that you don't have to bar or someplace it says you don't have to bar over the post 1980 heads but you do with the 1978 to 1980 heads.

I mean, all of these are complex matters of evidence and proof and we're going to try to show that

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PC 25 NRC-69 T-3 isn't any real change in these heads and that they still have the same problem they've always had in terms of design, that they had problems as we said before with cooling, that they have problems with the fire deck and the thicknesses an variations in manufacture of the heads, that the heads are not cabable of withstanding the firing pressures and operating pressures that they're required to operate with and that the ballgame isn't any different and that this barring over procedure is not sufficient to insure that there won't be a catatrophic failure at the time of an automatic start up.

I think that, you know, all of that hasn't changed by anything that's happened since the crank shaft broke except that FAA has done a study it could not do as you will recall, a finite element analysis -

JUDGE BRENNER: Okay. Wait. Tell me what you meant by your third sentence again.

MR. DYNNER: To the extent LILCO and FAA accepting inadequate design and/or manufactury of the pre-1981 cylinder heads, those matters will not be litigated. That is, if they're willing to stipulate that there were, that there was excessive cracking of the cylinder heads due to poor design or poor manufacturing, then we won't litigate the issue with respect to that vintage head.

That will be, I mean, FAA, as I read the FAA

report, basically says at least with respect to the '78 and earlier heads there were significant problems. And we're saying fine, if we can stipulate that we won't have to go through and list all of the instances of failures and cracking of the heads of those vintages because they're accepted as having occurred.

Now they say the problem's been solved, so we're going to litigate the issue of did they really solve the problem or not.

and maybe I didn't ask it well it why is not that item analogous to what we decided, I think with your agreement as to item A of item 1, that is the crank shaft, that it's not an end in itself and it's not pertinent as an end in itself but to the extent experts want to use the pre-1981 cylinder head experience in arguing either that the new heads of allegedly better quality are in fact no better or in fact are better and the comparison depending on which expert is putting on the testimony may go one way or the other.

That would be the relevance. That was my first question.

MR. DYNNER: Okay. There's -

MR. STROUPE: That's exactly the way it ought to

be.

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JUDGE BRENNER: Wait, let me say with Mr. Dynner. I'll give you a chance.

MR. DYNNER: I'll give you two reasons why it's different. Number one, the design of the cylinder head hasn't changed. The design of the crank shaft has changed radically. Number two, TDI manufactured the cylinder heads. TDI did not manufacture the crank shaft and therefore there's no issue and we haven't raised an issue on the crank shafts manufactured by Krupp as to manufacturing quality and how the issue of the quality or the lack of quality in manufacturer enters into and exacerbates the issue of the inadequacies of the design.

JUDGE BRENNER: Okay.

MR. DYNNER: That's why I think that it's a very different situation from the replacement crank shafts.

JUDGE BRENNER: Am I correct, however, that it's still not relevant as an end in itself, only as it may be relevant to the adequacy of the allegedly improved cylinder heads?

MR. DYNNER: It's the only, let me put it this way because I'm confused I quess a bit as to what we really mean to say here as part of our written contention and what we're able to allude to to bring in evidence about and to put on the record in connection with the overall litigation.

JUDGE BRENNER: I don't want to make a finding

per se. I don't think we have to make a finding per se on, after any merit, that the old heads were good or bad as an end in itself. Now, in the course of making a finding, if and when we first admit and then litigate an issue as to the adequacy of the new heads, as to whether they're adequate or not, some of the support for our finding, whatever the finding would be, would come from any evidence put on that talked about the experience with the pre-1980 head and showed the relvance. (End of tape.)

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MR. DYNNER: I guess my problem is that maybe it was semantics. If --

JUDGE BRENNER: I'm not criticizing you for some of the language.

MR. DYNNER: No, I meant --

JUDGE BRENNER: By putting it in, you get this discussion, and that may or may not help your case later.

But I'm just trying to understand the purpose of why you chose to put it in.

MR. DYNNER: Okay. As I read your February 22nd ruling, we made a comment there that we would—the proof, at one point you said that proof would be limited to the instances that we list.

So I listed this as an instance, if it was in dispute. Now if what we're saying here is that you don't want to name this as an issue to be litigated, that is, whether or not the pre-1981 heads had an operating history of cracking, that nevertheless, we can introduce evidence and put on the record what happened with those heads, what was done with them and why it's relevant.

Because it's the only operating evidence we've got.

Then I guess we're saying the same thing but with

different words.

JUDGE BRENNER: Except that you won't be able to put that evidence on as an end in itself. You're going to have to tie it to what you think is right or wrong, presumably you wrong, and LILCO right about the new heads.

How new are they, you know? You're saying they're not very new. LILCO will say, "Well, they're new in terms of what was important to make new."

MR. DINNER: If I can show that the design is the same as the pre-1981 heads, effectively, and then go and use this comparison, the manufacturing processes that were used in the 1981 heads in the pre- and post-1980 heads, and compare those and show what those changes were, then I can show what I need to show to convince you that the heads that are currently in the engines are no good.

And I guess that's my answer. I don't much care whether --

JUDGE BRENNER: Okay.

MR. DYNNER: -- they're stated separately or not.

I'm not trying to litigate something that's past
history.

I'm only trying to litigate something that is current history, but I don't want to be barred from bringing the things that are extremely relevant, if not

dispositive, of the current engines.

MR. DYNNER: Instances, as I had understood you to

JUDGE BRENNER: In making these rulings, we're trying to give guidance and in fac orders on what's relevant and current and so on, but we can't do that as to each and every thing, obviously.

For example, in passing, you mentioned manufacturing processes. I don't know offhand how relevant that's going to be.

It depends, a, on whether there's an issue as to cylinder heads at all, if admitted, and then, b, if there is one admitted, what your experts can show or what you can elicit on cross-examination as to the causes of past problems.

So we certainly can't rule on relevance as to each and every thing, and things are going to come up, and we'll have to make feature rulings probably also in the course of the evidentary hearing or in the course of motions to strike testimony, or so on.

But you did say, in passing, we told you to list instances, and you want to list this instance. That's a nice use of the word "instance," but in the fourth sentence, you say, "Hey, we've got a lot of instances which we're not going to list here."

What's the instances?

say in your order and interpreting the report, as I said before when I quoted from that portion, what particular happenings or occurrences of failure of heads, of cracking of heads, and we go and list a bunch of them.

JUDGE BRENNER: Why don't you list them? You were on notice that you had to list things that you would depend on.

If nothing else was clear, that was clear.

MR. DYNNER: Because --

JUDGE BRENNER: There's a debate as to how much you had to say about each one, but you had to at least list them.

MR. DYNNER: All right. I could say mea culpa, except for the fact that the reason I didn't list them is, I thought that LILCO and FAA had accepted that proposition and was hoping that as you suggested, that the parties could narrow the issues by reaching stipulations and agreements on these.

It didn't work on Tuesday. And I didn't list them.
So I was wrong in that record.

JUDGE BRENNER: But it's open-ended now, even if we admit A as written or even if we modified it along the lines of the conversation we've had.

MR. DYNNER: If LILCO's going to take the position

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that whatever went on with the pre-1981 heads is completely irrelevant and that they will not stipulate that any of the pre-1981 heads suffered cracking problems and that there were instances of cracking.

Obviously I have to list them. I didn't find that out until Tuesday, and I'm not making excuses, but I'm just telling you what the facts are.

JUDGE BRENNER: That's not a full sequetor. They could be taking the position, and yes, some of those things might be relevant, but they don't want to be surprised as to what instances you're going to talk about, especially since you say you have numerous instances but haven't listed them.

And the purposes of getting the specification was as to that element of surprise, as well as judging the basis of specificity, the contention.

So they have problems to their prejudice by that sentence in your contention, even if they don't take that absolute position that you just stated.

MR. DYNNER: Well, if LILCO took the position they took on July 3rd, then I should list the instances so they can know what we're talking about.

You're right.

JUDGE BRENNER: But you should list them even if they don't take that position. That's my point.

MR. DYNNER: All right. Fine. I'm sorry. I was trying to shorten up this thing, and I see I made a big mistake.

JUDGE BRENNER: You didn't shorten it up on the other ones we chose to list the instances.

MR. DYNNER: Well --

JUDGE BRENNER: Okay.

MR. DYNNER: Yes, there would have been a considerable weight to this matter, but not necessarily substance that would be commenserate with the weight.

JUDGE BRENNER: Let me take B, then I'll go to C, and then I'll turn to the applicant. Why is B relevant to an allegation that the cylinder heads at Shoreham are of improper quality?

MR. DYNNER: Well, what we're trying to show in that instance is that in fact, the changes that were made in the product manufacturing processes, namely changes in the gates and the risers and the sand that's used, etc., have not resulted in a product that comes out of that process that's reliable.

But there are exceptionally high rates that a caught. What we hope to do by evidence in the trial is to show that where you have—and you do have, in some of these cases, I think, the evidence will show, rejection rates of 60 or 70%, where you get cylinder

heads being made under these allegedly marvelous casting processes where you've got to repair basically almost every one of them that's sent out to a customer before it leaves the plant because there are casting defects.

What you're then doing, really, is relying on your QA to catch everything, and the QA is not reliable to catch everything.

And so you're really gambling when you send the product out.

You've caught X amount. You can use it, a clever order can use it the other way around, and say, "Well, this just shows how good their QA is."

JUDGE BRENNER: I don't think you have to be real clever to think of that argument.

MR. DYNNER: We'll address that argument, because that argument goes to whether a QA really was that competent.

We think we've got evidence, including evidence from staff, in depositions that indicates that the reading of that bit of evidence in this instance should be the way I first described it, and not the way a clever one would describe it.

JUDGE BRENNER: I can understand your proposition in the abstract, and we certainly heard it in other

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contexts than this hearing, and I've heard it in other hearings that you put too much pressure on QA, that's not the way to go, especially when you're talking about many multitudes of items, piping throughout a plant, or whatever.

But when you're talking about a finite population of 24 cylinder heads plus a few replacements, isn't that a different story?

And why should I worry about the allegedly improper heads that TDI might be selling to other customers as opposed to worrying about the finite population of 24 cylinder heads plus a few replacments that now or in the future that the Shoreham machines might use?

MR. DYNNER: Because what they do on their--number one, it goes, as I said before, to the manufacturing process under which the heads at Shoreham were produced.

Number two, it goes to what your faith is in the inspection process. What should be looked at? Which part of the heads did you look at?

Can you find everything when you look at it in your inspection? What kind of inspections have they actually carried out on the heads will be revealed, presumably, by the DRQR report that we just got?

MR. DYNNER: I guess my problem is that maybe it was semantics. If --

JUDGE BRENNER: I'm not criticizing you for some of the language.

MR. DYNNER: No. I meant --

JUDGE BRENNER: By putting it in, you get this discussion, and that may or may not help your case later.

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MR. DYNNER: Okay. As I read your February 22nd ruling, we made a comment there that we would--the proof, at one point you said that proof would be limited to the instances that we list.

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Because it's the only operating evidence we've got.

Then I guess we're saying the same thing but with

different words.

cylinder head that is well-designed, that you generally will have a manufacturing--if your manufacturing process is good, it makes it easier to come out with fewer rejects.

If you've got a design that's very difficult, its tolerances are suspect, it may be that the design can't be done properly, that the design is such that the product can't be manufactured properly.

JUDGE BRENNER: Your experts believe that's true as a general proposition?

MR. DYNNER: They believe it's true with respect to these cylinder heads.

That's why you will note that this one is connected both to the manufacturing process and the design process, because we believe in where you got that kind of rejection rate on a casting, given the casting processes used, it's a reflection on the inadequacy of the design.

You can't make it right, because it's not designed right.

JUDGE BRENNER: All right. Let me turn to LILCO as to anything they want to add on A and B and after that, have a question about C, of LILCO first.

But starting off, as to A, why doesn't the county at least in part of A have an admissible contention

that the replacement cylinder heads are of inadequate design in manufacturing quality to withstand the thermal and mechanical loads based on the fact that there have been these problems with the so-called old heads?

But they're old only in the sense that allegedly some improvements have been made. They're really not a totally different design.

And we've had some discussion of this a year ago, also.

MR. STROUPE: Let me start off by saying further that LILCO's decision, as far as the cylinder heads go, we have the improved cylinder head.

We have the post-1980 cylinder head. And we think obviously that cylinder head has to be litigated, those are the cylinder heads that should be litigated.

Now the county says the cylinder heads have been adequately designed, manufacturing quality that would withstand satisfactory thermal and mechanical loads during operation.

The problem we have with that is, it doesn't tell us why they're inadequate or how they're inadequate.

It's a very broad-brushed statement, as is most of the county's contentions, designed to let them get into evidence apparently anything that they feel fit to

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bring into evidence, to pot shot at these cylinder heads.

I think the fact that they have tried to draw in the 1980-the proposed pre-1980 cylinder heads is a prime example of that.

I think Mr. Dynner, in his statements this afternoon, has given a vivid illustration of the problem we have with this.

He talked about the inconsistencies barring other procedures. Where in this contention does it talk about barring other procedures?

I don't find it anywhere in it. He says that his experts have told him that when you have an adequate design, you tend to have more manufacturing problems.

They may have told him that; they certainly didn't tell me that. I depose his experts.

So we have another situation, I think, where the things that Mr. Dynner is saying himself are exactly the things that I think the board wanted to attempt to avoid, by requiring this specificity, to give parties, to give the board an opportunity to know precisely what was going to be litigated in the hearing on this matter.

Now when we sat down with Mr. Dynner in our July meeting, he did give us a little more specificity. He

said that they believe the heads will crack. We weren't told why.

They don't believe that the heads cool sufficiently. And again, we weren't given any explanation as to why.

They don't believe they're strong enough. We weren't given an explanation as to why.

Casting is not correct in these heads. Again, we weren't given any indication why.

And I might add we depose their expert, Mr.

Anderson, who is a metallurgist, who supposedly is going to be the guy testifying on this.

He could tell us what was wrong, and they say there is no redesign of the heads, ergo, it must be defect.

We don't think that is the kind of specificity that the parties are entitled to and the board is entitled to.

The fact that cylinder heads produced since 1980 have had a high rejection rate, I don't know that it's 60 or 70%, or about that.

Quite frankly, I do not know what it is. As you have said, it would not take a very clever person to ascertain that that could be pretty good evidence of the effective QA program.

It also fails to take into account that LILCO had

its own program, that LILCO did hydrostatic testing on these cylinder heads.

And they've done liquid dye testing. And frankly, we do not think that that for B, that should be an issue.

If anything, it relates to a matter of evidentiary proof. In other words, the county can choose to attempt to admit it into evidence or not to bring it into evidence.

We want to litigate the cylinder heads as they are on the Shoreham EDG, the 24 cylinder heads that are present on that generator.

We don't think whatever happened to pre-1980 heads has any effect on those heads as they sit there. They were manufactured under different standards.

And in addition to that, we conducted a severe QA analysis of those heads.

But when you come down to the bottom line on both A and B, particularly A, and you listen to the various things that Mr. Dynner had pointed out to the board this afternoon, you have a very difficult—and I say impossible—time determining if those kinds of things are the kinds of things that would be litigated if potentially admitted to the NRC.

And if that's the case, then I would think it would

be safe to assume that there are many other instances, which Mr. Dynner tends to use as a bases for these broad contentions that we think we're entitled to know about.

I think if the contention is admitted as it is, we're going into the collateral issues, and we're going to be into situations where there's going to have to be some periods of time for the parties to assess the particular situation and get back to this, because we can't anticipate everything that Mr. Dynner would have to come under this very, very broad and general contention.

Why can't the county tell us what's wrong with this assignment?

Why can't the county tell us what's wrong with the castings?

Why can't the county tell us what thermal and mechanical loads they think these heads out to be able to expand?

I think it's time that they specified exactly what they want. We're not saying we're unwilling to litigate this.

All we're saying is that if we're going to litigate this, we should be able to do it in an informed manner, so that we know exactly what the county wants from us.

I don't think we have that, that contention.

JUDGE BRENNER: On C. let me --

MR. STROUPE: Do you want me to address the common now?

JUDGE BRENNER: The C common or the B common? I think Judge Morris has some questions on A and B.

JUDGE MORRIS: Mr. Dynner, with respect to A and the last sentence thereof, did the county have in mind some specific thermal and mechanical loads?

MR. DYNNER: Yes, Judge Brenner--I'm sorry, Judge Morris. The specific loads that we had in mind were both at full load and at overload.

Part of this goes to the issue of the way in which analyses were performed by FAA and the piston firing pressure that was assumed, which we will show as incorrect.

What we're saying about the head, and I think that, you know, all this was done ad nauseam in the deposition, so contrary to this idea of litigating in a vacuum, there's nothing really new here.

What we said was that a head, cylinder head, is subject to both thermal stresses and mechanical stresses.

Where you make a number, for example, the fire deck of a wall, thinner, you increase its ability to cool,

and therefore withstand the thermal stress, you decrease its ability to withstand the mechanical stress.

We increase the thickness, just the opposite occurs. What we said about these heads is that you have a variation in thicknesses in the fire deck which are inadequate and unpredictable.

You have support problems, and we're using the loads at full rated 3500 and 3900, which are the standards we've used throughout, because those are the performance specification standards in the FSAR.

We have talked about, in the depositions, therefore, the dimensions of the fire deck and the water deck as being inconsistent.

And we've talked about stress risers being created just for the geometry. We've pointed to the cracking problems that have occurred previously, which have occurred because of casting defects, subject to and subjected to the kinds of stresses that this overrated engine puts on them.

JUDGE MORRIS: I think you're going beyond the intent of my question.

MR. DYNNER: I'm sorry.

JUDGE MORRIS: I was interested in specific mechanical or thermal loads on parts of the cylinder

heads.

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MR. DYNNER: As I recall, the maximum load that was calculated by FAA was 1680 psi firing pressure, which is the load that would be put on the head as their maximum.

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We have produced evidence that the firing pressures --

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JUDGE MORRIS: Excuse me.

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MR. DYNNER: On mechanical loads --

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JUDGE MORRIS: Wait a minute. Let me interrupt

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you. You're saying that that over-pressure leads to

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over-stressing of parts of the cylinder heads?

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MR. DYNNER: We are saying that that -- we are saying

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that, number one, yes, it may, that it may well.

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JUDGE MORRIS: Well, is this speculative, or do you

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have some calculations that show this is true?

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MR. DYNNER: Well, we know that there heads have

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cracked when they've been running at firing pressures

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And we know that the firing pressures in fact may

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be greater than that, that an over-load of firing

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pressures are greater than 1680 psi.

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And therefore, there is an understatement of the thermal and mechanical pressures to which the heads are

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subjected.

of that.

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MR. STROUPE: I would like to inject that I don't

believe Mr. Dynner had any evidence. At least I'm not aware of any heads that are presently on EDG's that have cracked.

MR. DYNNER: No, I don't know that they have.

That's correct. That's 16 heads. So that you know, our experts have done an analysis of the design, they've reached their own conclusions about the adequacy of the design, about the adequacy of the manufacturer.

They've looked at the history of these heads of the same design. They've looked at what the manufacturing changes and the processes have been.

And they have made these conclusions. And as I said before, the bases, I don't think, are really any different than they originally were in the cylinder head contention that was admitted.

We now have more evidence. We've got more facts to look at.

We've got an FAA study that said that they couldn't do an adequate finite element analysis of the head.

But it says--that certainly raises doubts.

JUDGE MORRIS: I think you've answered my question as far as you could go.

MR. DYNNER: I don't -- I have this strange feeling that I haven't done a good job answering it

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specifically, but maybe it's because I'm only talking about the, as I see it, the thermal mechanical load being related to the psi.

JUDGE MORRIS: Going to Paragraph B, just so I am clear in understanding what you've said, do you distinguish between QC and QA? Or were you using QA in a very broad sense?

MR. DYNNER: I was using it there in the broad sense that encompasses QC.

But I think we're talking here about specifically QC.

JUDGE MORRIS: Thank you.

JUDGE BRENNER: Well, one of your comments causes me to go back to A again, Mr. Dynner, so moving backwards rather than forwards, unfortunately, that last sentence, going to the heads presently in place and for shorthand, I'll call them new heads. I recognize the dispute as to how new is new.

I guess I could call them post-1980 heads, and make everybody happy.

That's rather a broad sentence. Now you've stated that this sentence is based on the allegation that the firing pressures used for the analyses are too low.

Is that the contention? Because that's a universe much more narrow than the possible universe under that

sentence.

MR. DYNNER: What I'm trying to do in answer to Judge Morris' question is to point out the thermal and mechnical loads during EDG operation were taken to mean, obviously on a sliding scale, if you were running the engine at 20% of capacity, we're not saying that the thermal and mechanical loads at 20% load are going to cause the cylinder head to crack.

We were looking at them in terms of the rating specification, which is 3500 KW, continuous, and 3900 KW in two hours in any 24.

That's the standard that we're using and have been using. And what I was trying to say is that when the analysis was done by FAA, what they looked at was what they used, and this is true with respect to all, as far as I recall, with respect to all of the components of the engine.

They use 1680 psi as the maximum firing pressure, which is the pressure produced at 3500 KW, and we know that in actuality, at 3500 KW, you may have firing pressures in excess of 1680 and an overload with firing pressures of up to around 1800.

JUDGE BRENNER: Fine. Is that the contention? That's what I'm trying to understand.

MR. DYNNER: As far as the thermal and mechanical

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loads. Thermal and mechnical loads come from the firing pressures, all right?

Maybe I'm not making this clear as I might have if I were a scientist. But depending upon the load carried by the engines, which is related to the firing pressure in the cylinder, that determines the quantity or amount of the thermal and mechnical loads of the engine.

We're not trying to say that at 20% or 30% the cylinder head would fail.

We haven't said that.

JUDGE BRENNER: I know that. I'm trying to understand the basis for the allegation in that sentence we've been discussing, the last sentence of paragraph A.

Because it's rather broad as stated. And as I understand, some of your overall remarks, I think, that's still what you're saying, but I'm not sure because you keep wanting to hedge it, I think, probably because you're not sure of what I'm asking.

But as I understand it, you're saying that the basis for the allegation that the heads are of inadequate design or manufacturing quality to withstand satisfactorily thermal and mechanical loads is because they haven't been analyzed and/or evaluted, and/or

tested against what the county believes the loads are that the machines would see.

Specifically, they haven't been tested above the psi that you think would be seen for a normal 3500 KW operation, normal flow operation, and certainly not for the overload operation.

MR. DYNNER: No. I think I'm getting confused, and maybe I'm confusing you in the process.

What we're saying is that these heads, there is a history of these heads cracking, and they crack at thermal and mechanical loads during operation of these EDGs at Shoreham, and they've cracked in other applications.

And we know that. Now LILCO has come back and said they've solved the problem at TDI because they've done different manufacturing processes and better QC.

And we're saying that we don't think that that's true. We're saying that the factors that involve the inadequate design and manufacturing quality are, a, that the heads have cracked.

Heads of the same design have cracked, that the changes in the processes are really not--do not solve the problem.

And we will say further, if we get into the evidence, that if you look at some of the design

features, and what we've said is the heads, that they don't cool adequately.

You have variations in the fire deck thicknesses, you have stress risers, and these are sort of why they cracked and why they can be expected to crack in the future.

JUDGE BRENNER: Do you understand that some of what you're giving me now are arguably specifications within the contention that a party or the board would not be unnoticed if the county intended to use as part of the contention without that statement?

Because the statement of the contention is broad, and they'd have to guess at what you're going to litigate.

And it's only by your telling me some of these things that I now understand some but apparently not all of what you want to talk about.

I'm not talking about detailed evidence; I'm talking about subject matter.

MR. DYNNER: Well, I'm understanding the confusion between where you draw the line between what you regard or what one regards as detailed evidence, and what one regards as a further specification of a contention.

I mean, we had a contention before. We had contentions before that said the heads crack, ergo, the

heads are no good.

That's a contention. We had --

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JUDGE BRENNER: It was a finite universe, then, in the sense that we were going to look at the particular cracks that occurred on the Shoreham diesels and see what was done or not done about them.

And that's a matter of litigation. But you're not trying to restrict this contention to that, and that's why we need to understand.

Because you think you know more, and that's fine and acceptable, but we need to know what it is you think you know more about in order to understand what the litigation would be.

MR. DYNNER: Yes. My difficult, again, is drawing that line. I agree with you. We've been having this dialogue all day.

JUDGE BRENNER: This sentence doesn't approach the line, you know.

MR. DYNNER: I'm sorry?

JUDGE BRENNER: This sentence doesn't approach the line argument.

MR. DYNNER: Well, I suppose that the sentence, in the context of what's gone on previously and what the depositions have shown and everything else, I don't think there is any surprise.

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I didn't put in here, obviously, all the problems with the design and specifics that, for example, our consultants believe exist.

I don't think that we have to show that if they made the head thicker here and thinner there, that X, Y. Z would occur.

But we do have more specific evidence and views of our consultants as to what the specific problems are.

Yes.

MR. STROUPE: Judge Brenner, just let me say this.

JUDGE BRENNER: I really think we've heard enough
on A and B, but unless it's really important and/or
succinct.

MR. STROUPE: Well, I'll make it succinct.

JUDGE BRENNER: Okay.

MR. STROUPE: All we're asking, I think, is the same thing you're asking. We put the heads on, we tested them, and we have what for what we think is a sufficient period of time.

We haven't experienced any problems. The county knows of problems or potential problems, we want them to tell us about them.

And it's the contention, as presently stated, we want that information.

JUDGE BRENNER: Don't make the mistake of inferring

a view that I might have by the questions I might ask.

MR. STROUPE: I wasn't referring to you. But we have the same problem, I think, in trying to approach this.

JUDGE BRENNER: That's a fair way to put it. Item

C. Let me ask the county a question first, contrary to

what I said my approach would be, and then I'll go to

LILCO on it.

Do I understand that as to item C, you only want to litigate those other allegedly common instances where it is ascertained that the cylinder heads were manufactured after 1980?

MR. DYNNER: Yes, sir. That was based upon the fact that those--that was the operating history we'd be looking at, if we didn't list the instances previously.

I list the instances of failures in order to--or am otherwise allowed to present evidence relevant to the current heads by showing what went on with the pre-1981 heads.

That's fine, but when we get to the post-1980 heads, I was trying to list particular instances.

Now to show the operating history of the heads, that process under C has not been successful in that we've stricken 3, 4, and 5 because we found out through

informal inquiries, on page eight, that in fact the heads under 3, 4, and 5 were pre-1980 heads, not post-1980 produced heads.

JUDGE BRENNER: Why do you care about only post-1980 heads for C, when you care about pre-1981 heads for A?

MR. DYNNER: Well, --

JUDGE BRENNER: Or you telling me your numerous instances, otherwise unspecified, referred to in A? That means only Shoreham instances.

MR. DYNNER: No. What I was trying to say was that if one takes it as given, then the pre-1981 heads have had problems, that I won't list the instances.

Then I go to the post-1980 heads. I hopc we're not confused about pre-1981 and post-1980.

We're talking about heads that are produced in the one instance, that is, to say in A, we're talking about heads produced before January of 1981.

And in C, we're talking about heads that were produced after January or from January '81 on.

JUDGE BRENNER: That maybe was the only point I wasn't confused on in this whole discussion.

MR. DYNNER: Okay. All right.

JUDGE BRENNER: But you see the apparent inconsistency that I've tried to get you to address by

my question?

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As to C, you're willing to strike, in fact, I infer that and you've said that and demonstrated it just now by taking out 3, 4, and 5, any instances not related to the pre-1981 heads.

Yet in A--

MR. DYNNER: Post.

JUDGE BRENNER: No. you wanted to take out any instances -- I'm sorry. You wanted to take out any instances related to the pre-1981 heads.

MR. DYNNER: Yes, sir.

JUDGE BRENNER: Okay. But as to A, you may still want to litigate very numerous instances of cracking of pre-1981 heads.

MR. DYNNER: Right --

JUDGE BRENNER: Which instances would not be limited to Shoreham.

MR. DYNNER: When we wrote this, we were under the erroneous belief that we might get LILCO to agree that, in fact, the facts demonstrate that with respect to the pre-1981 heads, there were inadequate design and/or manufacturing.

And therefore, we wouldn't have to note the ir.stances of them.

JUDGE BRENNER: Well, you know, I don't believe

that you really thought that you were going to get that kind of broad agreement.

Because even if there's agreement that maybe there were some things that were wrong, you're not going to agree that everything that was wrong is just identified by LILCO and further, that it's been corrected.

So I'm not sure how much you state your belief in that proposition.

But you say erroneous belief. So now that you've been disabused of that belief, why are you still willing to strike things like 3, 4, and 5 out of C, but wanting to put them forward, albeit unspecified, in A?

MR. DYNNER: I would seek the board's approval to specify the instances of the pre-1981 heads that we'll rely upon in A.

JUDGE BRENNER: Well, would three of them be 3, 4, and 5, which you're taking out of C? I mean, I'm trying to define a rather existing population here.

MR. DYNNER: Yes. Yes. Among others. Among many others. So I said it the wrong way.

If I am allowed to specify the instances of problems in pre-1981 heads, then I would move C 3, 4, and 5 into the listing of the pre-1981 heads.

JUDGE BRENNER: All right. Let me ask LILCO as to the items specified in S, beyond the 3, 4, and 5.

go through counsel, and it does take some time.

JUDGE BRENNER: But TDI has the information?

MR. STROUPE: Yes, I believe so. Again, give us one moment, and then I'll give you a chance.

(Whereupon, a brief discussion took place.)

JUDGE BRENNER: You wanted to add something, Mr. Stroupe?

MR. STROUPE: Yes. I wanted to say two things. In fact, three things. One, the component tracking list which was part, is part of the DRQR, which the county also has a copy of as does the board, does not have any indication on it of any post-1981 cylinder proposed.

And then we have, I understand from our , contacted TDI. To the best of their knowledge, subject to check, they're not aware of any post-1981 cylinder heads either.

The other thing I just wanted to mention is we have--it begins to sound like a broken record, but our problem with these common instances are the same as with the other things.

Again, there is no explanation what the instance is of the cylinder head at Shoreham. And again, we think our view is that the county ought to tell us how these instances, if indeed they be instances of post-

1981 cylinder heads, how they relate and impact upon cylinder heads that are presently at Shoreham.

JUDGE BRENNER: These are instances in C and I'm addressing this to LILCO, relate to diesels other than just being limited to the DSR 48?

And I guess we've seen some of the machines elsewhere and some of the other contentions, and so on, even though the types of machines are not listed, particularly in this place, in the contention.

Is it correct that aside from the possible differences between the year of manufacture, which I would say are not totally different heads, in the sense that they fit in the same machines, aside from that difference, is it correct that the heads in these different machines are similar, or is that not correct?

MR. STROUPE: Just a second.

JUDGE BRENNER: If you know, of course. There is always the unstated condition to any question.

MR. STROUPE: I think they are interchangeable.

Again, you'd have to look at the pressure under which
the various engines are operating.

JUDGE BRENNER: Yes, I wasn't talking about the-MR. STROUPE: Physically, though, I think they are
interchangeable.

JUDGE BRENNER: Let's go on to four. As you

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notice, on some of these we gave you a ruling right away, or at least on one of them but not on the others.

For pistons, I guess, more accurately it should read piston skirts, Mr. Dynner?

MR. DYNNER: No, sir.

JUDGE BRENNER: Well, pistons. Fine. A relates to the piston skirts. This is similar, I think, to the discussion we had about the crankshaft and the cylinder heads and to the extent there was a difference between those two, obviously much more similar to the discussion we had on the crankshaft.

That is, why should we litigate a contention going to the model piston skirts different than the model now in the Shoreham diesels, as an end in itself.

MR. DYNNER: We don't want to do it. We're not interested in doing that as an end to itself; we're interested in being able to present on the record facts that these cracks and the piston skirts of the AF piston occurred, the extent to which they occurred, situations in which they were—we can show that they're relevant to the AE in design, operation, and to which they reflect upon TDI.

JUDGE BRENNER: All right. In A, we're talking about a universe of the cracking of the AF piston skirts in Shoreham?

We will not admit it as a contention because it's not the -- the old design is not relevant as an end in itself.

If we permit an issue going to the current AE piston skirts in Shoreham, it may be that in the testimony and expert for the county or LILCO or anyone else putting forth testimony, can demonstrate that there is something relevant in terms of deciding the quality of the AE piston skirts, to looking at what occurred on the cracking of the AF piston skirts in Shoreham.

That's the universe because that's what was identified in A. And for that, it might be relevant.

LILCO might want to argue that this is what went wrong, and this shows we fixed it.

The county might want to argue, this is what went wrong and was not addressed, and it chose the new ones are no good.

All right. But if would be derivative toward the proof if we've found it admissible--not derivative, but supportive of the proof if we found an admissible issue in B, which we'll look at now.

Now, in B, your first sentence sets the stage.

Your second sentence has a rather broad allegation, and what is the basis and specificity of that allegation?

I would add the because or why or in what way.

I'd like you to tell us about that, Mr. Dynner.

MR. DYNNER: First of all, what we're going to talk about is again, the FAA report, which predicts that cracks in the AE piston skirts may occur similar to the AF piston skirts by virtue of its analysis, but that such cracks won't propagate.

We say that accepting that cracks may initiate that our experts believe that they may well propagate and that the analysis of FAA in their fracture analysis of non-propagation is not reliable.

With respect to design, the other things which we've mentioned to LILCO are principally the issue of the excessive side thrust load on the piston skirt, which our consultants believe occurs from their analysis of the drawings of the piston, and which recently when they were able to inspect some wear on the AE pistons at the Shoreham plant, found evidence that they believe demonstrates that there is, in fact, an excessive side thrust which can lead to catastrophic failure.

The manufacturing--there would also be evidence concerning the tin-plating of the piston skirt, the fact of that design causing problems with abrasive material becoming imbedded in it, that that can--and we

believe that there's evidence that it has caused vertical scoring in the wire, which could cause a gas blow by and result in a piston seizure.

JUDGE BRENNER: On the case specifics, you gave me the excessive side thrust load and the tin-plating design.

Is that the basis for the disagreement that you would have with the conclusion of the FAA report, or are those in addition?

MR. DYNNER: Those are in addition because as we read it, the FAA report did not address those issues.

JUDGE BRENNER: Backing up, then, to the FAA report, can you give me a reference and tell me specifically what the basis is for your experts disagreement with FAA's conclusion that the cracks won't propagate?

MR. DYNNER: Basically we will have metallurgical testimony as evidence which will evaluate the fracture mechanics analysis of crack propagation, which will show that that analysis is done in an ideal situation without reference to the actual configuration of the piston skirt, that this idealized view did not give a real world view, particularly when one has to meet the issue of the potentiality of some kind of defect, however slight it may be, surface or sub-surface, which

throws off completely the fracture mechanics analysis, in that even a very slight variation in what is assumed in the fracture analysis to be a perfect material can have a severe impact on the results of that analysis.

Further, that had this been done properly rather than in an idealized way, that it is common and often done to take variations in the results of the fracture mechanics analysis in order to show the potential for variation, and that the result is not as one might be led to believe from the FAA report, something that is absolutely certain.

In short, there are many factors which were not considered by FAA in its conclusion, that the cracks will not propagate and one ought not to put that level of confidence in those, the fact that the cracks won't propagate, as to gamble with the potential for a catastrophic failure of the piston in the engine.

JUDGE BRENNER: I take it--you didn't give me a reference to the report. I take it it's the FAA report, particularly on the subject of the piston skirt cracking?

MR. DYNNER: Yes, sir, the latest one, yes. What is it? May? I think it's the May 1984 report.

JUDGE BRENNER: All right. Also, as part of that same paragraph, you allege that the design of the AE

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pistons was altered prior to installation, in violation of the quality assurance requirements.

We've looked at LILCO's answer, and do you agree that that's what transpired?

MR. DYNNER: Let me check LILCO's answer for a moment, please.

JUDGE BRENNER: Surely.

MR. LYNNER: Our position remains that, in fact, the lip or fin or whatever you want to call it, which existed on the AE pistons at Shoreham is in the drawing.

And therefore, the piston skirt was designed to have that lip, and that the alteration did not follow the requirements of Appendix B.

There was no revised drawing made that we're aware of, and there were no other steps in the process of redesigning the piston and altering its configuration that would conform to the requirements of Appendix B.

JUDGE BRENNER: Well, all right. I understand your dispute, but do you agree with the factual proposition of what LILCO says was done, that these were excess material known as fins or from the casting process?

MR. DYNNER: No, because we believe that those fins are shown in the drawing. They weren't excess in the

sense that they were left on by some error and they should have been ground off at the plant.

The drawing shows them to exist, and therefore, the fact they were not ground off was correct.

JUDGE MORPIS: Mr. Dynner, could you tell me what drawing that was? Was this --

MR. DYNNER: It's the drawing for the AE piston skirt, which we obtained from TDI.

JUDGE MORRIS: As installed or as cast?

MR. DYNNER: It is purported to be the drawing of the skirt as it's to be manufactured.

JUDGE MORRIS: Is there a separate drawing that applies to installation, do you know?

MR. DYNNER: No, we don't believe so.

JUDGE MORRIS: Is that drawing included in anything that we have in hand?

MR. DYNNER: I don't know whether anybody made the drawing available to the board or not. It is available to the county as proprietary data, and we've signed confidentiality agreements, so we haven't used it for anything other than our own analysis at this point.

I think it could be made available to the board if TDI will agree.

JUDGE MORRIS: I'm not sure we need it, but maybe

LILCO can tell me if they're familiar with this drawing.

MR. STRCUPE: Judge Morris, I don't have familiarity with that drawing. I do know that as our answer indicates in response to this Friday alteration, it was done with the authorization of TDI personnel at the plant in California, subject to QA review at that time.

My understanding is that Mr. Caruso, of the NRC staff, stated that had absolutely no problem with that whatsoever.

So I can't answer your question as to this drawing, but at least as far as I know, nobody other than the county has a problem.

JUDGE MORRIS: Do you know whether or not these same fins or similar fins occur on the other piston skirt designs?

MR. STROUPE: I do not. I can try to find out.

MR. GODDARD: Judge Morris, perhaps the staff could comment upon Mr. Stroupe's comments reference to statements made by Mr. Caruso in his deposition.

The statements made by Mr. Caruso, that it was a proper and appropriate practice were in the context of grinding it off if it were, in fact, an excess fin or material left over from the casting process.

There was no questioning of Mr. Caruso as to whether or not such a -- I will call it a lip for

purposes of this discussion--was properly shown in the design drawing.

Mr. Caruso made no comments as to propriety, and I doubt that he would have commented on the propriety of grinding off a feature which was set forth in the design document.

MR. DYNNER: If I can help out, there is an attachment number six to LILCO's response, which has a portion or an extract from the deposition of Mr. Caruso on page 40.

I asked Mr. Caruso the question, "Do you know whether those lips of metal appear in the design drawings for the AE piston?"

Answer: "I'm not certain whether they do or not."

JUDGE BRENNER: And other things that he had no
opinion on, as I recall, which were follow-ups to that
question.

And that was consistent with what Mr. Goddard just paraphrased, I believe. Mr. Stroupe, what's LILCO's basis for saying these are just excess material from the casting process?

MR. STROUPE: I think our basis is looking at the fins themselves, as they were created for the process, I think we were there to solve those at the time.

I believe at that time they were just a product of

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excess metal in the castings and it was, in fact, good procedure to round off that area, and that is all that is done.

I think, further, our position would be that that particular procedure is something that's done at any time you have a fin or an excess on a casting, because it could create a stress factor, and that being the case, good practice required that it be rounded off as part of the overall process of manufacturing.

That's short and simple, and I think that's our position.

JUDGE MORRIS: Would such a procedure be on the drawing itself?

MR. STROUPE: That I'm not sure of. I just can't answer that question.

So there is no misunderstanding, the entire fin was not removed; it was rounded off, to make it a smooth, rounded surface to eliminate the possibility of any tension being created by that excess.

JUDGE BRENNER: All right. Staying with Mr.

Stroupe or whoever for LILCO wants to answer, on C and D, these are the alleged common occurrences by the county involving two chips, and they involve alleged defects or cracks or holes in piston AE--well, in piston crowns.

And your objection was rather succinct on this one.

You said that was crowns; we thought they wanted to
talk about skirts.

MR. STROUPE: We haven't had any, in LILCO's experience, no problem with any crowns. So we don't believe there can be any defects shown between that and the LILCO EDGs.

And in addition, under D, U.S. Steel, there is no specification as to what sort of piston crown that was, so we have no way of knowing whether there could even be an excess.

JUDGE BRENNER: Do you know?

MR. STROUPE: I do 't.

JUDGE BRENNER: Well, I mean you as LILCO.

MR. STROUPE: No, we do not.

JUDGE BRENNER: With the AE--we've been talking about the AE design in terms of the piston skirts in the past.

But when you have an AE design, does that change the piston crown also?

MR. STROUPE: It may or may not.

JUDGE BRENNER: You mean you don't know, or it varies?

MR. STROUPE: It is compatible, as I understand it, with several different types of crowns.

JUDGE BRENNER: What's the case with respect to the changes in the LILCO EDGs? Did you just change the AE skirts?

MR. STROUPE: Yes, I believe the only thing that was changed --

JUDGE BRENNER: To the AE skirts, I mean.

MR. STROUPE: In the Shoreham EDGs, it was the AE piston skirts.

JUDGE BRENNER: The U.S. Steel ship, the M. V.

Gott, as I recall, though it's not specified here, has,

I guess, a V-16 engine.

Is it correct that the design of the pistons of whatever type TDI was manufacturing at the time would be interchangeable between the V-16s and the straight aids in the other engines?

Do you know?

MR. STROUPE: I think that's correct that as far as the skirts go. I just don't know the answer to the question, but I think certainly the skirts are.

JUDGE BRENNER: Mr. Dynner, the county has not told us much on these alleged common occurrences for C and D, to tie the nexus to Shoreham, to my recollection.

We haven't heard much, if anything, about piston crowns before, as opposed to piston skirts, which has come up.

What is there about this that makes it relevant to Shoreham, in your mind, in the county's mind?

MR. DYNNER: This is a portion of the instances which goes to manufacturing quality and not the design of the crown.

And while there have not been any AE crowns at Shoreham that we know of that have had any problems or shown any defects, although I suppose we'll know more about that when we look at the DRQR report of Phase II, it did seem to us that as we were reviewing the operating history data that we obtained from TDI, these two elements, one of which we believe it an AE piston crown from the document itself.

And we're trying to ascertain whether that, in fact, is the case.

And the other appeared that it may be in a piston crown. That's the U.S. Steel one. When I called U.S. Steel's lawyer and asked him specifically, "Gee, do we really have to subpoena you just for you to tell us is this an AE piston crown or some other type?"

He felt that we would still have to subpoena him to get that information.

JUDGE BRENNER: As to the -- I'm sorry. To the

M.V. baltimore, the apex Marine ship, you're telling me
now that you don't even know if it's an AE piston

crown?

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MR. DYNNER: Yes, it is an AE piston crown. We are trying to ascertain the conditions under which the problems arose, but we have a document, I think, that

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indicates that.

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JUDGE BRENNER: Do you know what kind of engine is

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in the Baltimore?

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MR. DYNNER: I'm not sure. I'd have to look it up,

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Judge Brenner.

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JUDGE BRENNER: Do you know --

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MR. DYNNER: Well. wait a minute.

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JUDGE BRENNER: Do you know that it's not a DSR-48?

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MR. DYNNER: I know it's not a DSR-48; it's got

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9100 horsepower. I think it's -- you have roughly a

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600 horsepower cylinder.

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Somebody do the math for me.

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MR. STROUPE: It's a V-16.

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MR. DYNNER: It's a V-16.

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JUDGE BRENNER: All right.

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MR. DYNNER: This is a case, I must say, this is

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the kind of thing that relates. We didn't have the

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DRQR report when we got this thing on operating

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history.

This is the kind of thing, since it goes directly

to the issue of manufacturing quality, that we would

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want to look at in the context of the DRQR report.

And maybe that DRQR report will shed light on the issue of the piston crowns, sir.

JUDGE BRENNER: This is also the kind of thing where we said on kind of a continuum that if you were going to show any excesses, you were going to need to show more, as opposed to something that had more in common with the Shoreham engines.

And any time you start diverting from an instance in the Shoreham engines themselves, depending on how similar the other situation is with respect to the problem at issue, the degree with which you show a nexus with bases in specificity will vary.

And this is one where you're starting to get out there. That's not to say that something might be totally irrelevant in the total scheme of what theoretically may be relevant, but it's the balance on what may become too collateral, given the absence of a present reasonably close nexus in basis.

And in recognition of the shortness of human life, of looking at what might be more important rather than less important.

This might be a good time for a 15-minute break, until 3:55, and then we'll come back.

(Whereupon, a brief recess took place.)

JUDGE BRENNER: We're back on the record. Is Mr. Palamino is still here? Because I don't see him present.

No, he left. He was here up until the last break, correct?

MR. DYNNER: Judge Brenner, Mr. Palamino had another engagement. He asked me to apologize that he did have to leave.

JUDGE BRENNER: Okay. Am I correct that he was here up until the break, or did he leave before then?

MR. DYNNER: Yes, he left two minutes or so before the break. sir.

JUDGE BRENNER: Okay. As to the part B of the piston contention, the county has given us a specification, in their view, a specification of what they meant by inadequate design and manufacturing quality.

And I'd like to get LILCO's response, if it has one, to the allegation that the FAA report conclusion is not reliable because it is based on an analysis of crack propagation in an ideal situation, which would not be valid for the actual operating real world situation.

And further, that excessive side thrust load and the tin-plating design causing problems with abrasive

materials, thereby causing, I guess, vertical scoring, if I recall correctly, in the cylinder liner, causing gas blow-by.

Do you have a reaction to those specifics?

MR. STROUPE: Yes, Judge Brenner, I do. First of all, let me say that with regard to the FAA report, we believe the FAA report is an accurate and reliable report.

It is well down and supported, and will be supported. We also believe that the experience we've had with the AE piston skirts goes further to support LILCO's view that there isn't any problem with these piston skirts.

We do not have indication and we have a good many hours on these AE riston skirts. In addition, I think that there are a good many instances in the field which again are discussed in the FAA report, where the AE piston skirt operated without any problems.

So I think the FAA report is a good report. The problem that Mr. Dynner had indicated with the report, his experts see in the report, we don't believe exist.

We believe that the FAA personnel will support that. With regard to the tinning problem and the gas blow-by that the county has indicated could result in a tension procedure, our most recent information which is

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based on both FAA's analysis and to a large extent Dr. (inaudible) analysis is that that's not a problem of blow-by or anything of that nature.

It's probably caused by the use of a set of rings prior to the rings that have now been installed on the EDGs which contributed to some extent to this scoring or indication, perhaps, that were seen on the side of the piston and cylinder line.

I might add that in Dr. (inaudible)'s deposition, we're talking about the county, he stated that he didn't see any problem.

Beyond that, again, at the risk of sounding like another broken record, I say that we have here a very, wery broad contention, very, very much like the other contentions that we've seen, where the county is saying this is a piston skirt that is of inadequate design and manufacture.

And then Mr. Dynner has proceeded in response to questioning from the board, to illustrate three or four areas where they contend that they will show that these things exist.

Again, what we would say is, there may be more--I'm care there are more than the county tends to rely upon.

As would like to know that is wrong with the design of the piston skirt.

We would like to know what is wrong with the manufacturing process of the AE piston skirt.

We're not told any of this information in any filing that the county has made. To the contrary, it again is a general, broad sort of filing that the county has insisted on making in all of these contentions.

We don't think that we can be prepared adequately to litigate the AE piston skirts, based on what's now in print.

Above all, we don't think the piston crowns ought to be an issue. We have some piston crowns that I believe have over 1,000 hours on them.

This is a good deal beyond the sequence for them to get a failure, analysis. You're going to get it before that, so we don't think that should be looked at at all.

JUDGE BRENNER: Let me interject, if I might. What if we agreed with you as so the contention as printed, that is, in the county's filing?

That is, it's just too broad but if we limited it to the specifical ons, talking about Part B now and staying with the skirts.

I understand your position on the crowns, and we've discussed that, but with the piston skirts on Part B,

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if we agreed with you but limited the contention to the three items that Mr. Dynner put forth when I asked him for specifics?

MR. STROUPE: Well, that obviously would be helpful because our initial position is stated in our filing reports.

That is that we think the engines as presently stated does not abide by court's order and should be stricken.

Then, I'm not sure I fully understand what Mr.

Dynner has related to the board this afternoon about these three areas that were discussed.

That is, how the county contends those three hours impact on the reliability of the AE piston skirts.

JUDGE BRENNER: Mr. Dynner, I think I understood the county's view as to a basis for the disagreement with the FAA conclusion.

Whether or not we think that is an adequate basis is something else, but I understand your connection. I think I also understand your reference to the problems with the cause alleged by you to be the tin-plating design with the scoring in the liner.

But I don't understand the basis or the context, if you will, of the proposition that excessive side thrust load has not been considered.

Can you help me on that?

MR. DYNNER: I'll try. It's a rather, in part, an analysis of the geometry of the ratio of the length of the piston pin, the piston skirt, to the circumference -- I may have gotten that wrong.

JUDGE BRENNER: Is there something in one of the reports that causes the county to believe there is a problem with this, or is this --

MR. DYNNER: No, this issue was not addressed, sir, except by our consultants, who, in their connection with their analysis of the design of the piston skirt, include in their analysis the possiblity of piston side thrust.

And what brought the matter to their attention was the geometry of the piston skirt. There is a relationship or ratio-- I'm corry I don't remember exactly what it is -- of portions of the skirt which is, I am told, accepted by most manufacturers that results in a side thrust figure of about, as I recall, 85 psi.

And that is the normally accepted side thrust in this particular viston. The side thrust has been calc. Lated to something on the order of 123 or 124 or about 30% more than normally accepted in the design of piston skirts.

JUDGS BRENNER: Which one of your experts is it

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that has this proposition?

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MR. DYNNER: Professor Christenson. All of this was, again, part of the deposition that they took of our witnesses.

JUDGE BRENNER: That was my next question. Did Professor Christenson disclose his basis and calculations in that deposition?

MR. DYNNER: So far as I know, he did.

MR. STROUPE: I think I can answer that, because I took Professor Christenson's deposition. He spoke in generalities on almost all occasions.

I did not understand at the time what he was trying to say about piston side thrust, and quite frankly, LILCO has retained experts who have looked at that and do not understand it.

JUDGE BRENNER: So you don't feel badly, subjectively, then.

MR. STROUPE: That's right. We never had any calculations at that time or later, so I quite frankly don't know where these ...

JUDGE MORRIS: Well, Mr. Stroupe was side thrust something that the FAA considered in their analysis?

MR. STROUPE: I think FAA, Judge Morris, felt that side thrust was not a concern, and I believe the evidence also indicates from TDI personnel depositions

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that they didn't feel side thrust had anything to do with the operation and significance in the operation.

They had tested these AE skirts in the R-5 engine at cylinder pressures greater than 2,000 psi for about 622 hours.

And in their opinion, piston side thrust for loading was not something to be concerned about.

JUDGE MORRIS: Mr. Dynner, in the question of fracture mechanics and crack propagation, in an ideal material, I understand that your concern is that the material will not be ideal.

Am I correct so far?

MR. DYNNER: Yes, sir.

JUDGE MORRIS: What kind of non-idealities is your consultant thinking about? Is it very local things, almost microscopic?

Or is it a macroscopic flaw in the casting? What sort of non-ideality is being considered?

MR. DYNNER: As I recall, what he's talking about is that--I'll put it in my layman's terms, because I always get micro and macro mixed up.

That a very, very small flaw in the material, for example, a very tiny inclusion, sand inclusion or defect in the material, if it were in the path of the initiating crack, would completely change the result of

a idealized fracture mechanics analysis of crack propagation.

JUDGE MORRIS: But would that change in the analysis and also be local, or would it persist beyond the non-ideality?

MR. DYNNER: I'm sorry, sir. I don't understand the question.

JUDGE MORRIS: Well, lat me try to explain it in my own thinking, that I can picture very small imperfections in any material.

And knowing just a little bit about fracture mechanics, the whole subject is sort of a mathematical exercise, and if the properties don't exist as they're supposed to at the very point of the crack, then I think everyone will agree that the mathematics breaks down.

But if you go beyond that small imperfection, you're back into the ideal material again. So you could start a new calculation, which would apply, if I understand it correctly.

MR. DYNNER: Yes, sir. I telieve at that point, if the size of the crack was therefore increased, and the crack grew because of the propagation through the defective material, that you would, as you have said, have to do a new calculation, because the crack

propagation calculation under the fracture mechanics would depend upon the size of the crack initially.

So that if you start off with something 10,000ths of an inch, that would lead to different results than if you started out with something one-thousandths of an inch.

Because the properties of the larger crack would behave differently than a smaller crack.

And that was not done. In effect, the fracture mechanics did not involve, the study that FAA did on fracture mechanics, did not involve what they call, I'm told, a sensitivity study.

A sensitivity study being, as I understand it, something to sort of envelope your idealized study and show the effects of variations, depending upon changes in your assumption.

And those assumptions being perfect dimensions.

geometrically, perfect material, no flaws or defects,
no environmental considerations, and in this case also
they assumed a 1680 psi.

So that is an assumption of particular firing pressure for thermal and mechanical stress on the piston skirt.

So that any anange in all of these assumptions could well essues in a difference in the result and

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there was no attempt made to a sensitivity study to ascertain what kinds of variations in those assumptions might be acceptable or unacceptable.

JUDGE MORRIS: Did your consultant go beyond that and make some calculations himself that led him to conclude that this lack of consideration of those things might lead to failure?

MR. DYNNER: No, sir. And that is--my understanding is that what he would need to do that would be the computer program that was used by FAA and that he'd have to go back and run through, in fact, do their work all over by running through with a variety of assumptions.

And we're not going to do that. We don't have the resources or ability to do that.

And what we're going to be saying is not that the crack will occur; we're not going to predict that a crack will necessarily propagate.

What we're going to say is that they can't-conce they say that a crack may initiate, that they can't predict with certainty that the crack won't propagate.

And in fact, there are a whole variety of assumptions that they're making that are not realistic, given the way the engine is built are the way it's.

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Therefore, one cannot be assured that the cracks will not propagate.

JUDGE MORRIS: Thank you. I think I understand your position better.

MR. STROUPE: If I could just respond to the realism aspect of what Mr. Dynner has said. I do want to get some bottom line realism in this.

I think that is that the FAA report in its finite element analysis predicted that there may be cracks.

I think it should also be known, and I'm sure everybody's aware of this, that the testing that was actually done on the AE piston showed that there should be no cracks.

So if the finite element analysis erred, it erred in the favor of conservatism, whereby stating that there may be cracks.

Think the other point that should be made in realistic thinking, the fact that LILCO, and I believe to its not aware of any in-service failure or either an AF or an AE.

Trus, there have been some cracks and indications in AF skirts. We're unaware, based on the information we've had, we have, of any of those that have led to failures for operating.

MR. DYNNER: We are aware of catastrophic failures

But I think that what Mr. Stoupe's comments are leading to --MR. STROUPE: For the record, could we have where there is one? MR. DYNNER: I'm not sure. I think it's in the Texas-class vessel. But I'll try to find out for you later. JUDGE BRENNER: I'll let you two have your conversation without us later. MR. DYNNER: Yes, sir. JUDGE BRENNER: Why don't you finish your sentence? We want to move on. MR. DYNNER: Right. I think what Mr. Stroupe was saying goes to the final sentence about the operating history. And ne's alluded several times to the operating history of the AE piston. And that is a matter covered in part, I believe, in the FAA study. And our point there is that the AE piston was not tested on the test block in the DSR-48 engine. It was tested in an R-5 engine. I believe there were two of them that were tested. It has run at Shorenam for several hundred hours

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and the results have been, according to our experts, .

evidence of excessive side thrust.

Although we don't think that -- we have no reason to believe that there is any cracking of the piston skirts.

The pistons have also operated in Kodiak, Alaska. That was a non-nuclear utility, I believe. And the data on that is uncertain, but it appears that they have been run at only approximately 1,200 psi, which is substantially less pressure.

And I don't think that was in the DSR-48 engine either. So with all these things go to the last sentence about our belief that the operating history is such that the AE piston has been inadequately tested and remains unproven.

And that, of course, is the question and fact to be joined by the evidence, some of which we've heard today, just to whether it's adequate or not adequate.

JUDGE BRENNER: All right. Let's go--you've got an item five labeled "Other Components." It's then followed by subparts which talk about specific components.

We don't think it's necessary to take up time discussing the paragraph numbered five on page ten and continuing over to page 11 of the county's filing.

To the extent we understand it, it's not going to

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be admitted as a contention.

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It's too vague, broad, and general. We are prepared and will, in a moment, evaluate on their own merits the particular items set forth under--starting with the capital A on page 11.

And we'll look at those as further items in support of the overall EDG contention set forth near the beginning of the county's filing starting at page two of the filing.

Frankly, there are some sentences we don't fully understand in that general number five, but even if we understood it, it just is not appropriate of what we have to decide to go through in the understanding of it.

We don't need to reiterate this late boday that we're looking at the specific instances.

We'll look at those further instances you have, starting on page 11, as they may or may not be admissible in support of the general EDG contention of improper design and manufacturing in overrating and undersizing, as relative to the Shoreham diesels.

R. DYNNER: I should clarify for you, Judge Branner, that the listing of the specific instances on page if is not supposed to be specific matters to be Littlester, that what I intended to do there is shown by the reginning of paragraph five, is to set the context

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as we've discussed before, for the litigation.

that there were, in fact, a pattern of defects and failures, by referring to the board notifications, the TDI Owners Group program reports and documents in the NRC morning reports, and inspection reports, which would cover the pattern of defects and deficiencies principally in—I think almost exclusively in the nuclear application of the diesels and at Shoreham, and then to add to your confusion, I tried to list a non-nuclear and Shoreman, which is probably a mistake because Shoreham issues were, I believe, all covered in the board notifications and TDI Owners Group program.

So what the specified instances are, beginning on page 11 with the connecting rod bearing shells, is merely an attempt, nothing more than an attempt, to point to some additional non-nuclear TDI diesel defects which in fact occurred, which formed part of the broad pattern of defects and deficiencies in setting the context for the litigation and which we did not intend and do not intend to specifically litigate as to each and every one.

JUDGE BRENNER: Well, you have added to my confusion. I know you alluded to this at the outset today, and I let my, what I hoped was temporary

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confusion at that time, pass without much comment from me, because I wanted to get it at this point.

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However, unfortunately, I'm still confused. What's

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the point of all of it, then?

We would not --

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MR. DYNNER: Maybe it goes to -- excuse me.

JUDGE BRENNER: Go ahead. Anything you say may

help.

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MR. DYNNER: I think maybe it went in my mind to.

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again, a concern about whether we'd be able to say

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anything on the record about how we got here and about

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how the pattern of, for example, the defects and

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deficiencies in TDI's ability to adequately and

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properly design and manufacture diesel led the NRC to

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take the position it did in saying it wasn't going to

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license a plant with TDI diesels.

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And this board, I think, indicating that until the litigation of the diesel contentions, it wouldn't

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recommend that that be done.

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And it's really a contract setting thing. We have said--and I hope it's not been overlooked--when we talk

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about narrowing issues and being procise.

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I thought one of the major things we did was to cut everything out of the litigation that was in the

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contentions before, except the four major components

and the issue of the overrating.

But I didn't want to lose the right to refer on the record and have put in the record the facts pertaining to the background history of the TDI diesels.

JUDGE BRENNER: Well, when you say refer on the record and put in the record facts, you're talking about evidence. Correct? Evidentiary (inaudible).

MR. DYNNER: Yes, sir.

JUDGE BRENNER: Well, we're going to have evidence only on those issues in controversy, and if you want us to make findings, you're asking us to admit all the issues in your II.

And if we did all that -- and I don't know that we would--to if we did all that, we would only make findings on those items.

We discussed back on February 22nd and I think--in fact, I know alluded to at the outset today the fact that it where you were wanting to go to talk about things not with a nexus to Shoreham, but by which you thought they should show that TDI just can't be relied upon for anything, we'd have to have a very special nexus type showing.

And you said, no, you weren't going to have any in that category, and in fact, we've perceived none, on reading your written pleading.

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So I don't understand, still. Sorry we're having apparently this much trouble with your explanation.

What do you want to do with the items starting on page 11?

MR. DYNNER: For example, all the items that had to do with Shoreham, most is listed, and there are many additional deficiencies and defects that occurred on the Shoreham diesel specifically that aren't listed here, but that are in the DRQR, presumably, and the Owners Group program and board notification.

This is to set the context that we're not talking about the diesel engine that is made by a manufacturer that had never had any problems except with pistons, crankshafts, cylinder blocks, and cylinder heads, that there is, in fact--it is, in fact, relevant and should be considered by the board that there has been a pattern of problems.

And therefore, when you look at the specific instances, that they are against a background of a manufacturer whose engines have had considerable problems both in design and manufacturing.

JUDGE BRENNER: Well, I'm sorry. I just don't fully comprehend what you mean by proof that would just set a context or background, when you have specific items like this listed for quite some pages in your

pleading. I understand proof that that's a background in context when you have evidence by a witness on issue A and maybe as an introductory sentence or two.

He says, "I began to study this item back in 1983," and so on, and you really don't need that for a finding so much.

But it's a kind of a one-sentence warm-up, if you will, and an introduction.

I understand that in context, but I don't understand what you mean by background and context when you have quite a list of items listed here, especially by comparison to what you've told me before, the main items that you do want to litigate as the primary items.

And maybe I can put it in my own terms. I don't know what findings on the merits you would ask us to make as to these items occurring after page 11, in reference to the findings on the merits that I do understand you would ask us to make as to the items one through four in your II.

MR. DYNNER: I guess the answer is the proposition stated in paragraph five, which goes to the number and significance of design and manufacturing defects in the ZDGs, which are the Shoreham engines, and identical or similar diesels common to them, being so extensive and

pervasive that you can't have much confidence in TDI, in their current components, in the EDGs at Shoreham as they now exist, to believe that additional problems will not occur.

JUDGE BRENNER: Well, that's not just context on the other four items, is it?

MR. DYNNER: Well, it's --

JUDGE BRENNER: You're asking us to litigate on the merits. What occurred with respect to item A, B, C, D, E, and so on, and F?

And for that proposition, yet at the same time, you say you don't want to litigate those items on the merit.

And that's why I'm confused.

MR. DYNNER: Okay. Let me try again. If we take, for example, A-2, that there were numerous cracks and excessively worn connecting rod bearing shells on the Columbia, Columbia had TDI diesel engines.

They're not DSR-48s, but they are TDI diesels. I'm not suggesting that we litigate the issue of whether the Shoreham EDGs have solved the problem or not solved the problem of the connecting rod bearing shells which might make the specific instances of other failures of connecting rod bearing shells applicable to this litigation.

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Because we're not challenging in this litigation specifically the design and manufacture of the connecting rod bearing shells.

JUDGE BRENNER: For Shoreham.

MR. DYNNER: For Shoreham.

JUDGE BRENNER: I mean, whether or not the Columbia has problems, you don't care.

MR DYNNER: Or anywhere else. We are saying that there is a history of failures and defects both manufacturing and design in connecting rod bearing shells, the TDI engines at Shoreham and in common components, other applications, as well.

And there are so many that go into quantity, for instance, there are so many of this kind of thing that are listed in the reports and analyses and in these additional things which we pulled out of the review of the operating history, that consideration, we will argue, shall be given to the fact that the quantity of these facts that, number one, that they occurred, and two, that they occurred as to the components that we say they occurred to.

And then that they are so numerous and pervasive as to cast a shadow on the engines at Shoreham, even with the modifications that were made.

I repeat. We are not contending to litigate here

whether the connecting rod bearing shells at Shoreham are designed properly.

We are going to, I hope, address the manufacturing quality of those when we look at the DRQR, but we are saying that when one addresses those engines, it has to be done in the context that there are a pervasive number and quantity of defects which says something about TDI and its diesel engines.

reactions, and if you want to respond, you can. On the one hand, you're professing that you're not trying to put any items in what I might want to term it special showing category that we discussed at 21,622 and that we discussed here today of items with no nexus to Shoreham, but something that you would show a bases in specificity that the item was so significant with respect to TDI's competence, and I think the transcript had a type where it said "confidence," but what I think I said and, in any event, intended to say was TDI's "competence," that it should be heard in terms of judging whether or not anything TDI does can be relied upon.

And we said that it's obviously a more detailed showing than just a simple nexus showing, and you told me that's not what you're trying to do, although --

MR. DYNNER: That's correct.

JUDGE BRENNER: All right.

MR. DYNNER: That's not what I was trying.

JUDGE BRENNER: I want to eliminate that, because some of what you said sounds close to that.

Putting that aside, to litigate the items listed after your paragraph five, for the purpose of setting context, is a rather—would require, in my preliminary view, a rather detailed litigation of each and every one of those items in and of itself, although you profess not to want to do that, to determine what context, to use your word, they have.

If I converted that word, I'd say what relevance or value they have to our findings on the merits of the adequacy of the Shoreham diesels or willing to litigate the adequacy of the Shoreham diesels where you have specific items, and you've attempted to put those forth in your one through four of II.

And those are the findings that we would make. To the extent you had other items, we would evaluated it.

I understand you're saying you don't have a basis for saying these particular items are still problems on Shoreham.

So they're not in that category, either. And you profess them not to be part of either category, and

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therefore I don't really know what to do with them. It would be quite a collateral inquiry, quite an involved inquiry on arguably a collateral matter, let me phrase it that way, given the value of proceeding that way, as distinguished from the opportunity we've given the candidate to come forward with specifics on things that are wrong with Shoreham, either out of those basic—I forget now whether it's 12 or 16 items—and you've taken four of them, or, as we'll discuss in a moment, anything specific you wanted to point to in the DRQR. And that's things that are still problems.

And that opportunity was there. So I'd be inclined—and I'll have to discuss it with the board, because I don't think any of us, based on our discussions among ourselves as a board, understood your intent as you've just expressed it in item five.

But I don't think we'd admit any of that in item five, because we don't know what to do with it, frankly, in terms of the merits of what we have to decide, given the other opportunities you have, some of which we've evaluated, some of which we'll continue to evaluate, of telling us specifically what the specific instances are, upon which we should decide on the merits whether or not the Shoreham diesels are adequate for their purposes and meet the requirements necessary

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to their purposes. I wanted to give you that reaction in case you wanted to say something. (End of tape)

JUDGE BRENNER: My fellow board members do not disagree. I was preliminary with my preliminary reaction, put it that way.

MR. DYNNER: I would just like to make one short comment. I was responding, or trying to respond to the point that T thought had been made at the transcript 21635, in the last paragraph.

I was trying to do it in a way that said at least, almost as if the Board at least should take judicial notice if you will, of the Board notifications and the other documents that show the pervasiveness and number of events that happened. The fact occurred.

The significance of the fact, with respect to each element of the Shoreham engin, is not something that I'm trying to prove, and not something that I think I can litigate, unless we're going to be here for three years.

It was an attempt, and this filing was an attempt to focus down on the major components. the overrating issue, but without sacrificing the context that we all know, that as a fact, shown by the Board Notification, shown by the TDI owners group program reports, which refer to numerous other defects, and in some case, talk about them.

That those defects and deficiencies did occur.

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CS NRC T-6 CS NRC T6 They are facts, and they form a backdrop, if you will, to the drama that may take place soon.

JUDGE BRENNER: You give our hearings a label greater than they deserve, in my opinion. Although, I've heard them called worse, also.

Well, we've discussed at the beginning of the day, the context of my remarks at 21635 and I'll briefly reiterate that they do indeed have to be put in the context of our other requirements. It was in a supplemental explanation, but not in addition to, but not in derogation of our earlier requirements, as to specificity and basis and nexus.

To ask us to take judicial notice of the significance of all these things, and the Board Notifications and so on, for a finding on the merits, goes too far. That's not the kind of thing that can be subject to judicial notice. Many of these details are of varying importance, are undoubtly the subject of some dispute.

We can certainly take notice of the fact that a lot of problems have arisen with respect to the TDI diesels. We incorporated that as part of our ruling on saying that the county had made a sufficient showing to meet these standards for reopening the record to the additional diesel contentions in February.

CS NRC T 6 Beyond having previously met the standards on the basis of the knowledge that existed in approximately June or thereabouts, 1983. But, that's as far as it goes. That was a notice in terms of bases not a finding on the merits. So, you've got that notice already. We know about that. But, what we know about them is not going to be the subject of findings on the merit. Unless there are particular items that we litigate before us. On that basis, the reaction that I gave you before would be my ruling, at least, and we'll discuss it with the other Board members. That is, we would not admit these as separate issues, given the purpose that you haven't been putting them forward.

We had quite some problem with the bases for some of these, and knowing that draftsmanship is not a problem in the county's pleadings, we couldn't understand some of the alleged basis for this, but you've explained that. Now that I better understand your purpose, we were looking for where is there an allogation with bases and specificity that this is a present problem. Present particular problem on the Shoreham Diesel that you want to litigate.

And I've spent quite some time going through your items and file for that purpose, as to the other Board members and we discussed it together. And you've

explained why I had that problem. I miss interpreted your intent, so I'm glad to clear that up.

But, now that I understand your intent.

it would not be something that we would litigate on ther merits.

But, all the items that we would litigate on the merits, we would look at individually, and then to the extent that there was something we should look at together, we would do that, too. But, it would only be for the specific items set forth.

I don't know if it's necessary to get

comment from the other parties, but, I'll give look

on opportunity and in this case, the staff, too, if

it wishes, since I think this was kind of a new

explanation. Maybe the other parties appreciated

it, the purpose of the county better than the Board did.

MR. STROUPE: Judge Brenner, we agree entirely with what you have expressed, this afternoon, with regard to that contention.

JUDGE BRENNER: Mr. Goddard, the staff, although in generalities, as we have already indicated, did not object to any items. We think about this one given the explanation.

MR. GODDARD: Well, the staff would rely on the statement it made in it, the original filing,

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Judge Brenner, brief though it was. To the extent that these could be linked to the admitted contention during the evidentiary hearing, we would consider it irrelevant. We chose to make our rulings on the relevancy at that point. I believe that the staff did not interpret your requirements as specificity anywhere near the degree with which you are applying them today, and it is for this reason I feel that the staff response was informant at that.

JUDGE BRENNER: Well, in general, let me say, we weren't overly enamoured of the staff position that we await the hearing for all rulings on relevance. I've already conceded that many rulings on relevance cannot be forshadowed or preordained, and we do have to adjust to situations as they arise, both in motions to strike and then sometimes in rulings on specific objections to specific questions. But, nevertheless, we try to the extent feasible, as I think is typical of any trial, and certainly in our C hearings, as I know them, to define the universe a little better than just saying, here are a lot of instances that we might admit, and we'll worry about the relevance later.

And so, that's the concern that we had with the staff's answer. That's of substantitive concern and what we recognize that has to occur is to some items,

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and in fact, one of our rulings, already, is consistent with the staff's view as applied to that item. I certainly don't mind noting, and that was the ruling on the cylinder blocks. But, just apply that generally across the board, without some attempt of being able to have a little more detailed analysis of relevance to the extent that we could now, would not be the best way to go.

For the record, since I labeled them preliminary remarks before, that would be the preliminary remarks would now be transformed into the ruling of the Board on that Item 5.

Your Item 111 is the Owners Group Program plan.

MR. STROUPE: Judge Brenner, there's also a number 6.

JUDGE BRENNER: Thank you, I'm sorry. I missed that, as everybody was quick to remind me. The Item 6, on overrating and under sizing of the diesels. Mr. Dynner, this strikes as being a rather contention, to say the least, particularly coming at this stage of the proceedings. A lot has happened since February, in terms of discovery, among other things, and reports outside discovery. Where do you come forward with something this general, at this point? And what's your

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purpose on this one?

MR. DYNNER: Okay, again, as I indicated earlier, there are, there were diverging interpretations of what the Board wanted us to do on June 11th. The issue of overrating and under sizing of the diesels is supported by an analysis of how the DSR 48 engines at Shoreham were developed through a design in which rather than changes being made in components, the speed and horsepower of the engines were increased, significantly, without any design changes, or changes in the manufacturer. But, rather by simply increasing the air and fuel flow into the engine, without taking into consideration in the design of the components, the additional thermal and mechanical stresses that result from, in effect, hopping up the engine.

There is testimony and there is evidence to the effect, that in fact, this is what was done to the engine to get it up to over 600 horsepower, per cylinder. There is also evidence that the way the engine was rated, was done without any testing, there was a 24 hour test on the test band, and the DSR 48 engine, in order to rate it. There is testimony witnesses including a consultant at LILCO, that an engine on the test stand, for purposes of rating it, should be run for something along the line of a thousand

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hours. There is agreement, in general with that, our own consultants believe that it is necessary that in rating the engine, I think everybody agrees with this, in so far as the evidence induced to date, to run that engine at it's rated load, for a long period of time, 700 to a 1,000 hours and possibly more, in order to determine whether, what you rated it at is something the engine can run at without suffering failures and problems.

In this case, there is testimony that TDI took components, some of which had been used in the DSR 46 engine and another engine, and relied on them without putting them altogether in the R 48 engine, and all they did was a 24 hour test. So, the engine in our view, was not properly rated. And it is overrated as a result shown specifically, by the effects, and this is a tie in to the, in part, the past components.

That is to say, that it was overrated for the crankshaft that was in it originally, a we're maintaining that it's still overrated with respect to replace crankshaft. It's overrated with respect to the cylinder heads, because they can't stand up under the rated pressures, stresses to which the engine is put, at 3500 KW, with a two hour, 2900 KW overload requirement. And the same is true with respect to the

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AF pistons. They're originally cracked, and we say
the AE pistons are going to suffer the same fate. And,
finally, we believe that the over radius ties specifically
to the problems that have occurred in cracking in the
engine block. It's happened in all three of the
Shoreham EDGs.

To further explain this statement in paragraph 6, the current modifications and changes are so extensive, in that the engine now has a new crankshaft, new pistons, and one of them is soon to have a new cylinder block, and it may already have a new cylinder block, that they are effectively a new prototype of DSR 48. And that in that regard, the some three or four hundred hours that they run has been inadequate to determine whether this affectively new prototype engine is properly rated.

JUDGE BRENNER: Are you completed?

MR. DYNNER: Yes, sir.

JUDGE BRENNER: Well, as to the individual items, one through 4 and $\overline{11}$, we understood. You've alleged that in the written statement, and to the extent necessary, added to that orally, today, and citing what the support is, for your number 6, you've gone back over those various same things, as to each of those four components, if you will.

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And we understood that, and the question in my own mind, continues to be, that Item 6 is just a very general statement. The actual contention is as defined by the items that you would put forward to prove it. And, in fact, a more concise, but nevertheless, adequate wording of the idea that the Shoreham Diesels are overrated, undersized, is in the, what you've termed the EDG contention, stated at page 2, of your pleading, and as I've said, that contention exist or does not exist, only to the extent of the items that we would admit under 11, one of which we've already admitted.

MR. DYNNER: Well, I don't agree...

JUDGE BRENNER: And I don't know what
the number 6 is.

MR. DYNNER: I don't agree in the sense that the other four contentions indicate that the four major components currently in the engine, as we alleged, are inadequate. Six ties everything together. They're inadequate, not because they only, those four contentions, only those four components have problems, but, because the engine, as a whole, has been inadequately tested and inadequately rated.

The evidence that we've produced shows how a company rates an engine, and the evidence is that

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for a large number of hours, under the rated specification that it's going to try to give. In this case, 3500 KW for a continuously for a year, with maintenance, except for maintenance addages, and two hours in any 24 hours, at 3900 KW.

it rates that engine by testing on a test stand

We have, for example testimony that that would have been the proper way to rate this engine. If you don't rate it and test it in that fashion, you haven't properly rated the engine. If you haven't properly rated the engine, you've put a label on something and said it's capable of producing x, when it can't produce x, and you have no basis for saying that it's going to produce x, and what we've said, then is, the failures that took place at Shoreham are evidence that, that in fact, is the case.

And I think it's a difference between saying what broke is going to still break, and saying that the engine is overrated, and evidence of the fact, that among other things, that the engine is overrated, is that these four things, and many other things, did crack and fail.

JUDGE BRENNER: Well, what is the definition or the limits of the scope of this issue, then? What are the instances you would depend on to prove Item 6,

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beyond the four that said four? You don't have any specifics here, that I can see. See, we already understood that part of those four items would be used to support that proposition because you can get that from the EDG contention. But, now I understand it's not just those four. You want others.

MR. DYNNER: It's not just those four.

It is the evidence of how the engine was rated, in fact, by TDI. Now the engine was tested, how the design was developed.

rejection of your proposed contention for, that we weren't interested in the abstract processes, in that context it was QA to be sure, but, in the abstract processes, except as it maybe tied to items that had specific problems or that you have a basic to show there is not reasonable assurance that they will not have specific problems, and then we could look at those in the context of the quality, testing, whatever, that maybe partinent to those specific items.

MR. DYNNER: Well, I think it's quite different because, in that case we were talking about four particular components. Take somebody saying,
I'm going to seel you an automobile, and I'm going to guarantee that this auto is 300 horsepower and can go

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80 miles an hour on the highway, without anything bad happening to it. And then, you take it out and run it that way and you have four components that crack. Well, I don't believe that you should be limited in that, just saying, okay, four components are no good. Because the contention is that the car couldn't roduce 300 horsepower without anything happening to it, and it couldn't run 80 miles an hour, and what you're, the evidence your adducing in order to show that, is that somebody took that automobile, which was really designed to put out 200 horsepower and run it 60 miles an hour, and they goosed it up and they made it into a hotrod, then they put a plate on it and said now, everything is okay. And when you took it out and ran it, things happened to it.

Well, we're going to litigate a particular components, their adequacy now in the existing engine, that seems to me is a separate issue, is that those engines are overrated. Not the four particular components alone, are inadequate, but the engine, as a whole, is overrated, for what the specification of it's component is to be.

And those four components, which we are focusing on, in order to say that the replacement

components are inadequate, is different from saying
that the entire engine is overrated.

And the evidence is different. I just listed those four. What other ones we're going to list...

TUDGE BRENNER: I mean, you're going to tell us to tune in later, for the other ones?

I'm a bit at a loss in answer you more completely because I didn't come here believing that I was going to have to state the level of detail that you're asking me to _ate. I think I've got a reascnable job, I don't have my, all my people here with me, and I've tried to answer to the extent that my memory and some of my notes can serve me. But, frankly, sir, I was not prepared to come in here, because I didn't understand your order of February 22nd, to require this level of detail and the evidence, and yeah, I'm not prepared. I did the best I can do and I've done the best I can do.

JUDGE BRENNER: Well, I don't want to debate unnecessarily, but, let me tell you, I don't think, as to this one, at least, whether or not you have an argument as to the other questions that we asked you, and whether or not we need the answers to

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those questions to make our ruling, as opposed to seeing how much information that we could obtain to make our ruling easier, is one thing. But, under this Item 6, I just have to agree with you that we're asking for a great level of detail, because we're not, to say, you misunderstood our order as to setting forth instances, even if you have some dispute as to what was intended by instances, which, I also disagree with the original dispute, you had to know that you needed more than this paragraph 6, and among other things, we had a bit of discussion as to whether we could start the litigation on some items, shortly after February, when LILCO said that there reports out, at least on some items, or at least reports would soon be out, and we said that we would not start it then because it was important to have more of a picture, at least, as to those basic, and I keep forgetting the number, I'm sorry, it's either 12 or 16, components that were looked at. Just to know what was ahead, because we didn't want to stand the risk of having to back up and reopen records and so, as other things became pertinent, within the diesel machine. In fear that looking at item 15 and it turns out something they've got there as pertinent to item 3.

We didn't want to back up, but, nevertheless,

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we said after we do get a better context, by having information on many more of loose item, if not all of them, it would still be necessary to go item by item, because that's the only way that one could proceed, as opposed to just talking about everything in general all at once.

And we discussed that in a number of places on the transcript, among other places, 21616, and as I say, I just don't think we're pushing you for unfair detail on this Item 6. But, let me ask LILCO if they have any, that we've got your views on it, and let me ask LILCO if they have anything to add to their written answer on this one.

MR. STROUPE: No, I think our views are the same as those that have been espoused by the Board.

JUDGE BRENNER: Well, they have only been espoused by me so far, and that's not a ruling, yet.

MR. STROUPE: Espoused by Judge Brenner.

JUDGE BRENNER: I don't know if they're views so much as a stimulation of getting Mr. Dynner to answer. I've got to give you that caveat because we go back and consider some things.

MR. STROUPE: Well, we quite frankly, agree with what has been said.

JUDGE BRENNER: I didn't want to get too picky.

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I just, and I understood what you meant. But, again, sometimes we ask questions and say things to stimulate a response that we think might help us.

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Mr. Dynner, similar to things that we've said about other items, on this one, LILCO argues that you're

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talking about the way the plan was scoped and implemented,

Okay. Roman 3, on this Group Program plan.

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the incomplete portion, which I think is your item C,

and also lack of independence, and I'll get back to

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under 111, later. But, staying with A and B, these

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according to LILCO's argument, are vague, and dosen't

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give anyone notice of what you would prove to support

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the contentions, and after all this discovery, and

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all this time, you are obligated, the county was obligated,

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to come forward with specific evidence that a problem exists with a particular components reviewed by the

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program, and should have been listed separately and

to the extent, you had that, presumably was.

in LILCO's view. Why aren't they correct?

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And otherwise, we'd have to unfocus litigation

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MR. DYNNER: Well, they're not ...

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Correct for the same reason

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that they're not correct about a lot of things, which is to say that they're looking for a level of detail

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which is different than we think is necessary to support

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CS NRC T6 the bases for contentions. And I think that if this were viewed in the light, particularly of matters which are stated, as to the owner's group, that there is plenty of detail in this. Some of these things are not as detailed as they could be because we didn't have the DRQR, and LILCO points out that some of these are things which are not answered in the program plan, aren't in the program plans, as we've said, but, are apparently, they believe adequately addressed in the DROR report.

As I said, we only got a few days ago.

Maybe it would help to go through the specifics on
this, if you wish. Again, our interpretation of
the first part, was we had to list instances, not
that we had to list evidence. And the staff had
apparently the same interpretation of your February 22nd
report. Our interpretation of your order on the DRQR
was that we should address the elements of the DRQR,
that we wanted to have added to the litigation.

Again, maybe I was confused, you used
different words. I mean, we didn't say list instances
of problems with the engine. It was the elements
that I regarded as being those that we should address.
And, this entire thing, just starting with A, deficiencies
and scope and implementation, the owner's group program

attempts to list them. LILCO has, that it's going to rely on the owner's group program on the position of the diesel. The staff has said that it's going to rely on the owner's group program for it's conclusions. It's doing it's review of the owner's group program for that purpose. And, accordingly, we feel that the county should be given the opportunity to say, why the owner's group program are not to be relied upon as heavily as the apparently the parties are intending to rely on it.

And that there are numerous deficiencies in this scope, and in how that program has been implemented, --- the issue as to how those deficiences might have been addressed in the DRQR report that we haven't seen.

of detail. It's a matter of probabitive value and pertinence. What's the sense, for example, litigating an alleged lack of independence in the abstract, we could find that everybody would perform work on this, work for LTLCO, where it was paid by LTLCO, and so, and as in the words of, the vernacular word, general demerit, so what? in terms of what we have to look at, we would have to look at that only in so far as it manifasted itself in the lack of reasonable assurance

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finding for the particular things looked at, and, for example, you've got the engine block and you're going to want to talk about the work performed by them on the engine blocks, and you could come forward with your evidence as to why the work performed by persons working for, on behalf of LILCO, were shoddy, and whether or not they were LILCO employees or consultants, and how independent they were, is besides the point.

It's just digressive, nonprobative--issue, in the absense of some requirement that
somebody is violating. And then I use independence
as an easy example. So much the same would be
true as to the other items put forward under A,
would it not?

Again, you talk about context and some context is appropriate, and one of the context that we're looking at is the fact that this isn't February any more. This is July, and we certainly have had ample discovery, at a minimum, for issue identification, actually will be on that, in our view.

I hadn't gotten to C, myself, but, in your remarks, Mr.Dynner, you did get to that item C, which is the fact that the owner's, key elements of the owner's group program are incomplete.

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The party, in this case, the county, would have to particularly tell us what it wants to litigate, and why it's important to litigate it, and why it is necessary to await the issuance of the particular reports that might not be issued, in this case, to await the study of voluminous reports, just as heard, which you, of course, have not had an opportunity to evaluate, thoroughly, if at all, and to tell us why, and that was a rather specific requirement. And just to say that the program is incomplete because a list of reports has not bee issued, or has just been issued, we'll transform the point, and you haven't

had a chance to look at it, is not sufficient, given everyching that we know that you should know, over the course of the months, as to what was being looked at, and so on. You can at least tell us what items you have problems with and we have nothing of the sort.

In fact the reports are not complete or maintenance and inspection activities have not been issued, and some testing program has not been defined.

And the abstract, although, are not tied to specifics.

Now, as a separate contention, one of them you put down was the cylinder block testing program, and that might be relevant to the merits of the cylinder block issue that we have admitted. I don't know. We'd have to see that in the evidence. We certainly wouldn't preclude that at this time.

But, other than, that's an example of where it would be tied to a specific item. But, 1 eneral, they are not tied.

MR. DYNNER: You know, this is all being turned around. The DRQR report, everybody knows the DRQR report is the one report, it's a nine volume, it addresses the manufacturing quality of the hundreds of components of the engine. It says what we looked at, what inspections were held, how the inspections were done, and what was found. Just issued, we haven't.

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obviously, had a chance to look at it. It is the only when we look at that can we possibly address what issues in it, where we want to challange. What are the problems that were found in it. We don't know what they found. We don't even know which parts, out of a particular component that they inspected, because, as you look at the DRQR or rather the owner's program plan, it dosen't tell you that.

And that goes back to the first part of the list of deficiencies. Now, LILCO comes back and says, well, parts of the engine we inspected and those procedures are in the DRQR report. And now we're told that we're not specific enough in saying what we want to do in the DRQR.

We have to have an opportunity in order to comment and see what we think of manufacturing quality, to review the DRQR report before we can be specific about it, because we haven't seen it yet.

With regard to the instances of the whole program. Look, LILCO is going to rely on this thing, and it seems to me what, on this program. It seems to me what the Board is saying to us, is Gee, LILCO relys on it. LILCO can rely on it. You can't, county, you can't have the opportunity to say why this Board should not accept, at full value, what LILCO is relying

24 2 CS upon, and what the staff is relying upon, to the extent that it limits it's own involvement to a review of the owner's group program.

We have to take the owner's group program given your remarks to me, as a given. That's something they're going to say, which is the opposite of what we're saying. We have picked out four components to try to focus down and limit this litigation. But with our own understanding that a part of the litigation is when the other fellow says, I'm relying on this. Everything is done perfectly. This is one of the greatest engineering feats of mankind, one of the most extensive reports that's every been filed. We covered this, we covered that..why shouldn't we have the right to say, hey, wait a minute. That's not true. You haven't done inspections of this.

You haven't given the procedures under which you're going to do those inspections. You haven't utilized appropriate, you haven't made the necessary committments. You looked at incomplete records. That is what this entire portion, in part 3, on the deficiencies is aimed at.

JUDGE BRENNER: I've already looked pertinence of your point, and I want to tell you that before you go too far with it. Since it's only for our benefit.

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MR. DYNNER: And we're not litigating the

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LILCO can only say that, look at the DRQR and see how great we are, and it's the world's greatest job, and all the other words that you used, as to issues that we've admitted. I'm not interested in how great they are, as to things we're not litigated.

That's for other people, presumably LILCO and the staff, and so on, to look at. We're only interested in our issues that we have found that are admissible in litigation. And we're here to sit as a board in a adjudicatory hearing. It's meant to look over their shoulder as to, LILCO's shoulder or the staff's, or anyone elses for that matter, as to everything and anything that they may have done in the DROR. So, I don't want to hear about all the good things, all the self serving statements that LILCO may be able to make in other forms, or in press releases, or wherever, about their DRQR.

I don't care. I'm only interested in terms of the issues that we're litigating. So, I don't understand where you're worried about having an opportunity to respond to those kinds of remarks because they're not going to get away with making those kinds of remarks unless it's pertinent to what we're litigating.

entire engine? Unless, of course, we have the overrating, under sizing contention, because, unless we get that in, we're now down to litigating four components.

JUDGE BRENNER: Well, maybe. We haven't ruled on those four components, yet. But, ..

MR. DYNNER: But, there maybe two, I don't know. I didn't mean to suggest, I meant, at most ...

JUDGE BRENNER: Well, you know, you're pretending to have a contention in Item 4. You're talking about additional information, and we've discussed in February, because we envisioned then, the fact that we would be back before all our information was in, and in part because we thought we would be back on this item in approximately May, but we gave you more time on discovery.

MR. DYNNER: Okay, so you're on Item 4. now? I thought we were talking about Item 3C, and about Item 3A, which is what I was just addressing myself to.

JUDGE BRENNER: Well, I'm talking about Item 3C, because, although I may have labeled it additional information, but, you're saying that the program is incomplete, and what you're saying, in part,

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is that certain reports have not issued, and in the case of the DROR, as you pointed out, and we agree, that it was issued so recently that you haven't had a chance to evaluate it. As a final report.

But, with all the discovery, and your consultants, it seems that, to me at least, that the county should have been able to tell us what specific components there maybe problems with.

MR. DYNNER: On the manufacturing side?

JDUGE BRENNER: On anything.

MR. DYNNER: Well, we've already said on the design side, we've limited it to the four components. We said that we couldn't look at manufacturing because you have this massive program going on, in which we don't know what inspections took place and where they looked for what, on what components. And we don't know what they found, because we haven't seen the report yet. So, we don't know if or what we're going to say about the manufacturing quality, yet, except that we do have on those four components that we're challanging the design of.

We do have aspects of that, were noted to go to manufacturing quality, and to the overrating.

But, we don't know, we won't have until we review the DRQR, the issues concerning the manufacturing quality

of the engine as a whole, and other components of the engine. They were not in that batch of the 16 phase 1, so called significant know problems. Which is a design review, principally, if not exclusively, you can call it that.

JUDGE BRENNER: All right. I'll let that ... MR. FARLEY: Judge Brenner, I'm Milton Farley, counsel for LILCO. I have the responsibility for part three, which I will try to be very brief.

You are aware, as the entire Board is, that LILCO strenuously objects to the overall breadth and scope of the proposed litigation that the county is suggesting in this item 3. First of all, we think it is a very untimely proposed contention, or proposed tactic by the county. The county knew in November of 1983, exactly what the owner's group program was going to be about.

In early January, of 1984, it was provided copies of the DRQR description. And the DRQR procedures and list of components. From that time to the present day, they have been furnished with transcripts of all the owner's group meetings, they have had representatives at all the owner's groups meetings, and there is no reason, when the Board directed on February 22, 1984. as you observed, and the four intervening months that have

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elapsed, with all of the discoveries and documents that were available to the county, why they could not have come up with the specifics or the bases out of the DRQR, either on design or on manufacturer or anything.

No reservation should be permitted the county, with respect to this DRQR. They had their shot and they didn't take it, and it's over with.

I mean, it's just too late, and that has to do with the specific deficiencies they talk about, that has to do with not haveing had an opportunity to read it, they've had an opportunity to know everything that is going on about it.

It has to do with manufacturing defects

and it has to do with the particular deficiencies that

they talk about, the particular lack of independence

that they complain of, and the, and we have enumerated

in our response, and have elobarated on for the Board,

today, the report is complete. Everything is complete.

They've got everything now. So, that is, there just

simply is not basis for complaining about that any longer.

Now, I don't think it's necessary for me
to go through each one of the alleged, so called alleged
deficiencies, each of which we've objected to, and
explained as being overly broad, excessively broad, having

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no basis, or actually being totally wrong, or being irrelevant. We went through each and every par graph of their filing. But, we strenuously object to any more discussion or extension being granted to the county in connection with this DRQR. In candor, we agree with you, and your

statement on behalf of the Board, that if LILCO or the staff, attempts to use the DRQR to support any of the issues that you have admitted to litigation, after having heard all this, then, they are permitted to use those portions of the DRQR to attack the basis on which we rely.

Despite your earlier statement, I would point out that this is one issue on which the staff agrees with us. And we would urge you to adopt the position of the staff and the position of LILCO on Item 3.

JUDGE BRENNER: The staff agrees with you in Roman 3, but then when they put forth their schedule, I see some --

MR. FARLEY: That's going to be another subject.

JUDGE BRENNER: I know.

I see some inconsistencies in the staff's view on Item Roman 3, and what they have set

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1 forth as their view of the schedule. So, I'm not fully 2 sure I understand that ... 3 MR. FARLEY: Well, they do say that they 4 do not think that the owner's group program should 5 be the subject of independent or separate litigation, 6 in this proceeding. JUDGE BRENNER: I know, then they have 8 a schedule for hearing that advises to wait for a 9 staff DROR evaluation. 10 MR. FARLEY: Yeah, but we depart from 11 them on that. JUDGE BRENNER: Okay. You don't want 12 13 to agree with them on everything they say. 14 What if it's true, is it not, that the county has not really had an opportunity to properly 15 evaluate the only very recently received, final DRQR 16 17 report? 18 MR. FARLEY: Well, Your Honor, I agree 19 technically, with not having an opportunity to read the specific 9 volumes, or whatever it is, but, I 20 think it is unfair to take that out of context, from 21 what has occurred, since November, of 1983. Now, 22 for example, on June 21, I tended the taking of the 23 deposition by Mr. Shipe of Mr. Schilling, down in 24

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Oakland.

On June 22nd, there was an owner's group program meeting at FAA, and it is absolutely amazing, I mean, you have the staff there, you have the staff consultant, you have the outside consultants that the staff has employed, you have all of the FAA people, for each report, on each component, you have the owner's group representatives, and then you have the county's experts, and they go through each report.

And this has been going on ever since the thing started, and they go through each report and they make their comments, and the county's expert is taking all these notes, and then at then end he gets up and wants to make a big argument and presentation to these outside consultants, as to how they ought to do things.

Now, this has been going on from the very beginning, and I can't see why, at this particular stage, knowing what the scope and the task descriptions and the purpose of the DRQR was, why the county was not in a position prior to June 11, 1984, with respect to either the crankshafts, the cylinder block, the cylinger head, or the piston, to specifically advise the Board, as you had admonished as early as February, to, and you extended it twice, to come up with their

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specifics. I don't know what more you could have done.

MR. DYNNER: Judge Brenner, I think that counsel has confused the phase 1...

JUDGE BRENNER: Well, I was going to ... let me say, I don't think he confused it until his last two sentences or so, but I think you did digress from what I understand the county's argument to and 3C, that they've got, that they were not in a position to say the things about the program, other than the 16 basic items, well, there are not even that many because one of the reports on that came out on that later. I understand the difference of opinion on it, but, I'm just trying to define what I understand to be the county's point.

Mr. Farley, would you preclude the county at this time, from when they do go through the DRQR, coming up with something that they can show a good cause for coming in with a specific, late, on the basis that it was new information that could not have been reasonably available to them, not withstanding the earlier reports and transmittals and discovery?

MR. FARLEY: Within that broad context, and with the limitations with respect to the issues that you specifically permit to be litigated, and provided,

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we don't get another motion for deferring the filing of testimony and the commencement of the proceedings, then I don't believe we would have any objections.

I should also mention, very briefly, that

I should also mention, very briefly, that LILCO took the position in January, that the phase 2, DRQR report was not required for licensing, and we would preserve that, and also...

MR. DYNNER: We didn't know one way or the other on that, and we pointed out we wanted to have a better appreciation of what was done today, and still left to do...

MR. FARLEY: I'm just reserving what we said at that particular meeting, and also, that the county has had available to it, the component tracking data. I mean, there's nothing that it hasn't had available to it, except the written text.

(End of tape)

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MR. FARLEY: -- get something from me in order to formulate an objection or specification, I don't know. I don't know why they can't come up with their own decisions.

JUDGE BRENNER: Okay, I think I understand your view quite well and I think I understand the county's view also. On -- on Item 4, that's the one you've labeled "additional information" and that's the information of further discovery of the TDI diesel customers, non-nuclear customers, and to some extent the argument there might depend on what issues we admit or do not admit, of course, but we're prepared to give you a ruling on that Item 4 in any event, and I'm going to do so now.

Over here you've discussed your desire for further discovery, as I said, of the TDI non-nuclear diesel customers. You say regarding at least three of the four items in your -- three of the first four items in your Part 2, that is cylinder block cracking, cylinder heads and a piston crown, now, as I said, if we didn't admit those contingents then the request for discovery becomes moot.

But even if we admitted those contingents, we would now allow for that further discovery or you have a supplemental request, some assistance in

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discovery of the Saudia Arabia and Suriname diesels, which I think you noted on page 33 of your filing.

This is because in February, transcript

page 21,624, we said we would only allow formal discovery of the TDI customers based on a particular
showing that there was information that cannot be
obtained from another source which is in the possession
or knowledge of the TDI customers.

That is, showing, in other words, that the information would not be cumulative. And also, we asked for a showing that the other -- what particularly the other information would be that you would seek, and you've been unable to get it and you have not given us that specification.

We said we would not allow broad type discovery of these customers, and that's what you're asking us for. You're saying let us seek documents from them or let us depose them, and you haven't given us any specifics, and we emphasize that.

So that would be our ruling, even as to portions we might admit. I don't know if there are going to be any such portions, but I think we had a very clear requirement on that one and you haven't even attempted to meet it.

So we're going to deny the request in Roman IV.

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6.PM

We'll take a 15-minute break and, if you'll bear with us, we'll see if we can come back and give you some further oral rulings. I don't know if we'll be able to or not, but we will see. Come back at 5:50.

(Brief recess.)

JUDGE BRENNER: We are prepared to rule, we believe, in all these matters put before us. And then at the end of that we will discuss the schedule, and we have a schedule in mind and we'll give you an opportunity to react if you wish to to that schedule.

First, the rulings. We're in the county's Roman II, Item 1, Crankshafts. One A we have already ruled would not be admitted as a contingent in itself.

One B, we have to -- 1-B-1, we have to divide up a little bit. The first sentence of 1-B-1, we would specify, and with a specification we would admit it.

The specification is as follows: "The replacement crankshafts are not adequately designed for operating at overload (3900 KW) as required by FSAR Section 8.3.1.1.5, and their design is marginal for operation at full load (3500 KW) because they do not meet the standards of the American Bureau of Shipping (ABS), Lloyds, L-l-o-y-d-s, the International Association of Classification Societies (IACS) and the German codes."

In admitting the first part of 1-B-1, as

spec'fied, we will state the obvious, that at this point we do not know or rule on the merits of what the significance is of meeting or not meeting those codes, even if it is established that those codes and/or standards are not met, but we'll wait for the merits on that.

Mr. Dynner?

MR. DYNNER: I just wanted to clarify; apparently there's some confusion. What we said in further -- particularizing this sentence -- is that the replacement crankshafts are not adequately designed for operating at full load (3500 KW) or overload (3900 KW) under ABS, Lloyds and IACS.

They are not adequate at overload and they are marginal at full load under the German criteria.

that specification. What we're going to ask for is a listing from presumably the county as to part of the contention, of the contentions as we have reworded it on the transcripts, and you can circulate that informally -- we won't set a time limit -- among the other parties to make sure there's no disagreement on editorials and so on, and then file it with the Board in the case with the notation that the other parties have agreed that it accurately reflects the transcript.

And in this case we'll take your wording of

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it, Mr. Dyn er. The second sentence of what was 1-B-1 was withdrawn by the county. The -- I guess I'd like to call the portion we just previously admitted lB(1)(a), and I'd like to call this next portion lB(1)(b).

And we would admit a contention on that subject, however, as specified by us as follows:

"The shot peening of the replacement crankshafts was not properly done as set forth by the Franklin Research Institute Report, and the shot peening may have caused nucleation -- I'm sorry, may have caused stress nucleation sites, the presence of which may not be ascertainable due to the second shot peening."

I'm not giving editorial on that issue. We don't know if that issue is important enough at this stage and we weren't able to evaluate it officially to make that judgment.

We've admitted it based on what we saw in the report and the questions and answers of Mr. Caruso, which stand for themselves. That is that the questions and answers of Mr. Caruso did not fully support what what LILCO -- no, let me back up; I may be confusing that with another subissue.

I'll start again. We're admitting it because we think there's enough of a basis and specificity for

an issue. That's not a judgment on the importance of it, and if it really is a non-issue, this is something that the parties ought to be able to get together on and resolve.

I don't -- we never think it's too late in the day for that. In fact, prior actions in this case have shown that it's never too late in the day for resolutions of even relatively modest issues because any hearing time that is saved can more productively be spent on more important issues.

That's true about in general and may be true as to this subissue. On IB(2) we have a difference of opinion. Judge Perguson and I need further information, and the information we want is whether or not the design of the oil plug on the RAFFA Electricity Corporation in Saudi Arabia, DSR 48 Model Diesel, uses the oil plug of the same design as the present Shoreham Oil Plug.

And we want that information just as soon as possible from LILCO. We'd like LILCO to share that information before filing it with us with the other parties in case there is some possible difference of opinion as that -- what we think should be an ascertainable fact.

If the design of the oil plug is the same, Judge Ferguson and myself think there is a sufficient

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nexus to Shoreham with reasonable basis and specificity to admit the issue.

If we did so -- and we're not doing so now.

We're awaiting the information -- it would have to be slightly rephrased to be a sentence rather than a sentence fragment, but that's a minor accommodation.

Judge Morris does not agrees with us and he can state why at this point.

JUDGE MORRIS: I do not agree because I think even if the design is identical that the lack of other factors doesn't give adequate specificity and basis, such other factors being the environment in which the plug operates; service conditions; operating rules; maintenance and inspection procedures; fuel oil, as examples.

JUDGE BRENNER: So to sum up, we are deferring our ruling on that item, depending on the further information that may be admitted on the two-to-one vote.

Item 2, Cylinder Blocks, the first part, in capital A, we have already admitted with some minor word changes, as we indicated previously. Let me read it again so we could have it in one relatively concise place in the transcript.

"Cracks have occurred in the cylinder blocks

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of all EDG's and a large crack propagated through the front of EDG 103. Cracks have also been observed in the camshaft galley area of the blocks.

"The replacement cylinder block for EDG 103 is a new design which is unproven in DSR-48 diesels and has been inadequately tested." And we're admitting that issue, as we indicated previously.

Incidentally, in reading these I'm not repeating the county's code designations. We understand what they are. We have them in the original filing for whether it is design manufacturing or alleged over-reading problem.

As to Part B of the Item 2 Cylinder Blocks, we have already ruled that that part is being denied as an issue in itself. Number 3, Cylinder Heads, Part A we would not admit the first part of Part A with respect to litigation going to the earlier manufactured cylinder heads because we just do not think it's probative as an issue in itself.

with respect to the last sentence of A as put forward by the county, we will admit it with a specification as follows, and I'll read the whole thing and the specification comes at the end.

"The replacement cylinder heads for Shoreham are of inadequate design and manufacturing quality to

withstand satisfactorily thermal and mechanical loads during the EDG operation because they have not been tested above 1680 psi."

I might say a word or two about this one.

Despite our strong efforts, we think, to get the county to give us a specification of what it wanted to litigate under the arguable broad issue of cylinder heads, we did not get that specification.

We do not think we're being unreasonable in what we asked for. The county mentioned things here and there that began to sound like specification, but almost always in the same sentence or the next sentence added in all the other things, vague, undefined basis for this contention.

We could have excluded the entire contention given that discussion and our requirements from the February 22nd order, notwithstanding the fact that this contention back in June '83 had been — the subject of this contention had been an admitted contention back in June '83.

However, the situation is not the same and the county at this time was chargeable with a more detailed understanding of what it wants to litigate under that contention.

Now, withstanding that, we think that part

of the issue, as defined by our specification in the exercise of our discretion, could minimally meet the nexus basis and specificity.

That is, the nexus relevance requirement and also with adequate bases and specificity. So we have admitted just that part. As to what may be relevant on that part, we'll await the proof, but it seems to us to be a focused proof rather than collateral litigation of many other instances which would little, if anything, to do with the direct issue of how were these cylinder heads tested.

As to Item B, we would not have admitted that in any event as an issue in itself, even if we had admitted A in the broad fashion put forward by the county.

on the broad A, as stated. The extent to which it might remain relevant to the evidence, it appears to us it would be much less relevant now, given the way we have specified it, specified the issue under A.

But we're not in a position to totally

preclude anything and we'll evaluate what evidence

parties choose to put forward, but the evidence that

should be put forward is to the issue as we phrased

it and not the issue as the county would have desired

to litigate it initially. As to Item C, we would, given our ruling on A, particularly, we would not admit that issue.

There is just insufficient bases and specificity as to these instances as set forward in terms
of the nexus to Shoreham, arguably even under the
broad issue, as phrase, and certainly under the issue
as we have phrased it.

So C would not be admitted for the lack of nexus of -- that is, lack of probative relevance and lack of specificity and bases to the instances set forward under C.

Item 4, the Pistons, for the first part,

Capital A, we have already ruled would not be admitted as an issue in itself, and that goes to the old design piston skirts.

For Item B we will have to divide that issue up. You recall the first two sentences, B(1), capital B, 1 in parens, and we would admit that as an issue subject to the following specifications.

it. 'All AF piston skirts in the EDG's were replaced with TDI model AE piston skirts. The replacement AE pistons are of inadequate design and manufacturing quality to satisfactorily withstand operating conditions

because: (a) the FAA Report concludes" -- let me back
up. "The FAA Report conclusion that cracks may occur
but will not propagate improperly depends on fracture
mechanics analysis of an ideal situation which is not
valid for the actual conditions which may be experienced
by the Shoreham Diescls.

"(b) Excessive side thrust load, which could lead to catastrophic failure, has not been considered adequately. (c) The analysis does not adequately consider that the tin-plated design of the pistons could lead to scoring causing excessive gas blow-by which -- thereby causing a failure of proper operation."

MR. EARLEY: Judge Brenner, could we have the last one again?

JUDGE BRENNER: Yeah. You deserve to have a read right. It would be "(c) The analysis does not adequately consider that the tin-plated design of the pistons could lead to scoring, s-c-o-r-i-n-g, causing excessive gas blow-by, thereby causing a failure of proper operation."

I guess we could have said "thereby preventing or impeding proper operation," but I'll stay
with the original wording because I haven't had the
opportunity to labor over each and every glorious word.

Our purpose is, however, making sure the

issue is defined and understood.

MR. STROUPE: Could I -- Judge Brenner, could
I impose upon you to read (b) again, please, sir?

JUDGE BRENNER: Yes. You mean the -- all
right, the --

MR. STROUPE: Small B.

JUDGE BRENNER: -- small B which would be under Capital B(1)?

JUDGE BRENNER: "Excessive side thrust load which could lead to catastrophic failure has not been considered adequately." That would be an issue that we have termed 4B(a).

MR. STROUPE: Excess side thrust, I believe.

The next issue we would derive from the next sense of the county's contention -- and we would label it B(2) -- and we would admit that sentence as stated.

"Further, the design of the Modeal AE pistons and the EDG's was altered prior to installation without compliance with the requirements of 10 CFR, Part 50, Appendix B."

Now, our comment as to whether or not the facts of this matter require litigation would apply to this issue, too. It may be the parties can get together and ascertain what the facts are, as to

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whether -- what was changed. It's part of the design dependent on as distinguished from appendages related to the casting process and that part of the design should be something that the parties can decide, given the fact that they've got experts they can rely on.

Anyway, we hope that that is accomplished on this item, also. Nevertheless, at this stage we find the issue as stated with sufficient basis and specificity.

As to the last sentence of the -- yes, I'm reminded that we should add, appropro of something we said back in February, in admitting that sentence as written to the extent it remains an issue, we're not interested in abstract procedural violations of QA.

We're interested in what was involved in the substance of the particular fins on these pistons and whether or not they were part of the design and depended upon for anything.

All right, the last sentence of the county's B we would not admit. It's just a broad allegation that the Model AE piston has been inadequately tested and is unproven, lack of sufficient specificity and bases.

To the extent we've got the issue specified, we've done that already under the portions we did admit

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under B, so we're not going to go through the effort of specifying a contention and then leave a sentence like that at the end of B, which would -- could possibly result in an unknown universe of litigation under it.

As to C and D, these are the occurrences in the two marine vessels, ships, which involve the piston crowns. We are not admitting those. They lack a reasonably specific specification and basis as to the issue and as to the nexus and relevance to Shoreham, given what we've heard so far.

It's just too collateral. On Item 5, the general proposition for which begins at page 10 in the county's filing and continues for several pages thereafter, we have already ruled that would not be admitted as a separate issue and would not be admitted for the purposes the county wanted to admit it for the reasons we have expressed and there's no need to repeat those.

For Item 6, involving the over-rating and under-sizing of the diesels, the preliminary comments I had earlier would become the ruling of the Board.

We would not admit that issue.

It is simply too general. It does not comply with our requirements to come forward with the specifics at this point in time, which requirement is reasonable

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in our view and was very clearly set forward, as I indicated earlier.

To the extent there is a basis for the allegation, it is derivative solely of the specific instances and components that will be litigated under Roman II to the extent we have admitted them and the issue comes up there as stated.

The -- I should state that the county's introductory proposition labeled the "EDG Contention" will remain as the contention of the county. However, we would add the word -- and that's the one stated at page 2 -- however, we would add the word "because:" and then it is defined and limited by the instances that we have just admitted under Roman II.

So the general language of that cannot be pointed to to define the issues. They are solely to explain the specifics that follow and it's those specifics which we have admitted which do define ne issue.

Roman III involves the county's allegations, proposed contentions, with respect to the TDI diesel generator owners' group program plan. We are not admitting those.

There is just insufficient specificity contrary to our requirements at this late date in the

proceeding as to what is set forth and the bases for the problems and the context of particular problems.

Moreover, some of the items are not even directly probative or relevant to findings we would have to make on the adequacy of the diesels, and we discussed one of them by example, being the independence or lack thereof of the personnel performing tasks under the owners' group program.

To the extent there was anything specific, the county had every opportunity to bring that forward. As to C, which in part is a -- in effect, an attempt to reserve rights on reports not issued or just issued, and the most important of all mentioned by the county is the DROR.

Here again, we have required specifies. We made that clear as to the DRQR at the February 22nd transcript, as I mentioned earlier, and more particularly, at TR21620 to 21, and the county has not told us particularly what they would want to litigate.

while the final report has just been received, there has certainly been a lot of information for the county, it seems to us, to be able to come forward with what particular components it still has problems with.

And where it has done so, we have evaluated those and ruled on the admissibility of those in

Roman II, and we're not just going to have an openended reservation of right now as to other items.

Now, having said that, if the county when it goes through the DRQR can find something under the late contention -- and at this point, very late contention -- and in the context also of a re-opening because this is a re-opened proceeding, of something so new and so significant that the county can show that nothing in the earlier information available to it could have led it to believe that this type of problem exists, then the county, of course, can attempt to make the showing as to good cause and all the other requirements as to late contentions and re-opening the record and we'll evaluate it.

But it needs to be a very good showing at this point, given the schedule and given all the opportunity that the county previously had. They'd have to — the county would have to show us why it had no reason to question the particular component because it would be attempting to — presumably to bring forward a new — a new component rather than just further information on a component that it had concerns about which it had timely stated.

The other items in C, my previously general comments as to my comments generally applicable to

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Roman III apply -- again, this is not to say that some of those items cannot be pertinent to some of the particular components which we have admitted contentions on, but we'll leave that for the proof.

But there's nothing here to admit as a separate issue in terms of meeting the requirements for admissibility. As to Roman IV, we have already ruled that we would not order further general broad discovery of those TDI customers because the county did not even attempt to make the showing we clearly in this instance said would be required.

And as I think I stated earlier, the requirements for that showing was set forth at transcript page 21,624. It may be useful to summarize our findings in terms of the elements of the conclusion put forward in the county's filing which it sought -- the rulings it sought from this Board, just as a summary, and that begins at page 34 of the county's filing.

The county has requested us in small I in parens and small double II to accept the consolication and restatement of the EDG contention as set forth in Part Roman II and accept the particularization of matters as set forth in Part II.

In part we have done that to the extent we have admitted and further specified and defined

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the contentions. As to small triple I of the county's conclusion, the county has asked us to add to the EDG litigation the matters concerning the TDI owners' group program as detailed in Part Roman III, and we have denied that request for the reasons we've indicated.

In Part Roman IV -- I'm sorry, in small iv the county has asked us to defer the filing of testimony and commencement of EDG litigation until completion and an opportunity for review of the matters specified in Section C of Part III hereof, and we have denied that as impermissible abstract attempt to reserve future rights without specificity or basis when the county has had the opportunity to come forward with specifies by this time.

As to the last item in the conclusion, small Roman v, permit the county to obtain additional information and encourage the staff to obtain additional information as discussed in Part Roman IV, and we have denied that request for the reasons indicated.

All this gets us to the discussion of schedule. Judge Morris suggests that, as we did at the February conference, we give you a brief opportunity for any clarification you might seek from our rulings.

Again, not requests for reconsideration,

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but clarification if you don't understand anything in the rulings so far. All right, hearing none, we'll proceed to the schedule.

This would be our proposal, and we'll give the parties an opportunity to comment on it after we give it. We would propose that the county and the state, to the extent it wishes to file testimony, file testimony first, and we'll plug in the dates in a moment.

The reason for that is that although we have specified the contentions more particularly than the county had in some instances, there are still elements of the contentions that we think are susceptible to surprise in terms of precisely what the county would seek to put forward under those issues.

We think that the contentions have been defined now where that further information is not essential to admitting the contentions, and we have admitted it, but it is essential to an informed reasonably efficient litigation, and for that reason we would require the county and the state, to the extent that it wishes, to file testimony first.

Our schedule would be as follows. I'll give you the important steps first and then I'll fill in with some of the subsidiary steps. The important

steps -- and these are all receive dates -- would be as follows: July 31st, the county testimony and the state testimony, to the extent it wishes.

August 14th, LILCO and staff testimony.

September 4th -- it happens all these dates are Tuesdays -
September 4th, the hearing begins on Long Island. I'll

note that it's the day after Labor Day and we'll start

at 10:30 with the belief that that would give almost

everyone an opportunity to get there by leaving early

in the morning on Tuesday or at least late at night on

Monday, and we'll announce the particular place on Long

Island.

We hope we can get the Corps Room at Haupog (phonetic), but we're not sure. Why don't you -- we get the reactions to those as the main dates before I spend the time filling in some of the derivative dates on the motions to attract testimony and answers thereto in cross examination plans. Anyone can go first.

LILCO, do you have any comment on the schedule?

MR. FARLEY: No, Judge.

JUDGE BRENNER: County?

MR. EARLEY: No, Judge, other than to say we support that schedule.

MR. DYNNER: As I understand the schedule, and maybe when you go farther on it will become clearer

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as to the other matters, but if we're to file testimony on July 31st, the LILCO testimony, in effect, will be an opportunity for rebuttal testimony it files on August 14th.

And I'm wondering whether there will be an opportunity for the county and the state to respond and have rebuttal testimony as to matters raised anew by LILCO and the staff.

JUDGE BRENNER: All right, the answer in the abstract is no, but we will apply sensibly and sensitively, we hope, the opportunity for rebuttal testimony provided. I think it's 2.743, if I remember the number correctly.

But as we've done in the past in this proceeding, we're going to try to avoid, unless there's a particular showing that it's absolutely essential, further delays on the filing of written rebuttal.

We would be able -- the county's witnesses would not testify before having had the opportunity to read the LILCO and staff testimony, and we would hope to get any rebuttal as part of the responses to questions or if county counsel wants to tell us that at the beginning there are a few points in rebuttal they'd like to start out with and some indication of what it is, we'd certainly be flexible on that type

of things. And that would be the way to do it. What I did not get to, and will get to now, is that we're also — the proposal, then notwithstanding this sequence for the filing of testimony at the hearing the LILCO witnesses would be the witnesses that would testify first, that being the normal order, and we see no reason to vary that, and if you will, it's kind of a balance.

We've given LILCO the opportunity -- and the staff the opportunity -- not to be surprised by the county's written testimony, and there's no reason at that point not to revert back to the normal order of the party with the buiden of proof going first.

MR. DYNNER: I would like to say that insofar as we can contemplate now that there will be the need for the county to respond with direct testimony and rebuttal to LILCO's testimony.

It seems to us that it would be in the interest of all parties to have the county prefile that so that -- again, to avoid any surprise, there would be on the record the prefiled testimony with respect to that matter.

And we would suggest that the Board entertain the possibility of our doing that let us say around August 24th. That, of course, would also enable the

LILCO witnesses who are leading off to have the prefiled testimony of the county as to -- as to their views that they had in their original filed testimony.

JUDGE BRENNER: I'm sorry, could you repeat your last comment?

MR. DYNNER: Yes.

JUDGE BRENNER: I was just talking with Mr. --

MR. DYNNER: That would mean that the LILCO witnesses would have the advantage when the litigation began of knowing what the county's witnesses are going to say with respect to rebuttal, rather than just having to deal with it on cross examination without knowing those views in advance.

JUDGE BRENNER: All right, we'll get the other parties' reaction and think about that in a moment. Did you have any other comments, Mr. Dynner?

MR. DYNNER: I can make one more comment, and that is about the hearing commencement date. We have a number of witnesses who, as you may not have recalled, coming from California.

Other parties may have similar problems, but we certainly have a real problem in starting the day after Labor Day in that it's going to be an extreme disruption to any plans that people may have made who

are witnesses coming from far away.

JUDGE BRENNER: You're right, I did not recall that in setting the date. We'll talk about that and let you know in a moment also. I had forgotten that. Did you have anything else?

I'm going to move on -- if you're silent, I don't want to require you to say anything else, I just don't want to cut you off.

MR. DYNNER: Mr. Lampher wants to make a comment.

MR. LAMPHER: I tried to keep quiet today.

I guess it's just too long, but in not commenting concerning the requirement that the Board have the county and state go first with testimony, that should not be taken as acquiesence that we agree with the Board's characterization that there is -- there are elements of surprise.

When Mr. Dynner and I talked, we understood you did not want us to be re-arguing things that have been argued today, so our silence should not be taken as acquiesence.

JUDGE BRENNER: Okay, that's fine, and you're certainly entitled to make that comment since you made it as brief as you did. I did try to indicate, maybe not very successfully, that to some extent, and I'm

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the first to concede that not all these calls are clear calls when ruling on bases and specificity of contentions, that to some extent we balanced the fact that there was a rational argument that the contention still did not have sufficient basis and specificity, given the stage of the proceeding we were at.

It was after discovery. That we would be ameliorating that rational argument to some extent by this requirement. And we did it not only for the benefit of anyone party, but for our benefit also, in order to be able to under -- get what we think would be a more orderly and better focusing of issues upon which we could rule on the merits. Staff, any comment on the schedule?

MR. GODDARD: The staff would rather you took LILCO's comments on the schedule first, but I think --

JUDGE BRENNER: I thought they didn't have any.

MR. GODDARD: Oh, they had no --

JUDGE BRENNER: They liked it so far, subject to any changes we might come back --

MR. GODDARD: Liked it so far, okay. The NRC Staff feels that the schedule is somewhat tight from its standpoint because of the fact that the same

week in September.

parties that are involved with the Shoreham proceeding -by that I mean Dr. Berlinger, the P&L people and their
outside consultants are the same people that are involved in the TDI owners' group reports.

And there is a question of setting priorities between the TDI owners' group work which is going to be done. It affects not only Shoreham, but other dockets and the work that is Shoreham's specific.

We will be using the same witnesses.

Accordingly, the staff would suggest that possibly --

JUDGE BRENNER: What do you mean the same witnesses? I don't know of any other hearing going or.

MR. GODDARD: Well, we are expecting four or five hearings this calendar year involving the -
JUDGE BRENNER: Well, fine, but not the first

MR. GODDARD: No, but the work that remains to be done with regard to the DRQR and other matters which are going to be involving other facilities will be occurring at the same time.

The staff feels that perhaps an accommodation could be worked that they would have the benefit of having LILCO's testimony also filed prior to the requirement that the staff file.

Mr. Farley indicated that LILCO would be

ready to file its testimony this month, as a matter of fact.

JUDGE BRENNER: Yes, but we've indicated why we think it would help us, beyond whether or not it would help LILCO, for the county's testimony to be filed first.

MR. GODDARD: The -- excuse me, Judge Brenner, maybe I --

JUDGE BRENNER: So we --

MR. GODDARD: -- didn't state what I meant or maybe you misunderstood what I said.

JUDGE BRENNER: You're leaning towards what it sounds like a delay in the hearing of a couple of weeks.

MR. GODDARD: What I am suggesting is that the county file first, followed by LILCO and the staff and its witnesses have an opportunity to review that testimony.

We feel that this would expedite the actual preparation of the staff testimony. We would be ready to proceed in early September. We would hope a little later than the 4th, but we would be ready to proceed in --

JUDGE BRENNER: Assuming we started on the 4th or the 5th, when would you like to file your

testimony later than August 14th?

MR. GODDARD: I'd like to file no more than -well, not earlier than approximately the last week of
August. It's a Monday there, would be -- you know,
we'd be talking the 27th or 28th of August.

The SER of the staff, in fact, will not have issued until at least the 17th of August, and there's a significant possibility that will slip somewhat.

JUDGE BRENNER: Well, you've hit on a point
I was going to comment on.

MR. GODDARD: Pardon?

JUDGE BRENNER: You've hit on a point that I was going to comment on, but finish your sentence.

MR. GODDARD: For instance, the dates which the staff presented in -- on page 4 of its filing included the status of all technical reviews which essentially involve the same persons.

The TDI owners' group DRK Report on Shoreham which is indicated here as received June 30th was not in fact received until the 3rd of July, and a number of our staff and consultants have not yet received --

JUDGE BRENNER: Let me try to get to the bottom line because it is late. What did you mean in your schedule by "preparation of testimony"? Did you mean filing?

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MR. GODDARD: Well, we meant filing on the 15th.

JUDGE BRENNER: We have found, based on our substantive rulings so far, before we got to the schedule, that it wasn't necessary to wait for reviews of things unrelated to the issues we have admitted.

The issues we've admitted are ascertainable and we've identified them and we think at this late stage it's reasonable to require the filings essentially on the time frame we've requested without waiting for particular events in the staff review to key after.

In the first place, we didn't think we'd have to wait for the reasons we gave. Secondly, that becomes a very slippery game, as we've discovered in this proceeding, because if we make an assumption we have to wait for an evaluation.

There's no reason to believe that the staff schedule's going to hold. Now maybe it will and maybe it won't, and we've seen instances of the latter more than the former.

And I'm not going to lose control of scheduling the hearing in that matter when the staff's overall evaluation is not relevant to it. There may be some issues within the evaluation that are relevant, and now with our schedule the staff's going to have to change its priorities, hopefully only slightly, and

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focus on getting testimony ready on those issues, especially since we're not talking about a lot of issues.

So we're not going to worry about the fact that the SER may or may not be out because it doesn't matter. The staff can focus its priorities on the items that we have in controversy here.

MR. GODDARD: Judge Brenner, the staff did not mean to imply that this hearing schedule had to be governed by the SER.

JUDGE BRENNER: Well, I don't want to belabor it; I just wanted to give you what our concern was. But in terms of some minor adjustment, we'll talk about that among ourselves in a moment.

Not an adjustment in the hearing date beyond maybe a day, given the Labor Day situation, but adjustments in the sequence. Did LILCO want to comment -- Staff, did you want to comment on the county's request for an opportunity for rebuttal testimony?

MR. GODDARD: The Staff has no problem with that proposal.

JUDGE BRENNER: LILCO, do you want to comment on the county and the Staff's views?

MR. EARLEY: Judge Brenner, with respect to the Staff's proposal, assuming that the hearing date --

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hearing starts around September 4th or 5th, as you were discussing, we have no objection to the Staff's proposal.

With respect to the county's rebuttal proposal, we believe that the precedent set in the proceeding of requiring some showing of need for rebuttal testimony has worked well in this proceeding in the past.

We think that county, if they're going to file rebuttal testimony, ought to make some showing that the rebuttal is in fact necessary, but we don't object to their suggestion of filing a written testimony on a certain date, assuming it's made that showing.

JUDGE BRENNER: All right, and the Staff's proposal that you didn't object to would be the receipt of the Staff's testimony on August 27th?

MR. EARLEY: Yes, Judge.

JUDGE BRENNER: Did I understand that correctly? My preliminary view is that's very close to the beginning of the hearing and it's difficult to get testimony in that close, unless you assume it isn't very important, and I don't want to make that assumption.

It may be important and it may be complex and it may take some evaluation time by us, if not the parties.

MR. EARLEY: Judge Brenner, I was basing our

comments on the experience we've had in the past, that the LILCO witnesses go first, followed by the county witnesses with the Staff witnesses coming on last.

The Staff witnesses won't be supporting that testimony for several days or so after we actually start the hearing, depending on how long it takes to go through the other issues and whether we're going to go issue by issue.

JUDGE BRENNEF: All right. That's another item I'll get to at the end. Give us a moment.

MR. DYNNER: Judge Brenner --

JUDGE BRENNER: Yes?

MR. DYNNER: -- the county would object to -JUDGE BRENNER: It's 7:15.

MR. DYNNER: The county would object to the -not having an adequate time to review the Staff's
testimony. We're going to start cross examining
bILCO's witnesses. We'd like to have an opportunity
before we start the hearing to absorb what the Staff
is going to say, and we'd like to request that the
regulations that provide for 15 days be adhered to in
this respect.

JUDGE BRENNER: All right. The following accommodations which we hope will assist some of the quasi-substantive logistics and also possible hardship

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for people logistics. We'll start on September 5th.
We candidly did forget about the possibility of
California assistance support under witnesses.

We'll set a precise time once we make the arrangements, but it will be 10:30 approximately, perhaps a little earlier or a little later, depending on the plane schedules, so that those parties on the East Coast who can get morning planes will still have the opportunity to do that.

with respect to the Staff's request to file testimony after the county, we'll grant it in part, and we agree with the county's comment that they should have time before the hearing starts.

It's true, as LILCO's pointed out, that the Staff witnesses will not be up first, but nevertheless, counsel become busy with respect to other matters in the hearing and it is important, where feasible, to get testimony before the hearing starts, even though the complete analyses might not take place at that time.

So we'll give the Staff an additional weck, until August 21st for the receipt of its testimony. The earlier dates would remain the same, July 31st for the county and any state testimony, and we'll rely on the county to pass these dates on to Mr. Palomino or other counsel for New York, if that's no problem,

Mr. Dynner.

MR. DYNNER: No, sir.

JUDGE BRENNER: All right. August 14th for receipt of the LILCO testimony. August 21st for receipt of the Staff testimony. Now, any motions to strike and answers to motions to strike will follow the following pattern, and you can plug in the dates yourself.

One week after the receipt of the testimony and motions to strike that testimony have to be received. I should make it one week after the ordered received date, so if you receive it late on the night of the day before, don't worry about it.

It's one week after the received dates that we have ordered the motions to strike will have to be received. And then two weeks after the received dates -- why don't we make it one week after the receipt of any motions to strike, answers to those motions to strike would have to be received.

I think if you play that schedule out, you'll find that if there are indeed any motions to strike the Staff's testimony, which would be the last ones, the answers thereto would be received the day before the hearing begins.

With respect to the county's point on

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rebuttal testimony, we'll allow the county to file a written rebuttal on a received date of August 24th, as requested by the county.

However, we do want a showing that it is important in the sense that it would materially add to the record. That is, that it is not cumulative. You don't have to show that it's the world's most earth-shattering evidence, but you have to show that it's not cumulative and genuinely is rebuttal to the LILCO testimony.

And you can show that at the same time as the testimony as filed, if any, in a cover motion and tie it to something less specific by reference to the testimony which is rebuttal so it cannot be used as a vehicle for the filing of testimony that should have been filed initially.

And we agree with the county's comments that if it really has something in that category, it may be helpful and efficient to get it in writing. Notwithstanding that, if you find when you get to the hearing there is some brief point of rebuttal that you want to put on, we will continue to be flexible in that sense, as we have in the past.

We also recognize that the August 24th date is very close to the date of the filing of the Staff's

testimony. We're not going to set a separate date for written rebuttal to the Staff's testimony. To the extent that there's something that you can include in the August 24th rebuttal, if any, that rebutts the Staff's testimony, we encourage you to try to do so.

To the extent you can't, the additional flexibility that we said we'd have at the hearing should serve as a vehicle for getting that in through the county's witnesses.

And if there are still problems, we can deal with it at the hearing. And the sequence would be LILCO testifying first. Then the county, then the state, if it has any testimony, and then the Staff.

Now, in terms of whether it's issue by issue or party by party, we generally prefer issue-by-issue testimony. However, to balance -- the idea is so we don't forget the facts too far in time in order to get back to the same subject by another witness for another party.

I don't, however, want to hinder the parties'
preparation of testimony if the organization of such
would not lend itself to that division. Is -- our
hope -- well, we'll require the parties to discuss it
and to try to agree on whether it's going to be issue
by issue or party by party, hopefully before the county

files its testimony since that knowledge should be applied to the organization of the testimony.

It would be our hope, and we presume the parties' desire that if it's feasible and does not present a burden in the presentation of the evidence that any party thinks it needs to put on for the benefit of its case that the testimony could be divided issue by issue for the most part, if not totally, and we could proceed that way.

But if the logistics in the parties' view militate doing it differently -- perhaps two issues that should be put together -- perhaps all of them that should be put together -- we're probably going to be willing to accede to whatever agreement the parties might come up with on that score. If there's nothing else, we're prepared to adjourn at this point.

As always, we do thank you for your time here, and --

MR. EARLEY: Judge Brenner --

JUDGE BRENNER: Yes?

MR. EARLEY: -- you mentioned the cross examination plan date.

JUDGE BRENNER: Thank you. August 28th would be the date for receipt of cross examination plans of all testimony except the Staff's testimony. The

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preferred date -- let me put it that way -- for receipt of cross examination plans of the Staff's testimony would be September 4th.

If you cannot make that, you don't need to file any request for extension. Give it to us at the hearing -- beginning of the hearing on the 5th. I did want to say that when we're in the midst of discussing these filings and in some of our rulings denying issues we have been in obvious disagreement of the county's view, pointed out failures that we saw on the part of having a -- meeting the requirements that we believe we set forth clearly enough to be reasonably understood on February 22nd.

And in the course of doing that the full balance picture does not come through because when we have admitted contentions, we have not belabored the reasons quite in that detail, but obviously by our rulings we have found that the county has issues which should be heard on the merits on potentially significant problems with respect to these diesels and we're going to intend to be very vigorous with respect to the quality and level of proof on those issues and it's LILCO that has the burden of proof.

And we don't want to have to back up and have any problems similar to what we had with -- seems like

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a long, long time ago at the beginning of the hearing on the quality of the evidentiary support. That goes for all parties.

it assisted us in understanding the county's issues as put forward now in some regard -- we have compared the county's filing in January with this filing and we think the county has made a good faith effort to utilize the discovery time which we gave it, including two extensions, to better focus in on the issues which the county believed was important for it to spend its resources on.

And as I said, in going through the rulings seriatum (phonotic) and denying some issues, we didn't want the county or anyone else to believe that aspect of the county's preparation and use of its discovery escaped us.

It did not and we appreciate that, and in that sense we think the discovery time which the county back in February said it needed and which we granted it and then extended somewhat on two occasions was well spent.

And so we did appreciate that, Mr. Dynner.

All right --

MR. EARLEY: Judge Brenner, if I may, one other thing. I see I have to return quickly or not at all.

JUDGE BRENNER: Go ahead.

MR. EARLEY: Have to beat me. I'd like to renew a request that LILCO made at the end of the February 22nd conference, and that's a request for calculations performed by the county's consultants.

We understand from the conference -- from
the discussion today that there are such calculations
and we have not received them. I believe on February
22nd the Board ruled that they wouldn't force turning
over preliminary work and we abided by that, but now
I think it would be very helpful to get those calculations
so that -- so that we can start to prepare.

JUDGE BRENNER: I do recall that discussion in February. I'm sure you do, too, and you did allude to calculations today as the bases for some of the contentions we did admit. Obviously, those are the only ones we'd be talking about.

MR. DYNNER: Yes, I'll have to check,

Judge Brenner, and we'll -- as soon as we can get the

calculations, we'll get them to LILCO and the Staff.

JUDGE BRENNER: All right. Can you do it in a week?

MR. DYNNER: I 'slieve so.

JUDGE BRENNER: All right, why don't we make it a week from today. Obviously, to the extent the

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county thinks some of them are important, that LILCO will also have the benefit of seeing that in the testimony, but nevertheless, Mr. Earley is correct that it would be part of that continuing requirement which we discussed in February to get the calculations in in a week now.

I didn't spell out in detail all the procedures we've gone through in the past in this hearing. We do expect the parties to adhere to it, and I guess I hoped -- hopefully to be redundant, hopefully my hope is correct.

The parties know the simple basic procedural requirements. If you're going to be using references in the testimony, relying on things, the crafting of the testimony should be such that the references are made explicit in the testimony.

And to the extent they're not publicly available, should be made available to the other parties at the time the testimony is being produced and/or as soon thereafter as feasible.

If you think another party has it and the other party says they do not, where it is not voluminous or expensive, certainly the parties out of courtesy and cooperation can make the copies directly available with the testimony.

Where it is somewhat more voluminous, a

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nice convenient place for inspection and possible copying of excerpts can and should be made available. We're dealing with sophisticated parties here with ample resources to accomplish those types of things.

I just haven't belabored it. Similarly, where items are going to be relied on in cross examination, as in the past, where it would not in the cross examiner's view be unfair surprise to the other party, those other parties informally should be told of what documents or reports will be relied upon in the cross examination so counsel and the witnesses can have copies ready and be somewhat familiar with them and so on.

I didn't think it necessary to go through all that, and this brief reminder does not go through it and I just don't expect problems in regard to situations like that to arise at the hearing.

All right, we appreciate the time spent in this long day by the parties, just one day after the 4th of July, which we hope was more pleasant for all of you than today probably was, and we will adjourn at this point and see you all somewhere on Long Island on September 5th.

END OF MEETING

CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the

In the matter of: SHOREHAM NUCLEAR POWER STATION Date of Proceeding: Thursday, July 5, 1984

Place of Proceeding: BETHESDA, MD.

were held as herein appears, and that this is the original transcript for the file of the Commission.

> To Berry Official Reporter - Typed

Official Reporter - Signature