

Sept. 26, 1984

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1 WRBeb 1 JUDGE BRENNER: Back on the record.

2 Professor Sarsten or Mr. Henriksen, looking at
3 the table which we have identified as the first page of the
4 proposed Staff Exhibit 7, which is actually page 6 from a
5 larger document, could you tell us which engines those
6 numbers 1 through 7 represent, and also tell us, after you
7 do that, how you know that?

8 Let's go down the list. Let's do it on the
9 record.

10 WITNESS HENRIKSEN: From the table as I have it
11 in my exhibits I could not. I would have to refer to
12 another page.

13 JUDGE BRENNER: Fine. I did not mean to restrict
14 you to the table. Just from your knowledge tell us.

15 WITNESS HENRIKSEN: Yes. By referring to another
16 page I can tell.

17 JUDGE BRENNER: All right. Can you do that on
18 the record now, please?

19 WITNESS HENRIKSEN: The engines are, Number 1,
20 Transamerica Delaval R-4; Number 2, GMT-420; Number 3,
21 MAN-40/45; Number 4, Mirrlees "K" Major; Number 5, Pielstick
22 PC-2; Number 6,--

23 JUDGE BRENNER: Give me a moment, since we have
24 to take the time now, and I have to mark up my own exhibits.

25 Mirrlees is M-i-r-r- --

1 WRBeb

1 JUDGE BRENNER: Wait a minute. You can't do that
2 as Counsel.

3 MR. GODDARD: This was part of the markup that
4 you originally asked for, Judge Brenner.

5 JUDGE BRENNER: I never asked for that. I never
6 saw that language on the table. If you have anything else
7 to do with these exhibits by modification, you will have to
8 ask your witnesses, who are under oath, to supply that.

9 Go ahead and ask them, and I will hold off
10 admitting it into evidence until we know. Now, in addition
11 to having to mark up the engine names, you want me to add
12 whole sentences to the exhibit.

13 Go ahead. You cannot testify to-- Ask the
14 witnesses what you think you need to ask them to obtain any
15 clarifications or explanations of the table. And if you get
16 the answers you expect, we can probably accommodate you by
17 accepting the marked-up copy.

18 BY MR. GODDARD:

19 Q Mr. Henriksen, were there any other additions to
20 these tables which were originally taken from the Telex
21 which you received from Ricardo?

22 A (Witness Henriksen) Yes.

23 Q Will you state the addition to this table?

24 A It is under heading B:

25 "All data in table on page 6 can be

1 WRBeb 1 It has been distributed but it doesn't have a number on it.
2 It is Staff Exhibit Number 7?

3 JUDGE BRENNER: Yes.

4 It is not your fault the copy given to you by the
5 Staff doesn't have a number on it.

6 Go ahead.

7 BY MR. DYNNER:

8 Q Now can you tell me, gentlemen, this information
9 on this Staff Exhibit 7 was obtained, I think you said
10 earlier in your testimony, from Ricardo Consulting
11 Engineers. Is the information on this first sheet, a table
12 of numbers, true and correct in every respect?

13 A (Witness Henriksen) I don't know that.

14 Q Did you ask Ricardo to substantiate or verify in
15 any way the data that appears on this table after you
16 received the table?

17 A This may have been done by PNL.

18 Q Do you know whether it was done, sir?

19 A I do not know that.

20 Q Now at the bottom of this table there are two
21 sentences. One says:

22 "All data in table on page 6...."

23 I suppose it means this table.

24 "....can be taken from published data and
25 measurements."

1 WRBpp 1 to specify this over the projected piston area.

2 Q Now, Professor Sarsten, do you know --

3 Did you want to add something?

4 A (Witness Henriksen) I think LILCO's figure at
5 around 90 was based on using the diameter for the projected
6 area.

7 Q But you remember those two figures, about 80 and
8 about 123, right?

9 A (Witness Sarsten) Roughly.

10 Q Now, do you know what the side thrust in pounds
11 per square inch for the Mirrlees "K" major, that's the
12 engine that's number 4 on your list here?

13 A No, I do not know what that is.

14 Q Now, in comparing the engines on this list, in
15 terms of side thrust, what would you consider to be a
16 significant difference?

17 A As we are not speaking of anything that is
18 critical and, based upon calculations using the same rules
19 for determining area and so on, I would say a significant
20 difference here would be a 50 to 60 percent difference.

21 Q A 50 percent difference?

22 A A 50 to 60 percent difference, I said.

23 Q So, do I understand your testimony now that, on
24 the basis of your review of this data, on Staff's Diesel
25 Exhibit 7, that you would not expect to find the side

1 WRBagb 1 and answered.

2 MR. GODDARD: Very well. The Staff has no
3 further questions.

4 JUDGE MORRIS: In view of the time I think the
5 Board will ask a few questions and probably not get to LILCO
6 today.

7 MR. ELLIS: Thank you, Judge Morris. I have an
8 airline reservation I would rather not change. Thank you.

9 EXAMINATION BY THE BOARD

10 BY JUDGE MORRIS:

11 Q Mr. Henriksen, with respect to the tin coating on
12 the cylinder, there was some discussion in prior sessions of
13 making measurement to assure that the coating was not too
14 thick.

15 Is your opinion today that such measurements
16 prior to operation of those piston skirts is not necessary?

17 A (Witness Henriksen) No. They should not be
18 necessary.

19 We had a long dissertation by Dr. Swanger how
20 to control it. If this is the procedure used, I am
21 satisfied with the tin coating.

22 Q Professor Sarsten, do you agree?

23 A (Witness Sarsten) Yes, I was satisfied with that
24 explanation.

25 Q Mr. Henriksen, with respect to the scuffing, am I