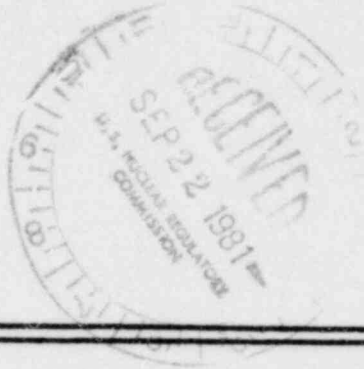


NUCLEAR REGULATORY COMMISSION



ORIGINAL

In the Matter of:

HOUSTON LIGHTING & POWER COMPANY )

Allens Creek Nuclear Generating )  
Station, Unit 1 )

) DOCKET NO. 50-466 CP

DATE: September 15, 1981

PAGES: 16646 thru 16891

AT: Houston, Texas

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UNITED STATES OF AMERICA

BEFORE THE  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
HOUSTON LIGHTING & POWER )  
COMPANY ) Docket No. 50-466 CP  
 )  
Allens Creek Nuclear Generating )  
Station, Unit 1 )

Capricorn Room  
Ramada Inn  
7787 Katy Freeway  
Houston, Texas

Tuesday,  
September 15, 1981

PURSUANT TO ADJOURNMENT, the above-entitled  
matter came on for further hearing at 9:00 a.m.

APPEARANCES:

Board Members:

SHELDON J. WOLFE, Esq., Chairman  
Administrative Judge  
Atomic Safety and Licensing Board Panel  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

GUSTAVE A. LINENBERGER  
Administrative Judge  
Atomic Safety and Licensing Board Panel  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

DR. E. LEONARD CHEATUM  
Administrative Judge  
Route 3, Box 350A  
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1 APPEARANCES: (continued)

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I N D E X

		VOIR		BOARD
<u>WITNESSES</u>	<u>DIRECT</u>	<u>DIRE</u>	<u>CROSS</u>	<u>REDIRECT</u>
			<u>RECROSS</u>	<u>EXAM.</u>
1	WILLIAM F. MERCURIO			
2	(Resumed)			
3	By Judge Linenberger			16,650
4	By Mr. Culp	16,652		
5	By Mr. Doherty		16,655	
6	By Mr. Doherty		16,657	
7	By Judge Cheatum			16,671
8	By Judge Linenberger			16,672
9	JEROME R. PEARRING			
10	By Mr. Dewey	16,688		
11	By Mr. Doherty		16,689	
12	By Mr. Doherty		16,693	
13	By Judge Linenberger			16,701
14	HOLLIS R. DEAN			
15	By Mr. Rozzell	16,712		
16	By Mr. Baker		16,713	
17	By Mr. Doherty		16,717	
18	By Mr. Black		16,724	
19	By Mr. Baker		16,741	
20	By Mr. Doherty		16,820	
21	By Mr. Rozzell		16,856	
22	By Judge Cheatum			16,860
23	By Judge Linenberger			16,865
24	By Judge Cheatum			16,878
25	By Judge Linenberger			16,880
	By Mr. Baker		16,882	
	By Mr. Doherty		16,888	
	By Mr. Rozzell		16,889	

P R O C E E D I N G S

9:00 a.m.

1  
2  
3 JUDGE WOLFE: All right. The hearing is in  
4 session.

5 In attendance this morning are Messrs. Copeland  
6 and Culp representing Applicant; Messrs. Black and Dewey  
7 representing the Staff; and Mr. Doherty. Mr. Scott is  
8 not present.

9 MR. DOHERTY: I fully expect him today. I  
10 talked to him after the ... you know --

11 JUDGE WOLFE: We had been with the cross-  
12 examination by -- or we had recessed the hearing last  
13 night as Mr. Scott was proceeding with cross-examination  
14 of Mr. Mercurio. He's not here.

15 We will now proceed with any redirect by Mr.  
16 Culp.

17 MR. CULP: I have no redirect.

18 JUDGE WOLFE: Are there Board questions?  
19 Whereupon,

20 WILLIAM F. MERCURIO

21 the witness on the stand at the time of adjournment,  
22 resumed the stand and, having been previously duly  
23 sworn, was examined and testified further as follows:

24 JUDGE LINENBERGER: Only one question, Mr.  
25 Mercurio, I think.

## BOARD EXAMINATION

1 BY JUDGE LINENBERGER:

2 Q Will the causeway that we were discussing  
3 yesterday afternoon be a -- will there be any measures  
4 taken to stabilize it; and if so, what?

5 A Yes, the causeway will be constructed of com-  
6 pacted clay and sand materials, which will be quality  
7 controlled to the best possible standards, using ASTM  
8 testing procedures.

9 The outside of the slope will be protected from  
10 waves and winds by soil cement.

11 Q What about the top of it, which I gather might  
12 perhaps have a roadbed of some sort on it?

13 A Yes. I don't recall the -- It's probably  
14 going to -- The roads are asphalt down there. I would  
15 guess it would be an asphalt roadbed, but I don't recall  
16 exactly. If it's not asphalt, the top will certainly have  
17 a layer of soil cement.

18 It's possible that that provides the roadbed.  
19 I don't recall whether we've put an additional layer of  
20 asphalt on that or not.

21 Q And what is soil cement?

22 A Soil cement is a mixture of sand and portland  
23 cement, water mixed together, when compacted it provides  
24 an extremely strong material, resistant to erosion and  
25 outside weather so that the slopes will not weather in

1 any size, shape or fashion.

2 Q Is it something that's poured the way one con-  
3 ventionally pours concrete or --

4 A No, it's placed in the manner in which one places  
5 soil, mixed in a pug mill or kind of a batch plant,  
6 carefully spread in layers. Everything, again, is con-  
7 trolled and tested according to ASTM standards, placed in  
8 layers, nine inches (if I recall correctly) and compacted  
9 by means of different -- either rubber -- the final com-  
10 paction would be a rubber-tired roller compacted to 95  
11 percent of standard property value, I believe.

12 JUDGE LINENBERGER: Okay, that's all I have.

13 JUDGE WOLFE: Is there cross on Board questioning,  
14 Mr. Dewey?

15 MR. DEWEY: Staff has no cross-examination,  
16 Your Honor.

17 JUDGE WOLFE: Mr. Doherty?

18 MR. DOHERTY: No questions, Your Honor.

19 JUDGE WOLFE: Any redirect?

20 MR. CULP: No, sir.

21 JUDGE WOLFE: Is the witness to be excused?

22 MR. CULP: Mr. Chairman, Mr. Mercurio has a  
23 short piece of testimony responding to a Board question  
24 of soil mechanics. And although the schedule that we  
25 filed has a Staff witness on blockage of intake canal

1 scheduled next, we were wondering if it would be okay to  
2 take Mr. Mercurio now on that Board question before the  
3 Staff witness.

4 I have consulted with Mr. Black, and he has no  
5 problems with doing that.

6 JUDGE WOLFE: Any objection?

7 MR. DOHERTY: No, sir.

8 JUDGE WOLFE: All right. We'll proceed to hear  
9 Mr. Mercurio testify on the Board question on soil mechanics.

10 FURTHER DIRECT EXAMINATION

11 BY MR. CULP:

12 Q Mr. Mercurio, do you have before you a document  
13 entitled "Testimony of William F. Mercurio on Behalf of  
14 Houston Lighting & Power Company on Board Question 8  
15 Relating to ACNGS Reactor Building Subsurface Soil  
16 Mechanics"?

17 A Yes, I do.

18 Q Does that document consist of four pages?

19 A Yes.

20 Q And does the document state that a statement of  
21 your professional qualifications is attached to your  
22 testimony on Bishop Contentions 5, 7, 9 and 10?

23 A Yes.

24 Q Did you prepare this testimony?

25 A Yes, I did.



1-5  
1 Q Do you have any corrections or additions to  
2 make to it?

3 A. None.

4 Q Is the testimony true and correct, to the best  
5 of your knowledge and belief?

6 A. Yes, it is.

7 Q Do you adopt this as your testimony in this pro-  
8 ceeding?

9 A. I certainly do.

10 MR. CULP: Mr. Chairman, at this time I move  
11 that the testimony just identified by Mr. Mercurio be  
12 incorporated into the record as if read.

13 JUDGE WOLFE: Any objection?

14 MR. DEWEY: No objections, Your Honor.

15 MR. DOHERTY: I'd like a couple of questions on  
16 voir dire, Your Honor.

17 MR. CULP: Mr. Chairman, could I inquire of Mr.  
18 Doherty if he intends to challenge the qualifications of  
19 this witness on this Board question? Mr. Mercurio has  
20 testified to his qualifications twice in this proceeding.  
21 He's an expert in soil mechanics.

22 And I'm just wondering if Mr. Doherty intends  
23 to challenge the witness' qualifications. And if not,  
24 what is the purpose of voir dire?

25 MR. DOHERTY: Well, the purpose of -- No, I

1 don't think I have to answer that. I think he's attempting  
2 to inflate his witness a little further. I think I have a  
3 right to voir dire the witness, regardless of what he  
4 has been on before.

5 He hasn't talked about this before, so I don't  
6 think I have to -- I don't see why I have to answer that.  
7 I think I have a right to ask him questions on voir dire,  
8 and he has the right to object if he doesn't think the  
9 questions are appropriate, and can object as asked and  
10 answered if they were asked previously.

11 He's suitably protected. I don't think --

12 JUDGE WOLFE: Well, the point is, Mr. Doherty,  
13 that Mr. Mercurio's qualifications have been subject to  
14 rather exhaustive cross-examination.

15 Are you ed going to ask these several  
16 questions, once again, attempting to challenge his com-  
17 petence? I take it your answer is yes.

18 MR. DOHERTY: Yes. It has to be.

19 JUDGE WOLFE: All right. I would suggest to all  
20 parties that voir dire is a very important procedure. All  
21 parties should recognize, however, that it's a technique  
22 not to be employed at all times. There are times when an  
23 expert's qualifications are such that it's a useless exer-  
24 cise.

25 This is not directed to you, Mr. Doherty, but to

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1 all parties. So you just have to make up your mind whether  
2 his written qualifications are so substantial that there's  
3 no point in challenging them on voir dire.

4 All right, Mr. Doherty.

5 MR. DOHERTY: Well, I am a party, and I have  
6 done that. I mean, I feel included by what you've said.

7 JUDGE WOLFE: Yes, it's a direction to all  
8 parties, but not direction to you specifically or ex-  
9 clusively.

10 All right.

11 MR. DOHERTY: It's sort of ironic that he has  
12 brought this up. I only had one question anyway.

13 VOIR DIRE

14 BY MR. DOHERTY:

15 Q Did you write this testimony?

16 A Yes.

17 MR. DOHERTY: That's all I had in mind. Thank  
18 you. No further questions.

19 JUDGE WOLFE: Any objection -- Mr. Baker has  
20 just appeared, it now being 9:11 in the morning. We're  
21 proceeding to hear the direct testimony of Mr. Mercurio.  
22 Are you here to cross-examine Mr. Mercurio?

23 MR. BAKER: No, sir.

24 JUDGE WOLFE: All right.

25 If there are no objections then, the testimony

of Mr. Mercurio responding to Board Question 8 is incorporated into the record as if read.

(See attached pages.)

- - -

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of	)	
	)	
HOUSTON LIGHTING & POWER COMPANY	)	Docket No. 50-466
	)	
(Allens Creek Nuclear Generating	)	
Station, Unit No. 1)	)	
	)	

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TESTIMONY OF WILLIAM F. MERCURIO ON BEHALF OF  
HOUSTON LIGHTING & POWER COMPANY ON BOARD QUESTION  
8 RELATING TO ACNGS REACTOR BUILDING SUBSURFACE  
SOIL MECHANICS

Q. Mr. Mercurio, please state your name and business address and describe your educational and professional experience.

A. My name is William F. Mercurio, and my business address is Ebascc Services, Inc., 2 World Trade Center, New York, N.Y. I have previously discussed by position and background in connection with my testimony on Bishop Contentions 5, 7, 9 and 10.

A. The purpose of this testimony is to address Board Question 8 which requests evidence regarding the ability of subsurface soil to support the ACNGS reactor building. Soil mechanics rather than subsidence is of concern here with respect to avoiding unacceptable settling of heavy structures.

1  
2  
3 Q. What types of analyses verify the settling  
4 characteristics of soil with respect to soil mechanics?

5 A. Static settlement analyses are used to estimate  
6 the anticipated relative vertical displacements of  
7 structures supported by soil. Soil mechanic theoretical  
8 calculations coupled with actual soil property test  
9 data verify the soil settling characteristics.

10 Q. Would you briefly describe how the underlying  
11 materials at the ACNGS site were observed?

12 A. Geophysical surveys and borings were used to  
13 obtain field data for the development of subsurface  
14 cross-sections. The locations of all borings, geophysical  
15 surveys, observation wells and proposed excavations, as  
16 well as plant structures, are shown on PSAR Figures  
17 2.5.4-5A, 5B and 5C. PSAR Section 2.5.4 provides a  
18 detailed discussion of data collection and observations.

19 Q. Would you describe what information the field  
20 data provided?

21 A. A detailed description of the subsurface  
22 material which was obtained from field exploration was  
23 presented in PSAR Section 2.5.4.3. The basic formations  
24 of the subsurface materials were identified as Beaumont,  
Montgomery, Goliad, and Fleming formation. The undisturbed



1 samples extracted from these formations were subjected  
2 to laboratory static and dynamic tests to investigate  
3 their strength characteristics, compressibility under  
4 heavy load and dynamic properties. The results of the  
5 laboratory tests, along with engineering interpretations,  
6 were presented in PSAR Section 2.5.6 and indicate high  
7 shear strengths and low compressibility. This data  
8 confirms that ACNGS is founded on soils which are more  
9 than capable of sustaining the loads to be imposed.

10 Q. Please describe the basic subsurface soil  
11 characteristics and analyses performed for the reactor  
12 building foundation.

13 A. The Reactor building mat foundation will rest  
14 on the Montgomery formation of predominately very dense  
15 and highly compact granular sand material with occasional  
16 overconsolidated clay layers appearing at the lower  
17 portion of the formation.

18 The mat foundation is to be placed on the  
19 very dense and highly compact Montgomery sand formation  
20 around elevation 104, which is about 28 feet below  
21 established plant grade. The maximum allowable bearing  
22 pressure for the reactor mat foundation design is 10  
23 kips per square foot (ksf) under the static loading  
24 conditions. The mat foundation has a safety factor

1  
2 greater than 20. Normally a safety factor of 1.5 is  
3 considered acceptable. A discussion of the method used  
4 and the design parameters for the analysis have been  
5 presented in PSAR Section 2.5.4.10.1.

6 Most of the settlement resulting from the consolida-  
7 tion of the granular material under loads will take  
8 place during the construction of the reactor building.  
9 Based upon consolidation test results and the effective  
10 imposed building load, the total settlement was calculated  
11 to be on the order of one (1) inch or less.

12 Q. What are your conclusions concerning this  
13 Board Question?

14 A. The Applicant has evaluated the subsurface  
15 soil conditions. On the basis of detailed test borings,  
16 geophysical exploration and extensive laboratory testing  
17 programs in conjunction with the structural requirements  
18 imposed by the buildings, the reactor building may be  
19 safely constructed on an earth-supported, reinforced  
20 concrete mat foundation.  
21  
22  
23  
24

1 MR. CULP: The witness is available for cross-  
2 examination, Mr. Chairman.

3 JUDGE WOLFE: All right. Mr. Dewey?

4 MR. DEWEY: Staff has no cross-examination.

5 JUDGE WOLFE: Mr. Doherty.

6 CROSS-EXAMINATION

7 BY MR. DOHERTY:

8 Q. Would you describe a static settlement analysis  
9 which you mention on Page 2? What was that?

10 A. Okay. Somewhat similar to the testimony I pro-  
11 vided yesterday, we investigate the site, both by walking  
12 over it, taking a look at it, taking soil samples from  
13 the ground either through the test borings or by test fit  
14 procedure.

15 Again, those samples are taken to the laboratory,  
16 and we can run one-dimensional consolidation tests on  
17 them. That confines it in the lateral direction and al-  
18 lows the sample to move in a vertical direction.

19 So by applying various loads and knowing cor-  
20 relations between the laboratory condition and the field  
21 condition, we can calculate the total movement of the soil  
22 under the loading.

23 So we get the laboratory sample, and from that  
24 then we can take the loading of any building, tank ...  
25 whatever it is that we're interested in -- and we can

1 calculate the settlement. That was done, according to  
2 regular procedures, for the Allens Creek plant.

3 Q You say you correlate lab conditions with field  
4 conditions. What does that -- You take some histories  
5 of buildings or some types of measurements that indicated  
6 a certain amount of compaction occurred, and compare it  
7 with -- kind of miniaturize it in the lab?

8 A Well, it is kind of miniaturized in the lab, and  
9 that's more or less the correlation, taking it from the  
10 lab and trying to make it for the big building site. We're  
11 only testing a small sample as we identified yesterday,  
12 although we do take the samples with depth and with  
13 lateral extent beneath any particular building.

14 But you develop a curve that one must then apply  
15 some amount of expertise in interpreting and reading off  
16 the values.

17 Q These tests have been done then; is that right?  
18 These tests have been done already?

19 A Oh, yes.

20 Q And you did them?

21 A They were done at the testing laboratory that  
22 was hired by Houston Lighting & Power.

23 Q Who were they?

24 A That was Dames and Moore, Houston, Texas.

25 Q How do you determine how far apart to take these

1 borings?

2 A. There are standard rules of thumb. Even the  
3 Staff has a Reg Guide that has some suggestions in it.  
4 I don't recall the number offhand of that Reg Guide.

5 But aside from that, virtually every soils text-  
6 book that you have has some rules of thumb for determining  
7 the depths and lateral extent of the borings.

8 But more important than that is your own personal  
9 experience, working over a number of years in different  
10 kinds of material. One would space the borings at dif-  
11 ferent extents.

12 For a nuclear power plant though, the borings are  
13 rather closely spaced and rather deep. It's one of the  
14 most -- in fact, it has helped to advance the state of the  
15 art, because of the extensiveness of the investigations  
16 and techniques employed by the nuclear power plant  
17 industry.

18 Q. Would 15 or 20 feet apart be about average?

19 A. That would be too close. For a nuclear power  
20 plant, they could be anywhere from -- if you were concerned  
21 about some soft zones, they could be 50 feet apart, to  
22 as much as 500 feet apart.

23 Q. Are there any soft zones around -- located --

24 A. Not on this site.

25 Q. None. Does the site at this moment require any

1 compaction to provide assurance against the building set-  
2 tling at this time, to your knowledge?

3 A. No.

4 Q. Were you able to look at any heavy structures  
5 on the Montgomery formation?

6 A. Yes, we specifically looked at heavy structures  
7 since the containment building and many of the other --  
8 I call them plant island buildings, those buildings  
9 immediately around the containment -- will be founded on  
10 the Montgomery formation.

11 Q. So you've found some structures that did exist,  
12 or were you kind of like -- Is this going to be the first  
13 really heavy structure on the Montgomery formation?

14 A. Oh, I thought your question was with regard to  
15 did we investigate something on the Montgomery formation.  
16 I'm sure there are other structures on the Montgomery  
17 formation elsewhere in that area of Texas. I did not in-  
18 vestigate them, no.

19 Q. Now, I think you described the containment and  
20 the mat bit. Does the weight of the containment shell  
21 sit -- Is that weight distributed to the mat, and then  
22 that weight rests on the earth, or does the shell sit  
23 on the earth and the mat sort of sits inside the shell  
24 on the earth?

25 A. No, the weight from the shell and any components



1 inside the shell is distributed evenly through the mat,  
2 and then from the mat to the subsoils.

3 Q Now, you describe a group of tests on Page 3, labo-  
4 ratory static and dynamic tests. I have a little trouble  
5 understanding what that would be like.

6 You described earlier some vertical -- I'd call  
7 them pressure tests as a layman -- but these don't sound  
8 like that. What are these like?

9 A Some of these tests are those same pressure  
10 tests, and that's a reasonable term to use. The dynamic  
11 test would consist of, again, a small soil sample. This  
12 time it would be put in a triaxial chamber, and we would  
13 subject a sample to dynamic movements.

14 And then from that, again, we take the readings  
15 on the sample and we can see how the subsoils would  
16 settle with regard to the effects of an earthquake, or  
17 even vibrations of equipment.

18 Q And a static test sounds like you just set the  
19 sample there and look at it?

20 A Well, it's more than that because we incre-  
21 mentally load the sample. We start off -- We take the  
22 sample from the ground. It's very carefully handled,  
23 carefully trimmed and set up in the laboratory, in what  
24 we call a consolidometer, which is nothing more than a  
25 brass ring that contains a sample in the lateral direction.

1 We then incrementally apply vertical loads on  
2 that, starting from loads as small as an eighth -- it  
3 could be smaller than that, if soils were softer. But I  
4 believe on this site, we probably started off with an  
5 eighth of a ton per square foot.

6 And the standard procedure has you doubling  
7 that load every increment. So we then go to a quarter,  
8 a half, one ton per square foot.

9 We then unload the sample, put a cycle on it,  
10 so we can see the effect of disturbance on the sample, if  
11 any; and then we reload the sample up again. And this  
12 time, I believe these samples may have gone as high as  
13 32 or possibly even 64 tons per square foot, which is  
14 until we can develop a straight line portion of the curve,  
15 that tells us then that we are out of any zones of  
16 disturbance and we have the sample back to its natural  
17 state in the ground.

18 We could then take the slopes of those -- the  
19 lines from the void ratio, log pressure curve, and that's  
20 how we proceed to calculate the settlement.

21 Q. You indicated that, apparently, the samples --  
22 looking at Line 7 on Page 3 -- exhibit low compressibi-  
23 lity. Would that conclusion be arrived at by putting  
24 a high loading in a static test?

25 A. Yes, it would. And then noting that there was

1 very little vertical movement to the sample.

2 Q What is shear strength?

3 A Shear strength is -- That's the strength of  
4 the soil.

5 Q Do you attempt to sort of subject it to an un-  
6 even load to see how it --

7 A We attempt to --

8 Q -- just load it part -- or one area of it,  
9 and leave another part ... is that what you do?

10 A No. We take the soil and we kind of make it  
11 think it's back in the ground again. We put it in what we  
12 call a triaxial chamber. And that chamber can exert  
13 uniform pressure around the sample similar to what it has  
14 seen in the past in the ground.

15 And then we can apply an incremental loading  
16 in the vertical direction to that sample and cause it to  
17 fail and shear. When it fails and shears, we can take  
18 those test results, again plot them on many samples at  
19 different depths, at different lateral distances, and  
20 determine the shear strength ... similar to concrete  
21 shear strength or even steel.

22 Q Okay. You give toward the foot of 3 the maximum  
23 allowable bearing pressure. How is that determined?

24 A By -- We take -- The shear strength of the  
25 soil is used in that calculation. We also use the size of

1 the mat, the depth of embedment of the mat, the unit  
2 weight of the surrounding soil, the shear strength of  
3 the soil (I think I may have mentioned that); and we go  
4 through a standard equation, the Tsogi Bearing Capacity  
5 Equation, applying corrections as may be required, based  
6 on other investigators' works.

7 Q Is the bearing equation given by a regulatory  
8 guide?

9 A Not as far as I know, but it's a well accepted  
10 equation, well documented and used throughout the in-  
11 dustry.

12 Q Does depth of embedment just mean how deep  
13 the cellar is kind of --

14 A Yes. The bottom elevation of the mat.

15 Q So you made that determination -- Ebasco made  
16 that determination?

17 A Yes, I did.

18 Q And is that figure a very -- Would you give me  
19 an idea of how variable that figure is at the site, or is  
20 it a quite consistent figure?

21 A No, it's quite consistent. Soils are fairly  
22 uniform at the site, very dense, stiff where it's clay  
23 material, and very capable of supporting the building.

24 Q You have -- unless I'm mistaken, and I think  
25 I'm right about this -- there is to be a cooling lake,

1 and then there's to be a stream or creek kind of on the  
2 other side of the -- In other words, you could stand  
3 at this plant and look one direction and see the lake,  
4 turn 180° and see the stream.

5 Now, will that stream tend to alter any of the  
6 characteristics of the soil through, say, a 40-year  
7 period, or will that --

8 A. No. The rise and fall of the water table could  
9 affect the calculation of bearing capacity or settlement;  
10 but we took into account the most conservative water levels  
11 that could occur.

12 Q. Now, the water table -- you say that could  
13 alter things? What alterations in the water table would  
14 cause those changes you had in mind?

15 A. A rise or fall in the water level.

16 Q. What would happen if the water table fell?

17 A. We would be safer since we now go to total unit  
18 weights, which is a higher number. It's like when you  
19 get in the bathtub, you weigh slightly less in the bath-  
20 tub than you -- if you'd put a scale underneath yourself,  
21 you'd weigh less.

22 The same effect is true with the soils. So we  
23 then can use, instead of half the weight of the soil,  
24 we can use the full weight of the soil.

25 And the equations that we use then would increase --

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in fact, probably -- it's a linear relation, since it appears in -- It should be a linear relationship.

So if the soil has doubled in unit weight, the bearing capacity would double.

Q Well, then, are you saying that you're taking a less dense material (water) out of the soil; therefore, the soil density increases?

A No.

Q -- and you plug that into an equation? Is that what you're saying?

A The density of the soil is the same, but the effect of density of the soil changes.

- - -



BY MR. DOHERTY:

1 Q And that would be -- So if you change the  
2 effective density of the soil, that goes into an  
3 equation, I think it's --

4 A Yes, it does.

5 Q And that actually brings a more stable appearing  
6 soil?

7 A From the point -- from the equation it does  
8 yes.

9 Q And is it generally -- Do you know of any --  
10 You said "from the equation," and I'm wondering if in  
11 actual experience, this seems to be borne out?

12 A Yes, it does. But I mean whether it's a one-on-  
13 one relationship can be questioned.

14 Q There's a trend then, but not a correlation?

15 A Well, it's more than a trend. I mean we in the  
16 industry would use the number, if it was a dry soil,  
17 we'd use one number. If it's a wet soil, we use another  
18 number.

19 Q So you've used a wet soil number; is that  
20 right?

21 A Yes, which would be the most conservative.

22 Q I see. Okay.

23 Have you ever addressed these problems in any  
24 other type of project in the immediate area?  
25

1 A Oh, yes.

2 Q In Texas?

3 A In Texas. As I mentioned yesterday, I've  
4 worked on almost all of HL&P's plants at one time or  
5 another.

6 Q Were there -- Did you find -- Well, in that  
7 work, that experience that you've had with HL&P's other  
8 plants (we might as well use those, obviously it could  
9 be anything ... any kind of a plant). Were there  
10 problems even though this type of approach was used? Did  
11 problems emerge later on or --

12 A No --

13 MR. CULP: Wait.

14 Your Honor, I'm going to object to any further  
15 questions along these lines. I think we're here to discuss  
16 the soils at Allens Creek and not other plants in Texas.

17 It seems to me that Mr. Doherty's questions are  
18 getting beyond the scope of this witness' testimony.

19 (Bench conference.)

20 JUDGE WOLFE: The objection is overruled. We  
21 think that this sort of testimony is relevant and a help  
22 to the Board in making its decision on the question of  
23 soil mechanics.

24 You may proceed.

25 ///

1 BY MR. DOHERTY:

2 Q Did you answer "no" a minute ago?

3 A Yes.

4 Q Was there anything else you wanted to add to  
5 that?

6 A Just that the soils by far at Allens Creek are  
7 better than any of the other plant sites that HI&P has.

8 Q Well, are any of those sites on the Montgomery  
9 formation, to your knowledge?

10 A Yes. The depth of the Montgomery formation  
11 would be below some of the plants. Generally the upper  
12 soils for most of the other plants are the Beaumont  
13 clays, which is just a thin covering over our site.

14 Q So the other plants have a thicker Beaumont  
15 clay?

16 A Yes.

17 Q -- in your experience?

18 A Either Beaumont clay or recent alluvium  
19 that may have been deposited from stream -- deposits  
20 from streams --

21 Q Okay. Now, you spoke of safety factors at the  
22 bottom here of Page 3. Can you tell me what -- Is that  
23 a ratio of something to something, or what is that?

24 A Okay. That's a ratio of the actual bearing  
25 applied by the weight of the building and any dead or

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live loads to the strength that the soil exhibits.

And in our case we had a safety factor greater than 20, so the soil could support 20 times more load than we're presently putting on it.

Q Did you participate in the original selection of the placement of the plant?

A Yes, I did.

Q In the event of any flooding, would you say there would be any possibility of this situation changing such that the bearing capacity of the earth changed?

A No. We would consider such a thing in the calculations, but the permeability of the soil is such that flooding over any reasonable period of time, the water could not get into the soil to materially affect anything.

It would just barely be seeping in there at such a slow rate that for calculation purposes, we consider a higher water table. But in actuality, it could never exist at this site.

Q I neglected to ask you what the distance of embedment is from the surface of the earth, how far down is the mat into the earth?

A The ground surface, I think, is going to be one -- Grade 142, and the bottom elevation of the reactor mat is Elevation 104.

It's a 38-foot embedment, I believe.

1 MR. DOHERTY: Okay. I don't think I have any  
2 other questions, Your Honor.

3 Thank you very much, Mr. Mercurio.

4 JUDGE WOLFE: Redirect, Mr. Culp?

5 MR. CULP: No, sir.

6 JUDGE WOLFE: Board questions?

7 BOARD EXAMINATION

8 BY JUDGE CHEATUM:

9 Q At the bottom of Page 3, Mr. Mercurio, you  
10 say, "The maximum allowable bearing pressure for the re-  
11 actor mat foundation design is 10 kips per square foot  
12 under the static loading conditions."

13 When you say maximum allowable bearing pres-  
14 sure for the reactor building, is that what you've cal-  
15 culated to be the outside weight that could be supported?

16 I don't quite understand this sentence.

17 A I think what we're trying -- what I tried to  
18 say in that sentence there is that the maximum loading  
19 we see from the building is 10 kips per square foot under  
20 static loading.

21 Q Okay.

22 A Perhaps removing the word "allowable" might make  
23 it better.

24 Q That is what I was wondering about.

25 A Yes. Sometimes reading these -- writing them and

1 reading them over and over, you may leave an extra word  
2 in.

3 Q On page 4 you use the term "effective imposed  
4 building load," just what is the load? Ten kips --

5 A. Ten kips per square foot.

6 Q Okay. I just wondered whether it referred back  
7 to that 10 kips.

8 A. Yes, it does.

9 Q Okay.

10 JUDGE CHEATUM: I have no more questions.

11 BOARD EXAMINATION

12 BY JUDGE LINENBERGER:

13 Q As a matter of curiosity, you indicated that  
14 Dames and Moore did the tests on the bore samples. Were  
15 they also responsible for tests on the samples associated  
16 with the intake canal/causeway structure?

17 A. Yes, they were.

18 Q When you talk about a bore sample being tested  
19 under conditions of lateral confinement, I presume that  
20 that sort of test is not capable of giving any informa-  
21 tion about shear strength; is that correct?

22 A. There's probably in the literature some correla-  
23 tion between some of the parameters that we can give out  
24 of the consolidation tests and shear strength, but it isn't  
25 ordinarily used for that.



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Q The shear strength results then would come from the triaxial -- measurements in the triaxial geometry?

A Yes. Either triaxial, or I didn't mention direct shear test. That's another type of test. It's kind of a split box, and we can move the soil horizontally and cause it to fail along a particular plane, either one of those two tests.

Q Were both tests used in this instance?

A Yes, they are -- were.

Q You indicated that the analysis that you performed assumed the soil was wet. Were any of the tests performed on soil samples that were first tested dry and then tested with water added to them?

A The procedure is -- because you get -- although the water isn't supposed to materially affect the strength parameters, the procedure is always to test the samples in the wet.

Well, I take that back. It could affect the clay strength slightly, but generally not the sand samples.

But the procedure always calls for saturating the samples.

Q Naively, I would think that there's a possibility that moisture in the sample could provide perhaps

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1 some type of lubrication that would affect shear strength.  
2 Does this kind of thing happen?

3 A. Not in the sand materials. And even in the clay  
4 materials, it's not supposed to affect it. It affects it  
5 because the sample will probably swell a little bit, and  
6 then it makes it slightly less dense.

7 The shear strength is unaffected by the water  
8 table -- or water content.

9 Q. If I understood you correctly earlier, I thought  
10 you defined safety factor in terms of a ratio of applied  
11 load to the strength of the soil. Now, by strength of the  
12 soil do you mean some value just below that which would  
13 bring about shear failure, for example?

14 A. What is meant by strength of the soil?

15 A. The shear strength of the soil -- the strength  
16 of the soil refers to the shear strength of the soil.  
17 The sample is tested at various strains, either in the  
18 triaxial or the direct shear test.

19 And you begin to get some movement under all  
20 conditions, or some straining of the soil. At one  
21 particular point the soil starts to rapidly lose strength,  
22 so that's the peak strain; and that's the strength that  
23 is then used.

24 Strength beyond that, the soil would materially  
25 move.

1-27  
1 Q Is this sort of analogous to a deviation from  
2 Hooks' Law, if you're pulling a metallic filament, for  
3 example -- the proportionality relationship up to some  
4 point and then a break away?

5 A Along those lines, yes.

6 Q What's a kip?

7 A It's a unit of loading. It's a thousand pounds.

8 Q So 10 kips is 10,000 pounds?

9 A Yes, it is.

10 Q How does the 10 kips which you say represents  
11 the effective imposed building load at Allens Creek, how  
12 does that compare with what you might experience with,  
13 say, a 50-story office building?

14 A It's not an easy -- If you don't work with  
15 50-story office buildings all the time, it's not an easy  
16 analogy to make. But I -- It would probably be greater  
17 than that imposed by a 50-story office building.

18 But since I don't work on them all of the time,  
19 I won't say that I'm an expert in that.

20 Q Okay. But at any rate, applying the 10 kips  
21 as the -- accepting the 10 kips as the effective imposed  
22 building load and the mat foundation safety factor of  
23 20, am I correct in concluding that that says that the  
24 mat foundation is capable of sustaining a load of 200  
25 kips?

1-28

1 A Yes. By the equation it is. I wouldn't apply  
2 that great a load.

3 Q Is that because you are not confident of the 20  
4 or --

5 A Reasonably, I would look for a rock site to  
6 apply that kind of loading. That's ... that's big.

7 Q What is the basis for your concluding that if  
8 there is settlement, most of it will occur during con-  
9 struction as opposed to a more gradual settlement over a  
10 period of a few years, say?

11 A Since the soils at Allens Creek within the  
12 depth of influence -- and generally we use a number any-  
13 where from one time the diameter of a building or one  
14 time the dimension of a building to two times the dimension  
15 within that depth, so if the reactor mat is 140 feet in  
16 diameter, we would look 200 -- somewhere between 140 feet  
17 and 280 feet in the ground at those soils as being the  
18 compressible soils.

19 Below that depth, the influence of the loading  
20 that you've put on the soil is negligible. We know that  
21 the soils within the depth of influence of the Allens  
22 Creek site are sand materials.

23 We also know recorded throughout the literature  
24 accepted by the profession, that the sands exhibit im-  
25 mediate settlement. You put the loading on and virtually

1 it's instantaneous.

2 Now, with depth, of course, there is going to be  
3 some time effect; and that's why I say that over the life  
4 of the plant, the initial settlement will be the greatest.

5 We have measured on many plants and building  
6 foundations -- it's a common thing to do, to measure the  
7 settlements. And on sands it comes out very rapidly.

8 Q Having placed an upper limit, as you seem to  
9 have here, of one inch or less for settlement, is that  
10 value so far as you know factored in somehow to design  
11 considerations of the structures or is it assumed that  
12 all significant settlement will have occurred before  
13 any critically dimensioned structures are placed on the  
14 foundation?

15 A There's two things to be concerned about. One  
16 would be the structures themselves, the mats and the  
17 walls, those structures as opposed to, say, a turbine  
18 pedestal or piping connections.

19 So the first consideration, there is no --  
20 because the movements are so small, there's no need to  
21 take that into account in the stresses in the concrete  
22 and the steel. They wouldn't add anything or require  
23 any additional reinforcing or thickness of concrete.

24 With regard to the structural components,  
25 piping and electrical lines, those on Allens Creek will be

1 hooked up a few years down the road. And the settlement  
 2 will have materially stopped. But we have imposed a  
 3 design consideration on those items as an additional con-  
 4 servatism.

5 And we say that -- I believe the number that we  
 6 have allowed for is half an inch differential after  
 7 construction of the building, before any major piping  
 8 hook-ups are made.

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1 Q Are you aware of whether there will be any  
2 monitoring of settlement at the Allens Creek site?

3 A There will definitely be monitoring at the site.  
4 This system that I've had extensive input in the design of  
5 will measure the settlements.

6 Q Can you just at least conceptually explain how  
7 this monitoring is accomplished?

8 A Yes. It's rather simple, but simple is sure  
9 sometimes.

10 It's survey readings on various mat foundations  
11 or as the mat foundations come out we may move the benchmark  
12 to a wall or some piece of steel that's permanently fixed.

13 So initially, we would probably take readings  
14 on a monthly basis at four points on a reactor building,  
15 probably about four or eight points (I forget exactly how  
16 we've got it designed) for the different buildings on a  
17 monthly basis until the settlement -- we see a very --  
18 There a distinct trend in settlement.

19 It's always a curvilinear relationship initially  
20 with time, and then eventually it flattens out, no matter  
21 what the soil may consist of. In the sands it flattens  
22 out rather fast; but as you add additional load, you'll  
23 get additional settlement.

24 So we'll keep the monitoring up until we  
25 completely construct the plant and they're ready for

1 operation.

2           Since Allens Creek falls in the Gulf Plain and  
3 there is general subsidence aside from the loadings that  
4 the buildings impose, there will be special monitoring of  
5 the subsidence in the area.

6           I believe there's a commitment in the PSAR to  
7 continue that for some period of time. If it's going to  
8 cost enough money to put in that monitoring system, we  
9 might as well get something useful for the plant and for  
10 the industry.

11           JUDGE LINENBERGER: Okay. Thank you, sir.  
12           That's all I have.

13           JUDGE WOLFE: Mr. Dewey, cross on Board  
14 questioning.

15           MR. DEWEY: The Staff has no questions, Your  
16 Honor.

17           JUDGE WOLFE: Mr. Doherty?

18           MR. DOHERTY: No questions, Your Honor.

19           JUDGE WOLFE: Is the witness to be excused  
20 or did you have any more?

21           MR. CULP: No, sir. He's to be excused  
22 permanently.

23           JUDGE WOLFE: All right. The witness is  
24 excused permanently.

25           (The witness was excused.)

1 MR. DEWEY: Your Honor, Staff wishes to call  
2 as its witness Dr. Jerome Pearring, who will testify  
3 concerning blockage of intake canal.

4 Before we begin with this, Mr. Black would like  
5 to talk about some schedule changes.

6 MR. BLACK: I'd like to note some minor  
7 schedule changes that the Staff has come up with.

8 If people could refer to Mr. Sohinki's letter  
9 to the Board of September 2nd, 1981, I think that would  
10 be the best reference point that we can discuss these  
11 minor schedule changes.

12 Starting September 16th we have Bishop  
13 Contention 17 on TNT detonation and Bishop Contention 6  
14 on pipeline rupture LPG.

15 The first schedule change that Staff would like  
16 to suggest is that we switch those two and start off with  
17 the pipeline rupture, Contention 6, first, and move to  
18 TNT detonation.

19 The reason that we're requesting that is that  
20 our Witness Camp has combined Contention 17, TNT detonation,  
21 with chlorine monitoring. So we would like to present  
22 those two together.

23 Moving over to the next page on the schedule,  
24 October 6, in the p.m., we have Doherty Contention 38B,  
25 and we have indicated -- which is cold shutdown 24 hours.

2-4

1 We have indicated Staff Witness Hodges. We  
2 neglected to put in Applicant witness on that particular  
3 issue as well, and he or she -- I forget who the  
4 Applicant's witness is, but he or she would appear at that  
5 timeframe.

6 MR. COPELAND: It should be Mr. McIntyre.

7 MR. BLACK: Mr. McIntyre.

8 MR. COPELAND: I'm sorry, Mitchell.

9 MR. BLACK: Mitchell.

10 Then on October 7th we have indicated Board  
11 Questions 2 and 7 to be presented by the project manager,  
12 Mr. Moon.

13 He has already prefiled those testimonies.  
14 This is testimony that we have been shuffling back and back  
15 and back, just because we didn't want to have Mr. Moon  
16 come down here to make an extraneous trip; but in any  
17 event, Mr. Moon is also going to be testifying on stud  
18 bolts maybe at that time, too, but the stud bolt issue  
19 is tied to the ATWS issue, and the Commission is hopefully  
20 going to be issuing a statement of policy consideration  
21 with respect to the ATWS issue sometime soon.

22 Depending on what that statement of policy  
23 consideration says with respect to ATWS, we may or may not  
24 want to present Moon at that time on stud bolts, or we may  
25 or may not want to substitute Moon with somebody else that

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may know a little bit more about the issue than Mr. Moon.

So that is still a question mark in Staff's mind with respect to stud bolts.

With respect to Board Questions 2 and 7, we would like to substitute Mr. Soffer instead of Mr. Moon on those Board questions.

Mr. Soffer originally had the input -- gave the input to Mr. Moon on those questions, and since Mr. Soffer will be here on Bishop Contention 1 on population, we thought that he would be the best witness to present testimony on those two questions.

One Board question has to do with whether Washn 1400 was used in Staff calculations.

Another question has to do with EPA jurisdiction on site for some type of radioactive release; and I'm not certain. It's been a while since I remember these Board questions, but they have to do with siting analysis, and Mr. Soffer is the section leader in the Siting Analysis Branch and we thought that he would best present that testimony.

With the Board's permission, we'd like to make that substitution.

The next switch is that we would like to switch the TexPirg Additional Contention 31 with Bishop Contention 1.



1 In other words, present the population density  
2 contentions with Soffer and Farrell before we get into the  
3 technical qualifications issue.

4 JUDGE WOLFE: We'll schedule Bishop Contention 1,  
5 then, for October 8th; is that what you're saying?

6 MR. BLACK: Yes, or however that falls into the  
7 schedule at that time.

8 JUDGE WOLFE: Yes.

9 MR. BLACK: Also, I should indicate, too, that  
10 on October 6th we have Doherty Contention 41, which is  
11 reactor water level indicators.

12 We have prefiled testimony by Huang on that  
13 issue, and as the schedule notes that Hodges will be joining  
14 Huang on that particular issue, in Staff's mind we felt  
15 that that would aid the Board and parties in its  
16 deliberations and consideration of that issue.

17 Mr. Hodges is intimately familiar with reactor  
18 water level indicators, and we felt that he might be able  
19 to present a clearer picture on certain questions than  
20 Huang could. So we have added him to that panel -- or as  
21 a panel member, I should say.

22 JUDGE CHEATUM: I don't understand. Huang is  
23 already on your list.

24 MR. BLACK: Yes.

25 JUDGE CHEATUM: And then you also have Hodges.



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1 MR. BLACK: Right. I just wanted to indicate  
2 that we are putting Hodges in there. He wasn't listed on  
3 the prefiled testimony, but we have put him in on this  
4 schedule.

5 JUDGE LINENBERGER: Incidentally, Mr. Black,  
6 this water level indication topic is one where I feel it  
7 would be particularly advantageous to have some simple  
8 geometry sketches to accompany the testimony.

9 The time we got into this before there was some  
10 confusion, at least in my mind, derived from attempting to  
11 use the PSAR figures.

12 So if we could have some sketches associated  
13 with that testimony, it would be appreciated.

14 MR. BLACK: Okay.

15 Lastly, I indicated yesterday that we would be  
16 prefiling testimony on ATWS this Friday, that  
17 Mr. Warren Minners would be joining Mr. Hodges on that  
18 particular issue, and we will be prefiling Mr. Minners'  
19 testimony this Friday.

20 That is the last of the schedule changes that  
21 Staff has at this time.

22 MR. DOHERTY: Counsel Black.

23 MR. BLACK: Yes.

24 MR. DOHERTY: I have a couple of questions on  
25 the record.

2-8

1 the record.

2 MR. BLACK: Yes.

3 MR. DOHERTY: Will Mr. Soffer adopt Mr. Moon's  
4 testimony with regard to Board Questions 2 and 7?

5 MR. BLACK: Yes.

6 MR. DOHERTY: I think you said there was some  
7 advantage in having Mr. Moon testify later due to something  
8 that related to ATWS and that that related to stud bolts;  
9 and yet I don't -- May we anticipate or do you think you  
10 might want to do the same thing with Mr. Hodges, since the  
11 topic of ATWS is coming up apparently before that.

12 Do you follow my question?

13 MR. BLACK: We are hoping the statement of  
14 policy consideration precedes Mr. Hodges' and Mr. Minners'  
15 testimony on ATWS, but we don't think it's totally  
16 necessary at the time to have that statement on policy out.

17 I guess what I'm saying is that we're just not  
18 certain how that statement will apply to the stud bolt  
19 aspect of the ATWS question.

20 I'm just indicating at this time that we may  
21 wish to delay Mr. Moon's presentation on that or we may  
22 wish to treat it some other way, depending on how that  
23 statement comes out and what it says.

24 MR. DOHERTY: Thank you.

25 JUDGE WOLFE: Would you bring me in again on

2-9

1 Mr. Minners. You've brought his name up.

2 It strikes a bell, but I....

3 MR. BLACK: Yes. Mr. Hodges had presented  
4 Staff testimony on the ATWS issue previously, and my  
5 understanding (I wasn't here at the time) that Mr. Sohinki  
6 said that he -- because Mr. Hodges did not know some of  
7 the answers to some of the questions that were asked,  
8 Mr. Sohinki indicated that he would present another  
9 witness that might have known some of the ATWS procedures  
10 better than Mr. Hodges did, and Mr. Minners is that person.

11 We will be filing his testimony this Friday and  
12 we'll present him October 5th with Mr. Hodges on the ATWS  
13 issue.

14 JUDGE CHEATUM: How do you spell his name,  
15 Mr. Minners?

16 MR. BLACK: I believe it's M-i-n-n-e-r-s.

17 JUDGE WOLFE: And this is with regard to  
18 Doherty Contention 8?

19 MR. BLACK: Doherty Contention 8.

20 JUDGE WOLFE: Any objection to this realignment  
21 in the scheduling?

22 MR. COPELAND: No, sir.

23 MR. DOHERTY: No, Your Honor, no objection.

24 JUDGE WOLFE: All right. Mr. Dewey.

25 MR. DEWEY: Yes, sir. At this time we submit

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Dr. Pearring to be taken under oath and testify.

JUDGE WOLFE: Would you stand, please, and raise your right hand.

Whereupon,

JEROME R. PEARRING

was called as a witness and, having been first duly sworn to testify the truth, the whole truth and nothing but the truth, testified on his oath as follows:

DIRECT EXAMINATION

BY MR. DEWEY:

Q Dr. Pearring, do you have before you a copy of your testimony in this proceeding entitled, "Testimony of Jerome R. Pearring"?

A I do.

Q Does this document also include your professional qualifications?

A It does.

Q Was this document prepared by you?

A Yes, it was, sir.

Q Do you have any changes you'd like to make at this time?

A No, sir, I have none.

Q Is the testimony that you prepared true and accurate to the best of your knowledge and belief?

A It is, sir.

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1 Q Do you adopt it as your sworn testimony in this  
2 proceeding?

3 A I do, sir.

4 MR. DEWEY: Your Honor, at this time the Staff  
5 requests that the testimony of Dr. Pearring be admitted  
6 as evidence in this proceeding and be copied into the  
7 record as if read.

8 JUDGE WOLFE: Any objection?

9 MR. CULP: Applicant has no objection.

10 MR. DOHERTY: I'd like to take the witness on  
11 voir dire, Your Honor.

12 JUDGE WOLFE: All right.

13 VOIR DIRE EXAMINATION

14 BY MR. DOHERTY:

15 Q Dr. Pearring, I'm going to ask you some  
16 questions about your professional qualifications.

17 You list a publication down here, and then it  
18 says at the conclusion of the title, "AFWL-TR," and I  
19 don't know what that means.

20 A Air Force Weapons Laborato. Technical  
21 Report, sir.

22 Q Okay. From looking at your background, I had  
23 a question. Did you leave the Air Force to go to Texas  
24 A&M on two occasions, like there were two departures from  
25 the Air Force?



2-12

1 A No, sir, I did not leave the Air Force. The  
2 Air Force sponsored my graduate study both times.

3 Q Okay. Did you author any of the sections of  
4 the SER for the Allens Creek plant?

5 A No, sir, I did not. My employment commenced on  
6 the 28th of April of 1980 with NCR.

7 Q Have you reviewed the PSAR for Allens Creek  
8 with regard to this issue?

9 A Yes, I have, sir.

10 Q You list here being "Chief Geotechnical Engineer  
11 Missile Siting Programs." I don't know much about  
12 missile sites, but what kind of problems do you encounter  
13 there that are related to this issue? Can you give me  
14 any idea?

15 A Yes, sir, very much so. The missile program  
16 that I was associated with was the Hardrock Silo Siting  
17 Program for the United States Air Force.

18 It involved the selection of sites by means of  
19 exploratory drilling, soils testing, rock testing and  
20 analysis throughout the United States and the northern  
21 portion of the United States.

22 The soil mechanics efforts associated with this  
23 is very much akin to the soil mechanics efforts that are  
24 associated with siting any major structure.

25 Q Now, was any of your work involved in siting,



1 did it involve siting where water -- where large bodies of  
2 water were a significant factor in the site itself.

3 For instance, and just for instance, locating,  
4 say, a missile platform on a seacoast?

5 A Yes, sir. We did considerable amount of work in  
6 the Wisconsin area and the Minnesota area where we were  
7 very close to lakes.

8 The moisture that was encountered, the water  
9 that was encountered, was at the natural water table level,  
10 and it was encountered at just about every boring that  
11 was made.

12 So water is a definite parameter associated  
13 with the siting of any type of structure.

14 JUDGE WOLFE: Would you bring the microphone  
15 close to the edge of the table. Is it turned on?

16 THE WITNESS: Yes, it is. I'm sorry.

17 BY MR. DOHERTY:

18 Q Did it actually involve creation of underwater  
19 structures, as well, some of this?

20 A Of course, some of the portions of the silo  
21 would be placed beneath the water table, and because of  
22 that it would involve considering the water parameters  
23 associated with the soil mechanics aspect.

24 Q Did it include estimates of slope stability?

25 A Oh, yes, absolutely.

2-14

1 In addition to just the silo itself, there are  
2 auxiliary facilities that are required to support a missile  
3 program; and, of course, the construction of that would be  
4 aboveground and it would require slope considerations and  
5 stability considerations.

6 MR. DCHERTY: Okay, I'm sorry, Your Honor. I  
7 don't think I have any other questions.

8 JUDGE WOLFE: Any objection?

9 MR. DCHERTY: No, sir.

10 JUDGE WOLFE: All right. The testimony of  
11 Dr. Pearring, including his resume, will be incorporated  
12 into the record as if read, relating to Doherty Contention  
13 29.

14 (See attached pages.)  
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UNITED STATES OF AMERICA  
U. S. NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD  
(Doherty Contention 29)

In the Matter of )  
HOUSTON LIGHTING & POWER COMPANY ) Docket No. 50-466  
(Allens Creek Nuclear Generating )  
Station, Unit 1) )

TESTIMONY OF JEROME R. PEARRING, PH.D., P.E.

Q1. Please state your name and present position with the NRC.

A1. My name is Jerome Pearring. I am employed as a Geotechnical Engineer, Hydrologic and Geotechnical Engineering Branch, Division of Engineering, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555. My work involves the application of Geotechnical Engineering principles in the Safety Evaluation review of nuclear power plant sites and structures.

Q2. Please describe your educational background and previous positions held.

A2. A resume of my educational background and employment experience is attached.

Q3. Please state the nature of the responsibilities that you have had with respect to the review of Houston Lighting and Power Company submittals concerning the Allens Creek Nuclear Generating Station Unit 1 ultimate heat sink structure.

A3. My involvement with the Allens Creek Nuclear Power Generating Station project began in June 1980. At that time I was assigned review responsibilities for Geotechnical Engineering matters associated with that project. In familiarizing myself with this project I reviewed the applicant's past submittals of Geotechnical Engineering data

including results of subsurface investigations, results of laboratory tests, and estimates of soil properties determined by the applicants consultants, which relate to the ultimate heat sink and causeway soils. I also reviewed cross sections of the ultimate heat sink slopes and the results of the applicant's analysis of the stability of the proposed slopes as presented. I have also evaluated the applicants recent modifications to the previous submittals which were submitted as a part of Amendment 58 to the PSAR in May 1981.

Q4. What is the purpose of your testimony?

A4. The purpose of my testimony is to respond to Doherty Contention 29 which alleges that there is insufficient assurances that postulated failures of ultimate heat sink structures will not lead to unacceptable blockage of the submerged intake canal. These insufficiencies allegedly would present a risk of meltdown of core if residual heat removal system water is insufficient after a core damaging accident. Doherty's contention 29 appears to be based upon information contained in subsection 2.5.4 of Supplement No. 2 to the Allens Creek Nuclear Generating Station, Unit 1 Safety Evaluation Report dated March 1979. That report concluded that, at that time, there was insufficient assurance that postulated slope failure would not lead to unacceptable blockage of the submerged intake Canal.

Q5. What has the applicant done to remedy this?

A5. Since NRC issuance of Supplement No. 2 to the Safety Evaluation Report the applicant has performed additional study of the causeway slope stability features. Its analysis, as described in Amendment No. 58, to the PSAR, resulted in an estimate of causeway slope soil movement of less than 4 inches under seismic loading conditions. I have independently

reviewed the potential for slumping of the lakefront causeway slopes under SSE and OBE earthquake loading and concur with the finding of the applicant that expected slope deformation would be minor.

Q6. Has the applicant done anything else to increase confidence that the alleged problem will not occur?

A6. Yes. In order to positively restrict potential causeway and/or ultimate heat sink slope soil movement into the intake canal, the applicant has committed to the construction of a concrete retaining wing wall structure at the intake forebay, lakefront area, to provide containment of the causeway ultimate heat sink slopes. The presence of such a retaining structure, which can be readily constructed using standard engineering design and construction principles and procedures, would provide very high confidence that the flow of cooling water into the intake structure from the lake would not be adversely affected by a postulated failure of the Ultimate Heat Sink causeway slopes.

Q7. Is it therefore your engineering judgement that the commitment of the applicant to construct a concrete retaining wing wall structure at the concourse of the ultimate heat sink causeway and submerged intake canal is acceptable assurance that postulated failures of soil slopes would not lead to unacceptable blockage of the intake canal?

A7. Yes. Of course it will be necessary before actual construction to review the final design of the retaining wall structure and its interface with the causeway at the ultimate heat sink forebay canal before final acceptance can be made. I would not expect problems, however, as the design of such structures is a straight forward relatively common engineering procedure.



Name: Jerome R. Pearring

Address: 3713 Larchmont Drive, Annandale, VA 22003

Telephone: (703) 941-7438

Education: B.S. Civil Engineering - Loyola University, Los Angeles, CA (1955)  
Master Civil Engineering - Texas A&M University (1963)  
Ph.D. Civil Engineering - Texas A&M University (1968)

Work Experience (Major/Significant Employment):

<u>Year(s)</u>	<u>Title/Function</u>
1980 - 1981	Geotechnical Engineer - NRR
1976 - 1980	Program Manager - President's Economic Adjustment Committee Consultant to Director on Engineering Matters - DOD
1955 - 1976	Civil Engineering Officer - U.S. Air Force Assignments encompassed planning, developing and managing projects and programs associated with Civil Engineering Research and Development (R&D) and construction * rehabilitation of Air Force Operational facilities. Major assignments included: Program manager - Air Force Civil Engineering Research & Development; Program Manager Air Force R&D Technical Facility Modernization program; Joint Service Command Combat Civil Engineer Duties - Vietnam; Chief Geotechnical Engineer Missile Siting Programs; and Assistant Professor Geotechnical Engineering - Air Force Institute of Technology.
1955 - 1956	Assistant District Materials Engineer - Idaho Dept. Highways

Publications:

"A Study of Basic Mineralogical, Physical-Chemical and Engineering Index Properties of Laterite Soils," (AIWL-IR)

Professional Societies/Activities:

Member - National Society Professional Engineers  
Registered Professional Engineer - Ohio (1959), Virginia (1980).



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JUDGE WOLFE: Is there cross-examination,  
Mr. Culp?

MR. CULP: No, sir.

JUDGE WOLFE: Mr. Doherty?

MR. DOHERTY: Yes, Your Honor.

CROSS-EXAMINATION

BY MR. DOHERTY:

Q Is this the first project that you've ever  
been involved in which involved a sort of pond under a  
pond arrangement?

A Yes, it is, sir.

Q Have you reviewed or in your graduate work  
perhaps read about this type of arrangement of a pond under  
a pond and what it --

A Yes, sir. Both within my graduate work and  
at the time I was teaching soil mechanics courses at the  
Air Force Institute of Technology, I did concern myself  
with slope stability analysis for reservoirs and for all  
types of slopes.

As far as the slope is concerned, its function  
is not known to it. It has to respond to the same laws  
of physics whether it be within a pond under a pond or  
whether it be exposed to the open air surface.

So in that regard I have considerable experience  
in this type of effort.

2-16

1 Q Did you read the testimony of Mr. Mercurio?

2 A I did, sir.

3 Q Do you have any criticisms of that?

4 A No, sir, I have no criticism, but there is one  
5 point that I would just like to bring out, and that is the  
6 acceptance of the principle of a retaining wing wall  
7 structure is accepted, the principle, by the NRC Staff.

8 The actual review and acceptance of the specific  
9 designed wing wall has not as yet been accepted, because it  
10 has not been submitted, and I wanted to make that clear.

11 Q So that at the moment you don't have any idea  
12 of how deeply they will excavate to set that wall up, or  
13 even if they will; is that right?

14 A We have the commitment that it will be a  
15 Category I seismic structure, yes, sir, and that is the  
16 commitment that they have made, that it will be sufficient  
17 in terms of its size, in its dimension, and its capability  
18 to withstand seismic loading associated with the SEE.

19 Q Is the prime concern the SSE at this point?

20 A Right now, sir, the SSE is the only loading  
21 factor that would cause the slopes to even come close to  
22 failing for a very small displacement.

23 Q What's an OBE?

24 A Operating basis is an earthquake that is  
25 expected to be encountered over the lifetime of a plant,

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and it is designated at exactly one-half of the SSE, safe shutdown earthquake.

Q Now, when you say that, that's not a regulation, is it? That's the situation for Allens Creek that's expected to be one-half the SSE?

A That's the parameter that is used throughout the entire program, whether it be for Allens Creek or others.

The OBE has a horizontal acceleration of one-half the SSE.

Q What is the acceleration of the SSE here; do you know?

A .1, sir.

Q Just .1?

A .1 G.

Q Now, on the top of 3 you stated that you have independently reviewed the potential for slumping of the lakefront causeway under those earthquake loadings.

When you review, do you independently check calculations?

A I reviewed the information which was presented in the PSAR and utilizing that information as I interpret it, I then proceeded to perform a displacement analysis using the standard accepted procedures, civil engineering procedures, for doing so, and arrived at a conclusion

2-18

1 concerning the potential for displacement.

2 Q Was it the same analysis as they did in terms  
3 of the equation, only you just looked away and did it  
4 your -- you know what I mean, you might well come out  
5 with the same answers, so it's like a check?

6 A It is a standard procedure, Newmark's procedure,  
7 yes, sir. That is the standard procedure, but it isn't  
8 just a question of looking away. It's a question of  
9 analyzing the -- As an example --

10 Q It is a checking, though?

11 A Oh, yes, absolutely, sir.

12 Q So you would actually have a high probability  
13 of coming out with the same answers at some point and then  
14 you could actually look to see --

15 A Not necessarily.

16 Q No, not necessarily, but some probability of  
17 that?

18 A That's right. In my estimation, if their  
19 procedures were correct, we would have a very high  
20 probability of coming out with the same answer.

21 Q I think Mr. Mercurio stated they used two  
22 calculations on the possibilities of slope slippage.

23 One was a split circle method, I think, and  
24 the other was -- Do you recall the other one, by any  
25 chance?

2-19

1 A Yes, sir. One of them, the latter one that you  
2 are referring to is the wedge analysis.

3 Q All right. Now, are those --

4 A Wedge analysis. The other one is is the  
5 simplified Bishop slip circle.

6 Q Bishop slip circle. Now, those two -- I think  
7 you stated both of them produced answers that were  
8 conservative to the -- in other words, that in doing both  
9 calculations they came out with answers that were well  
10 within a criteria that they had to meet. Is that what you  
11 discovered as well?

12 A Yes, sir, but my analysis went farther than  
13 that. You have to perform those two analyses as inputs  
14 into the Newmark procedure in order to arrive at a  
15 potential for displacement.

16 Those two analyses provide you with a safety  
17 factor that can be used, then, to input into the Newmark  
18 procedure for the solution we were looking for.

19 Yes, it is true that those two procedures when  
20 using soil parameters which are adequately conservative  
21 will give you a factor of safety which is adequately  
22 conservative.

23 Q Now, I think in Answer 7 at the foot of page 3,  
24 this discussion of the retaining wall structure, is that  
25 the same as the wing wall? Is that just a different term



2-20

1 for that?

2 A. Well, the wing wall is an extension of the  
3 retaining wall, and it in fact is a retaining wall in  
4 itself.

5 Q. Do you have any of the PSAR with you, by any  
6 chance?

7 A. Yeah, I have portions of it, sir.

8 Q. Do you have Figure M-1?

9 A. I don't have it with me, but I remember what it  
10 looked like, sir. I think I might be able to do this  
11 from memory.

12 Q. Well, let's try it. Okay.

13 Figure M-1 is a bird's-eye view of the ultimate  
14 heat sink, and it shows slopes of the earthen outer walls.  
15 It shows two slopes.

16 One is marked 20:1 and then there's a --  
17 apparently the deeper one, the more central one, is marked  
18 8:1.

19 Do you know why there are two slopes?

20 A. Yes, sir.

21 Q. I'd be glad to show you this, if it's --

22 A. That's all right, no.

23 Specifically, we're referring to the ultimate  
24 heat sink itself and not to the causeway or the entrance to  
25 the causeway.



2-21

1           The ultimate heat sink slopes were designed  
2 originally on the basis of an 8:1, but because there  
3 was a concern on the part of the Applicant and on the  
4 part of the Corps of Engineers previously that there may  
5 be some sediment which would in fact deposit itself in  
6 the area of the slopes, on the slopes of the ultimate  
7 heat sink; and the slope then being relatively flat would  
8 provide for a flow under earthquake loading of this  
9 sediment into the ultimate heat sink, and then eliminate  
10 or, if you will, take up some of the storage capability of  
11 the ultimate heat sink.

12           To avoid the potential for this, for the upper  
13 portion of the ultimate heat sink, the Applicant redesigned  
14 the top foot to provide for a 20:1 slope.

15           Q       So then that's only a one-foot-by-twenty-foot  
16 slope. Actually, it's just a tiny drop and then the main  
17 drop is at 8:0.

18           A       That precludes the flow of soil from the  
19 remaining four hundred and -- I believe it's 4,800 acre  
20 from the remaining part flowing into the ultimate heat  
21 sink.

22           Q       The idea that that material would tend to catch  
23 on the low slope, which is very broad.

24           A       That is correct.

25           Q       I see, and -- okay.

2-22

1 Q Well, at the area of the causeway, is that same  
2 20:1 slope also present throughout? It looks like there  
3 are some 3:1 slopes there. Do you want to look at --

4 A The causeway slope itself is a 3:1 and where  
5 it enters the ultimate heat sink, it breaks from a 3:1  
6 to an 8:1 slope.

7 The actual water intake canal leading from  
8 the lead edge of the ultimate heat sink back into the  
9 water intake structure is sloped on approximately a 23:1  
10 slope. So that the forward bay, if you will, of the water  
11 intake structure and the canal does maintain that 20-plus  
12 to one slope.

13 Q Well --

14 A Actually, if you will, sir, it does provide --  
15 it goes from an elevation of 92 feet all the way down to  
16 an elevation of 86 feet, or a drop of 6 feet over a  
17 distance, I believe, of 139 or 169 feet.

18 So there's a considerable distance of this  
19 23:1 slope.

20 MR. DOHERTY: Your Honor, I'd like to ask him  
21 to point this out on this. I'm reaching pretty close to  
22 the end of this questioning, but I would like to ask him  
23 because I can't see that on here, and I know the Board  
24 can't get much out of that.

25 THE WITNESS: I believe you'll find that on

2-23 1 Drawing M-1 -- or M-2, the upper cross-section.

2 It's also listed in Section 9.2, as I recall,  
3 of the PSAR. I don't recall the exact page, but it's  
4 spelled out in detail in that section.

5 MR. DOHERTY: All right.

6 You are right. There is definitely some marking  
7 of that at Section DD of Figure M-2.

8 I don't think I have any further questions,  
9 Your Honor. Thank you.

10 JUDGE WOLFF: Is there redirect, Mr. Dewey?

11 MR. DEWEY: No, sir.

12 JUDGE WOLFE: Board questions?

13 JUDGE CHEATUM: I have none.

14 BOARD EXAMINATION

15 BY JUDGE LINENBERGER:

16 Q Dr. Pearring, these figures that you've just  
17 been discussing are from what document?

18 A The portions of the PSAR, Section 2.5 and  
19 Section 9.2 and in addition, Appendix M.

20 I don't have the specific drawing numbers, but  
21 in Appendix M to 2.5 it would be M-1, M-2 and M-2(a),  
22 I believe, are the numbers.

23 Q Yesterday when one or both of these figures  
24 were being discussed, I thought I heard reference made to  
25 an Amendment No. 58; is that --

2-24

1 A That is correct, sir.

2 Q Okay. I just wanted to be sure we're still  
3 talking about the same source of those figures.

4 Just one question, Dr. Pearring. At the bottom  
5 of page 3 of your prefiled testimony, you indicate the  
6 necessity to undertake a review of the final design before  
7 actual construction is initiated.

8 Does this mean that this design review will be  
9 at least a partial prerequisite to the granting of a  
10 construction permit?

11 A No, sir. Specifically, the excavation will be  
12 allowed to proceed, as is the normal procedure, prior to  
13 the submittal of the design.

14 What it does mean is we would like very much to  
15 review the design before final approval of the final  
16 construction.

17 Q But the issuance of a construction permit is  
18 not conditioned upon --

19 A It is always conditioned upon review of the  
20 final design, sir. It would not be conditioned upon, as it  
21 was in Supplement 2, the initiation of excavation.

22 Supplement 2 to the SER, which was issued in  
23 March of '79, required the submittal of the design for  
24 review prior to the initiation of excavation without  
25 positive assurance of either the design or the placement

2-25

1 of such a structure such as the wing wall, the retaining  
2 wall.

3 With the commitment of the Applicant now,  
4 assuming the construction permit would be authorized,  
5 the excavation for the causeway, for all of the other  
6 facets of the ultimate heat sink, would be allowed to  
7 proceed.

8 JUDGE LINENBERGER: That's all I have.

9 JUDGE WOLFE: Cross-examination on the Board  
10 questions, Mr. Culp?

11 MR. CULP: No, sir.

12 JUDGE WOLFE: Mr. Doherty?

13 MR. DOHERTY: No, sir.

14 JUDGE WOLFE: All right. Is the witness to  
15 be excused?

16 MR. CULP: Yes, sir, the witness is to be  
17 excused.

18 JUDGE WOLFE: Permanently?

19 MR. CULP: Permanently.

20 JUDGE WOLFE: All right. The witness is so  
21 excused.

22 (The witness was excused.)

23 JUDGE WOLFE: Before the next witness is called,  
24 we'll recess now until 10 of 11:00.

25 (Recess taken.)



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MR. COPELAND: Mr. Chairman, before we proceed with our next witness, I'd like to bring a matter up to the Board while it's fresh on everybody's mind.

This relates to Mr. Scott's conduct last evening. I know that every Intervenor in this proceeding has a right to cross-examine, and I don't question that. I don't challenge that.

But I think we have a right to be protected against abuse of the right of cross-examination; and I think his conduct last night was clearly an abuse. He was obviously not prepared for cross-examination --

MR. DOHERTY: Your Honor --

MR. COPELAND: -- I think that was apparent to everybody who was here. He spent the entire time that he cross-examined Mr. Mercurio seeking information that was in the PSAR, and that he could have found if he had gone there, unlike Mr. Doherty who did come here prepared. He had figures out of the PSAR and was prepared to examine on those figures and so on.

Finally, after all of that, he admitted that he didn't even agree with the contention, that he thought -- that he agreed with the Applicant's position in the matter that the wing walls were unnecessary, which to me means that the entire line of cross-examination that he was pursuing was pointless from the outset and a complete



3-2  
1 waste of time.

2 When asked how much more cross-examination he  
3 had, the Board will recall that he said he had three more  
4 hours.

5 Now, that to me just cannot be a truthful state-  
6 ment, for a man to say that he has got three more hours  
7 to cross-examine a witness on a contention that he doesn't  
8 even agree with.

9 The end result was, of course, that Mr. Scott  
10 didn't bother to show back up here again this morning.  
11 The witness was required to be held over. And it's clear  
12 from what happened this morning that we could have  
13 finished with him last night.

14 As a result, he has missed most of the day of  
15 a seminar that he was supposed to attend --

16 MR. DOHERTY: Your Honor --

17 MR. COPELAND: -- which he testified on the  
18 record yesterday he was going to attend today.

19 And what happens with Mr. Scott? Nothing.  
20 Absolutely nothing.

21 He comes in here and says he has got three  
22 hours of cross-examination; the witness has to be held  
23 over at great expense and personal inconvenience. Mr.  
24 Scott walks off scot-free, to use a pun.

25 The Board has previously warned Mr. Scott, at

3-3  
1 Page 6299 of the transcript, that if he continued to come  
2 into the proceeding unprepared for cross-examination, that  
3 they were going to limit his cross-examination rights to  
4 an hour.

5 My suggestion, Your Honor, would be that Mr.  
6 Scott be put on notice that at any time in the future that  
7 he intends to cross-examine, that before he begins his  
8 cross-examination he be required to explain in considerable  
9 detail -- not just in outline form -- the exact points that  
10 it is that he is going to pursue on cross-examination,  
11 and then explain the relevance of those points to the  
12 Board.

13 And I think at that point the Board should deter-  
14 mine whether those points are matters that are relevant,  
15 and limit him strictly to those points. And if he can't  
16 satisfactorily meet that burden, then I think his right  
17 of cross-examination ought to be limited to half an hour.

18 And I would ask at this time that Mr. Scott  
19 be put on notice of something along those lines. I  
20 think we have reached the point where we just have to have  
21 some protection, and that we're entitled to some pro-  
22 tection.

23 MR. DOHERTY: I object to this. This whole  
24 thing is fabricated on Mr. Copeland's believing that Mr.  
25 Scott was unprepared. He has no proof of that.

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Mr. Scott came here -- I saw his notes. He had some preparation. He may not have been prepared to the heights that Mr. Copeland had in mind. But I think he was prepared.

I don't think there's anything to that at all. This is old land. We've been over it before.

He refers to being warned in the transcript, it appears to be somewhere back in March or April. Times have charged. It's now September.

We've also gone over the idea of giving materials to the Board, have the Board look it over before they ask questions; and the Board has noted defects in that idea, so that that's of no use.

He states that he couldn't possibly have -- if I get this right -- several hours of cross-examination. Well, I don't see how anybody could know that.

That seems to be precluding -- He states that ... the statement that the wing wall isn't necessary means that the contention is taken care of. Well, that's not necessarily true.

Mr. Scott may feel that the wing wall won't make any difference, won't stop the situation. Mr. Scott may have any number of ideas. And to entertain a whole lot of things along that line at this point I think is not reasonable and not much good for us to do.

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Perhaps if it's a matter of expedition, Mr. Copeland should be pleased that Mr. Scott did not appear since -- did not do what he considers is merely a slow-down of the process.

But I think to carry on this kind of thing with Mr. Scott not present is not good practice. But I think in general the whole discussion was simply unnecessary, the kind of thing that I think the Board has indicated from time to time that it doesn't really pay a whole lot of attention to.

And I would hope that the Board would continue to feel that way. There may be many ways that we can think of to improve various counsels here at this hearing, and various Intervenors, too. But I simply think the kind of proposal that he made at the end of his presentation there is not justified.

JUDGE WOLFE: Anything else?

MR. BLACK: Well, a few comments I suppose from Staff are warranted.

Mr. Doherty is right that this ground has been covered before. But that, indeed, is unfortunate in Staff's mind that this problem has crept up on numerous occasions.

I certainly do sympathize with Mr. Copeland. If it were my witness that was held over on an attorney's

1 representation that he had several more hours of cross-  
 2 examination and, in fact, didn't show up the next morning  
 3 to continue that cross-examination, I would have been  
 4 equally as irritated as Mr. Copeland appears to be.

5 But I think that it's not the right time  
 6 probably to discuss this type of motion, if it indeed is  
 7 a motion, in the absence of Mr. Scott. I think he has a  
 right to defend himself.

8 But I, as Mr. Copeland, wish to place the Board  
 9 on notice that we will be seeking orders from the Board  
 10 to terminate Mr. Scott's cross-examination, or any other  
 11 Intervenor's cross-examination on very short notice, if,  
 12 in fact, the Staff perceives that the examination is --  
 13 has no direction, is serving no purpose and in fact is  
 14 merely dilatory and an abuse of the right of cross-  
 15 examination.  
 16

17 We have gone over this before. And it's a very  
 18 hard thing to do, to place a prospective limitation on  
 19 anybody's right of cross-examination because it really  
 20 has to be done on an issue-by-issue situation.

21 But I, like Mr. Copeland, just wish to note for  
 22 the record that we will probably be seeking the Board's  
 23 relief on this type of matter in the future from Mr. Scott  
 24 or any other Intervenor that we feel has abused his right  
 25 of cross-examination.

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MR. COPELAND: Well, Mr. Chairman, I guess what I'm trying to say here is that I recognize the problems with terminating cross-examination in advance, but I must say that the Board itself has previously warned Mr. Scott that we were going to do that.

And what I'm suggesting in my own mind is something less severe than that; and that is, to put him on notice that when he comes in here, he's going to have to have something in mind that he's trying to prove and to show this Board that it's relevant before he even starts.

And if he can't do that, then place a time limit on him.

(Bench conference.)

JUDGE WOLFE: All right. If indeed Mr. Copeland's request was in the form of a motion that we take the requested action, such a motion we deny.

At all times the Board is aware of what goes on. We, like the parties here, were surprised when Mr. Scott last evening said he had two or three more hours of cross-examination and then didn't appear this morning to resume his cross-examination.

That, indeed, was surprising; if indeed he had additional cross-examination, he certainly waived his right to continue that cross-examination.

We will keep a very close watch, as we do, on



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the attitudes and behavior of counsel and the parties.  
Upon timely objection as to a certain question being pre-  
sented or as to a line of questioning, when objections are  
made, we will rule promptly.

And as in the past, if it's clear that the  
questioner is spinning wheels and really has no good  
specific questions, we will, as we have in the past,  
terminate the right of cross-examination.

I think the record here speaks for itself. Mr.  
Scott is building his own record on his performance, and  
it will follow the record. And whatever action we may have  
to take, once again, will be bolstered by this record.

All right. Proceed with your witness.

- - -

1 MR. ROZZELL: Your Honor, at this time we would  
2 call Mr. Hollis R. Dean to the stand and ask that he be  
3 sworn.

4 JUDGE WOLFE: Would you rise, please, and raise  
5 your right hand.  
6 Whereupon,

7 HOLLIS R. DEAN  
8 was called as a witness and, having been first duly sworn,  
9 was examined and testified as follows:

10 JUDGE WOLFE: Please be seated.

11 DIRECT EXAMINATION

12 BY MR. ROZZELL:

13 Q Mr. Dean, do you have before you the "Direct  
14 Testimony of Hollis R. Dean on Baker Contention 1,  
15 Financial Qualifications"?

16 A Yes, I do.

17 Q And does that testimony consist of ten pages  
18 of questions and answers and a two-page attachment  
19 labelled "HRD-1"?

20 A Yes, it does.

21 Q Was this testimony and this attachment prepared  
22 by you or under your supervision and control?

23 A Yes, it was.

24 Q Do you have any corrections to the testimony at  
25 this time?

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A. No, I do not.

Q. Is the testimony true and correct to the best of your knowledge, information and belief?

A. Yes, it is.

Q. And do you adopt it as your sworn testimony in this proceeding?

A. Yes, I do.

MR. ROZZELL: Your Honor, at this time we would request that the direct testimony of Hollis F. Dean on Baker Contention 1, Financial Qualifications, along with a two-page attachment thereto, be copied into the record as if read.

JUDGE WOLFE: Any objection from the Staff?

MR. BLACK: No objection.

JUDGE WOLFE: Mr. Baker?

MR. BAKER: I'd like to take this witness on voir dire.

JUDGE WOLFE: All right.

MR. BAKER: -- if that's appropriate.

VOIR DIRE

BY MR. BAKER:

Q. I have a few questions concerning your exact knowledge of certain issues in this case and your role in preparing certain financial information for the company.

The first question is: What part did you play

1 in preparing or reviewing the cost of construction esti-  
2 mates for Allens Creek Nuclear Station?

3 A. I did not take an active part in the preparation  
4 of those. I looked them over, and I looked at more the  
5 financial side of it than the -- being able to finance  
6 than I did the cost preparation.

7 Q. Okay. Are you prepared to answer questions on  
8 what the cost of construction has been in the past and  
9 your projections for what it might be in the future?

10 A. I can tell you what has been reported as being  
11 the estimated cost based upon the in-service dates. But  
12 to go into the details of the cost preparation, no.

13 Q. What part did you play in preparing answers  
14 to the NRC's request for updated financial information?  
15 That was this packet that was dated October 12th and had  
16 a cover letter from Mr. Goldberg.

17 A. That document was prepared under my supervision,  
18 and I reviewed it prior to it being released to Mr. Gold-  
19 berg for submittal.

20 Q. And what part have you played in preparing or  
21 reviewing the construction cost estimates for the various  
22 coal and lignite plants which are to be constructed over  
23 the next decade?

24 A. So far as the actual in-depth look at the costs,  
25 no. We have the engineers who are responsible for that.

1 We look at the overall costs. We look at how much it is  
2 on a KW installed basis. But that's it.

3 Q Are you in communication with the people who do  
4 prepare the documents? Do you attempt at least to satisfy  
5 yourself that their projections are accurate?

6 A Yes. Based upon conversation with them, we  
7 do attempt to satisfy ourselves that to the best of their  
8 knowledge and belief, based upon the facts they have in  
9 hand at the time, that those are reasonable and fair esti-  
10 mates. And that has been done.

11 Q Okay. Now, what part did you play in preparing  
12 the -- or reviewing the construction cost estimates for  
13 the South Texas Project near Bay City?

14 A It has been along the same basis, Mr. Baker.

15 Q I see. How closely have you followed the  
16 financial troubles at the South Texas Project, the cost  
17 overruns that have been reported widely and --

18 MR. ROZZELL: Your Honor, I object to the form  
19 of that question, specifically the use of the term  
20 "troubles."

21 MR. BAKER: Okay, I understand.

22 BY MR. BAKER:

23 Q You're aware, of course, that there have been  
24 numerous reports of financial overruns at the South Texas  
25 Project, are you not?

1 A I have been aware of that.

2 Q And how closely have you been involved in con-  
3 sulting with other officers of the company with regard  
4 to these cost overruns and other financial issues?

5 A Certainly we have discussed them and have been  
6 concerned. It's my understanding that the appropriate  
7 people have taken the steps that they thought would miti-  
8 gate those.

9 But I have not had a real -- I do not really  
10 get involved in preparation of cost estimates, Mr. Baker.

11 Q Well, have you been involved in any way in con-  
12 sulting with your engineers and the contractor on the  
13 South Texas Project with regard to holding down costs  
14 and keeping this project basically on track with regard  
15 to the final cost of construction?

16 A With the contractor, no. Yes, we have talked  
17 with our own officers, yes.

18 Q And just roughly, how often would you say do you  
19 discuss the South Texas Project with other offices with  
20 regard to the financial aspects of it?

21 A It's periodically, but I can't say what kind of  
22 schedule that we might have.

23 Q Once a month or twice a year?

24 A Well, certainly it would be more than twice a  
25 year. I cannot give you an exact schedule. It's



3-14  
1 discussed periodically, as it appears that it would be  
2 necessary.

3 MR. BAKER: That concludes my voir dire.

4 JUDGE WOLFE: Mr. Doherty.

5 MR. DOHERTY: Yes, I have some also, Your  
6 Honor.

7 VOIR DIRE

8 BY MR. DOHERTY:

9 Q Do you regard yourself as having knowledge of  
10 typical rates for residential customers of the company?

11 A I have knowledge of the residential rates.

12 Q Do you also regard yourself as someone who has  
13 knowledge of the rates of the companies -- or the  
14 utilities that serve residential customers surrounding  
15 your service area?

16 A I have seen those. I'm not as familiar with  
17 those certainly as I am with the lighting companies.

18 Q You mentioned a firm named Duff and Phelps in your  
19 testimony. Do you know how long this -- whatever it is --  
20 has been rating "ut" securities?

21 A Duff and Phelps has been publicly rating  
22 securities for about the last year. Previous to that for  
23 many years for their own individual clients, they had  
24 been making private ratings, which those clients paid  
25 for.

1 But I do not know how long.

2 Q Did you perform the study results -- or did you  
3 do the study which produced the results which are on  
4 Page 6 of your testimony?

5 A That was done under my supervision.

6 Q All right. Have you ever testified before the  
7 Texas Public Utilities Commission in any of the rate re-  
8 quests that you mentioned on Page 7 and Page 8 of your  
9 testimony?

10 A Yes, I have.

11 Q Are you familiar with company construction work  
12 in progress requests prior to your time -- prior to the  
13 time of your testimony; that is, prior to the time --  
14 the years you give in your testimony? I think you started  
15 in 1978.

16 A That was the first rate filing that we had  
17 before the Texas Public Utility Commission.

18 Q You mention what you call forecasted rate  
19 increases. Did you bring those with you today? Do you  
20 have them with you?

21 A Would you point out to me in the testimony  
22 where we made that reference, Mr. Doherty?

23 Q At the top of Page 9, Mr. Dean, you speak about  
24 HL&P's opinion of forecasted rate increases.

25 MR. ROZZELL: Mr. Doherty -- excuse me -- what

3-16

1 was your question again?

2 BY MR. DOHERTY:

3 Q Did you bring studies of that?

4 MR. ROZZELL: Your Honor, I would object to that  
5 question as being beyond the permissible scope of voir  
6 dire.

7 MR. DOHERTY: Well, I think part of a person's  
8 preparation is what he brings to his -- to the hearing.  
9 And I'm just asking if he brought it to the hearing.

10 JUDGE WOLFE: Objection sustained. You may go  
11 into that at some subsequent time, but not on voir  
12 dire.

13 MR. DOHERTY: All right.

14 BY MR. DOHERTY:

15 Q Did you prepare -- Have you prepared the  
16 forecasted rate increases for the company? Is that one  
17 of your responsibilities?

18 A Under my jurisdiction they have been prepared,  
19 yes.

20 Q You supervised that?

21 A Yes.

22 Q And in doing that, do you familiarize yourself  
23 with other utilities in order to make forecast rate  
24 increases?

25 A The forecasted rate increases that we have made

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1 were on the basis of what has been allowed this company  
2 previous -- in previous rate cases by the PUC. Cer-  
3 tainly, you have to look at what has been done in this  
4 company's position and also you are aware of what has  
5 happened in other areas.

6 But you utilize what has been done for your  
7 own company.

8 Q Okay. That's what you did?

9 A That's what we did.

10 Q How do you familiarize yourself, sir, with  
11 those other companies?

12 A We have access to the rate orders from the  
13 PUC.

14 Q Okay. Are there any other sources you use?

15 A For what?

16 Q For familiarizing yourself with the rates of  
17 other utilities that you might use in forecasting your  
18 own.

19 A I'm not quite sure what you might be asking,  
20 as to what others you would use because basically it  
21 has to do with what the Public Utility Commission allows.

22 Q You don't use any other sources, is that --

23 A I don't know what other sources you might be  
24 referring to, sir. If you would explain to me, I might  
25 could answer the question.

1 Q Well, the Department of Energy does some of this,  
2 too. Do you use any of their publications?

3 MR. ROZZELL: Your Honor, I hate to interject  
4 myself again here, but I'm going to object to that  
5 question and further questions along this line as, once  
6 again, beyond the permissible scope of voir dire.

7 I think this is clearly cross-examination.

8 JUDGE WOLFE: No, I think not. I think it's  
9 clearly an area that -- questioning that goes to his  
10 expertise and competence .. what other matters he uses  
11 for comparative evaluations or for his own evaluations  
12 of his own company's desired rate increases.

13 Objection overruled.

14 THE WITNESS: We use basically the Public Utility  
15 Commission of Texas Rate Orders.

16 BY MR. DOHERTY:

17 Q You don't use anything else?

18 A I do not, no.

19 Q Are you familiar with Moody's Announcements  
20 of its Derating of the Companies, 21-series of Publicly  
21 Held First Mortgages from A to A -- small a?

22 A Yes.

23 Q Are you familiar with Houston Industries?

24 A Yes.

25 Q Are you an officer of Houston Industries?

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A. Yes.

Q. Which office?

A. Vice President and Treasurer.

Q. Are you familiar with Primary Fuels, Incorporated?  
porated?

A. Yes.

Q. Are you an officer?

A. Yes.

Q. Which office?

A. Vice President.

Q. Are you familiar with Utility Fuels, Incorporated?  
porated?

A. Yes.

- - -



BY MR. DOHERTY:

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Q Are you an officer?

A Yes.

Q Which office do you hold?

A Vice President.

MR. DOHERTY: No further questions, Your Honor.  
Thank you, Mr. Dean.

JUDGE WOLFE: All right. If there are no objections, the written testimony of Mr. Dean on Baker Contention 1, inclusive of the two-page attachment, are incorporated into the record as if read.

(See attached pages.)

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	§	
	§	
HOUSTON LIGHTING & POWER COMPANY	§	Docket No. 50-466
	§	
(Allens Creek Nuclear Generating Station, Unit 1)	§	
	§	

DIRECT TESTIMONY OF HOLLIS R. DEAN ON  
BAKER CONTENTION 1, FINANCIAL QUALIFICATIONS:

Q. Mr. Dean, would you please state your full name, your position, and describe your educational background and business experience?

A. My name is Hollis R. Dean. I am an Executive Vice President of Houston Lighting & Power Company (HL&P) and the Chief Financial Officer of the Company. I have ultimate responsibility for the Accounting, Computer Services, Corporate Development, Internal and Operations Auditing, Rate and Corporate Planning, and Treasury Departments. I am also a Director of the Company.

I received a Bachelor of Science Degree in Accounting from Bowling Green College of Commerce, Bowling Green, Kentucky, in 1946 and joined the Accounting Department of Houston Lighting & Power Company that same year. I became Comptroller in 1966, Vice President in 1970, Group Vice President in 1973 and Executive Vice President in

1 April, 1981. In April, 1977, I was elected a Director of  
2 the Company. I am a Certified Public Accountant and a  
3 member of the American Institute of Certified Public Account-  
4 ants, the Texas Society of Certified Public Accountants, the  
5 Financial Executives Institute and the Finance Committee of  
6 the Edison Electric Institute.

7 Q. Mr. Dean, what is the purpose of your testimony?

8 A. The purpose of my testimony is to address Baker  
9 Contention No. 1 which essentially alleges that HL&P does not  
10 have "reasonable assurance" of obtaining the funds needed to  
11 construct Allens Creek.

12 Q. Mr. Dean, what is the current cost estimate for  
13 Allens Creek Nuclear Generating Station, Unit 1?

14 A. Our estimate for ACNGS as of March, 1981 is  
15 \$2,090 million, excluding the allowance for funds used during  
16 construction.

17 Q. Will HL&P have to finance all of the cost of ACNGS  
18 in the future?

19 A. No. Through June 30, 1981 we had already spent  
20 approximately 13% of this amount, or some \$282 million,  
21 excluding the allowance for funds used during construction.

22 Q. What sources of funds will you be relying upon to  
23 finance your future expenditures on ACNGS?

24 A. The projected sources of funds are shown on Attach-  
ment HRD-1. As shown on this attachment, we will be relying

1 upon a combination of internally generated funds and external  
2 funds in the form of debt and/or equity securities. This has  
3 been our traditional method of financing all of our power  
4 plant projects.

5 Q. Mr. Baker alleges, in effect, that HL&P is too weak  
6 financially to construct Allens Creek. Do you agree?

7 A. No. HL&P is a financially sound utility and has a  
8 service area that is one of the healthiest in the United  
9 States. As of December 31, 1980, HL&P had invested capital  
10 of \$3,283 million consisting of 48% long-term debt, 7%  
11 preferred stock, and 45% common equity. For the year ended  
12 December 31, 1980, HL&P had operating revenues of \$2,124  
13 million and a net income of \$197 million. We have had a sub-  
14 stantial growth in total assets in the last ten years, and  
15 we have been able to finance that growth. We expect that, over  
16 the time frame in which ACNGS is being built, the percentage  
17 of construction expenditures attributable to internally  
18 generated funds will approximate our past experience. Finally,  
19 we feel confident that based upon HL&P's forecasted earnings,  
20 return on equity and coverage ratios, a market will be  
21 maintained for the Company's stocks and bonds which must be  
22 sold in order to raise the necessary external funds to  
23 finance construction.

24 Q. Would you please describe the growth of the Company's  
assets in the last 11 years and compare that with the growth

1 anticipated for the next 11 years?

2 A. During the period from January 1, 1970 to December  
3 31, 1980 construction expenditures totaled \$3,574 million,  
4 of which \$2,095 million were financed externally. During  
5 this time, total assets of the Company grew from \$873 million  
6 to \$4,151 million. This represents an increase in company  
7 assets by a factor of 4.8. Total capitalization during  
8 this same period grew from \$773 million to \$3,283 million,  
9 an increase of 4.2 times.

10 During the period 1981 to 1991 construction expendi-  
11 tures of \$13,120 million and net external financing of \$8,065  
12 million are projected. During this time, total assets are  
13 forecasted to increase to \$15,657 million and total capitaliza-  
14 tion is expected to increase to \$12,355 million. These figures  
15 represent increases by a factor of 3.8. Therefore, on a  
16 relative basis, the growth in assets and in capitalization  
17 during the period 1981 to 1991 will be less than that  
18 experienced by the Company from 1970 through 1980.

19 Q. How do the projections for generation of internal  
20 funds during 1981 to 1991 compare with the last 11 years?

21 A. During the 11-year period ending December 31, 1980,  
22 internal funds averaged 41% of the Company's total con-  
23 struction expenditures. The 11-year forecast for the con-  
24 struction period of ACNGS indicates that internal funds will  
average approximately 39% of the Company's total construction



1 budget. This means that the Company's ability to rely on  
2 internal funds should remain unchanged during the next 11  
3 years.

4 Q. You stated earlier that you believed there would  
5 be an adequate market for external financing. Would you  
6 please explain why you believe that to be true?

7 A. A major determinant of the Company's ability to  
8 finance centers around the ratings of securities as established  
9 by Moody's, Standard and Poor's Corporation and Duff and  
10 Phelps. HL&P's first mortgage bonds and preferred stock are  
11 rated "double A" or equivalent by Standard and Poor  
12 and by Duff and Phelps and "A" or equivalent by Moody's  
13 Investors Service, Inc. The criteria for the determination  
14 of ratings are difficult to state with precision. No fixed  
15 mathematical formula automatically produces any particular  
16 rating. Many subjective factors play an important role.  
17 However, these financial organizations place special emphasis  
18 on such ratios as interest coverages, return on equity, and  
19 debt-equity ratios. Based upon statistics for the twelve  
20 months ended December 30, 1980, the range in interest  
21 coverage, return on equity, and debt-equity ratios for A  
22 rated<sup>\*/</sup> utilities was as follows:  
23

24 

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\*/ Bonds which are rated A are considered "upper medium grade obligations" by Moody's.



	<u>Range</u>	<u>Median</u>
Interest coverage (pre-tax)	1.8-3.7 X	2.6 X
Return on Equity	8.5-14.6%	11.0%
Capitalization:		
Long Term Debt	44-59%	52%
Preferred Stock	6-16%	13%
Common Stock	30-45%	35%

In comparison, HL&P's forecast indicates that interest coverage, return on equity, and debt-equity ratios for the construction period 1981 to 1991 are expected to fall within the following range:

	<u>Range</u>	<u>Median</u>
Interest Coverage (pre-tax)	3.3-4.0 X	3.6 X
Return on Equity	13.3-17.2%	15.0%
Capitalization:		
Long Term Debt	47-49%	49%
Preferred Stock	7-10%	10%
Common Stock	1-45%	42%

HL&P's projected performance is considerably higher than the median for single A rated utilities. For this reason we believe that the Company will have the financial strength to undertake the ACNGS construction program.

Q. How does HL&P compare in assets with the other electric utilities in the U.S. that are constructing nuclear plants?

1 A. HL&P compares very favorably. Of the 61 companies  
2 which have nuclear plants under design or construction, only 15  
3 companies have more assets than HL&P. <sup>\*\*/</sup>

4 Q. How does HL&P's securities rating compare with other  
5 electric utilities in the U.S. that are constructing nuclear  
6 plants?

7 A. Of the 61 companies referenced above, Moody's rated  
8 four of these companies' securities triple A, 15 double A,  
9 23 single A (including HL&P) and 19 BAA or below as of  
10 December 31, 1980.

11 Q. Turning to the specific allegations in Mr. Baker's  
12 contention, he alleges that without 100% of Construction Work  
13 in Progress (CWIP) included in its rates HL&P would be  
14 unable to finance ACNGS. Would you please comment on this?

15 A. The amount of CWIP to be included in rate base in  
16 determining electric rates is that amount necessary to maintain  
17 the financial integrity of the Company. In the Company's 1979  
18 rate case, Docket 2076, the Company requested 100% of CWIP in  
19 rate base. However, in the last two rate requests, Dockets  
20 3320 and 3955, the Company has requested only 85% and 73%,  
21 respectively, of CWIP in rate base. The Public Utility

22 \*\*/ Companies with nuclear plants under design or construction  
23 were identified in a January 1981 issue of Electrical  
24 World.

1 Commission has allowed 60% and 69% CWIP in rate base in  
2 Dockets 2676 and 3320, respectively.

3 While the Company believes that these rate increases  
4 have been insufficient, it is convinced that the Utility  
5 Commission recognizes the necessity of CWIP in rate base to  
6 allow a utility to maintain its financial integrity. This is  
7 evidenced by the increase in the amount of CWIP allowed in rate  
8 base from Docket 2676 to Docket 3320. The principal difference  
9 between the Utility Commission's amount of CWIP and the  
10 Company's is primarily one of a difference in professional  
11 judgment as to the amount of CWIP necessary to maintain finan-  
12 cial integrity. In any event, it is not correct to make the  
13 blanket statement that 100% of CWIP always has to be included  
14 in rate base for a utility to be financially sound. The  
15 amount of CWIP included in rate base must be based on the funds  
16 deemed necessary to maintain financial integrity during the  
17 time frame the rates will be in effect.

18 Q. Much of the forecasted internal cash position,  
19 earnings, rate of return on common equity, and coverage ratios  
20 depends upon receiving adequate and timely rate relief from  
21 the Public Utility Commission of Texas. Do you believe that  
22 the rate relief necessary to maintain the Company's financial  
23 integrity will be granted by the appropriate regulatory  
24 authority?

A. Clearly, an important assumption that underlies the

1 financing plan is one of obtaining adequate rate relief. It  
2 is HL&P's opinion that forecasted rate increases, both retail  
3 and wholesale, will be shown to be necessary and reasonable  
4 and will be granted by the appropriate regulatory authority.  
5 The Company's financial forecasts are based upon the assumption  
6 of a targeted return on equity of 15.8%. This return, which is  
7 .2% below that granted in a neighboring utility's most recent  
8 case, was granted by the Utility Commission to HL&P in its  
9 most recent order. We believe that regulatory authorities  
10 will act responsibly and will provide adequate and timely  
11 rate relief and that the Company will be able to obtain the  
12 capital funds necessary to finance the power plant projects  
13 that we have to build in order to serve our customers.

13 Q. Have you recently applied for a new rate increase?

14 A. Yes we have. A new rate filing was made in July  
15 and hearings will begin in September. We expect to be  
16 requesting rate relief on an annual basis over the next ten  
17 years in order to maintain an adequate return on equity,  
18 interest coverage ratios and internal cash generation so that  
19 external funds necessary to finance our construction program  
20 can be obtained.

21 Q. Have you stretched the construction schedule for  
22 ACNGS and several of your other new power plants because of  
23 financial constraints?

24 A. Yes, we have. In March 1981 we determined to delay

1 the inservice dates of the four lignite-fired units and ACNGS  
2 which were scheduled for the period 1985 through 1991. These  
3 delays were necessitated by constraints on our ability to  
4 finance the numerous new plants that we must construct to  
5 meet increased demands for electricity. This revised  
6 construction program has enabled HL&P to reduce its projected  
7 expenditures during 1981 to 1983 from \$3.3 billion to \$2.4  
8 billion.

9 Q. Does that conclude your testimony?

10 A. Yes.

APPLICANT: HL&P NUCLEAR PLANT, ALLENS CREEK UNIT  
 PROFORMA SOURCES OF FUNDS FOR SYSTEM - WIDE CONSTRUCTION EXPENDITURES AND CAPITAL STRUCTURE  
 DURING PERIOD OF CONSTRUCTION OF SUBJECT NUCLEAR POWER PLANT  
 (MILLIONS OF DOLLARS)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
<b>External Financing:</b>											
Common Stock	\$ 214	\$ 116	\$ 217	\$ 221	\$ 242	\$ 247	\$ 249	\$ 230	\$ 128	\$ 226	\$ 128
Preferred Stock	50	110	110	90	110	110	90	70	110	-	100
Long Term Debt	300	300	300	525	650	600	450	450	450	275	450
Notes Payable	(97)	11	43	30	54	151	161	(37)	(17)	67	121
Contribution From Parent											
Total External Funds	<u>467</u>	<u>537</u>	<u>670</u>	<u>866</u>	<u>1,056</u>	<u>1,108</u>	<u>950</u>	<u>713</u>	<u>671</u>	<u>568</u>	<u>799</u>
<b>Internally Generated:</b>											
Net Income	244	336	363	448	500	641	633	709	770	738	847
Less:											
Preferred Dividends	25	34	48	56	67	76	86	94	103	109	114
Common Dividends	143	181	217	266	306	360	413	454	492	529	566
Retained Earnings	<u>76</u>	<u>121</u>	<u>98</u>	<u>126</u>	<u>127</u>	<u>205</u>	<u>134</u>	<u>161</u>	<u>175</u>	<u>100</u>	<u>167</u>
Deferred Taxes	46	48	55	59	66	65	72	73	04	99	114
Investment Tax Credit											
Deferred Net	52	51	69	73	99	107	105	83	67	70	82
Depreciation and Amort.	117	125	144	158	184	199	250	298	351	448	538
Change in Working Capital	41	10	19	27	32	45	37	57	26	15	18
Less AFDC	<u>(70)</u>	<u>(109)</u>	<u>(91)</u>	<u>(140)</u>	<u>(149)</u>	<u>(197)</u>	<u>(130)</u>	<u>(40)</u>	<u>(113)</u>	<u>(50)</u>	<u>(124)</u>
Total Internal Funds	<u>262</u>	<u>246</u>	<u>294</u>	<u>303</u>	<u>359</u>	<u>424</u>	<u>468</u>	<u>632</u>	<u>590</u>	<u>682</u>	<u>795</u>
Total Funds	\$ <u>729</u>	\$ <u>783</u>	\$ <u>964</u>	\$ <u>1,169</u>	\$ <u>1,415</u>	\$ <u>1,532</u>	\$ <u>1,418</u>	\$ <u>1,345</u>	\$ <u>1,261</u>	\$ <u>1,250</u>	\$ <u>1,594</u>



1981      1982      1983      1984      1985      1986      1987      1988      1989      1990      1991

Construction Expenditures:

Nuclear Power Plants	\$ 151	\$ 198	\$ 260	\$ 295	\$ 327	\$ 334	\$ 255	\$ 212	\$ 148	\$ 109	\$ 39
Other	558	585	704	874	1,048	1,168	1,123	1,137	1,058	1,141	1,430
Total Const. Exp.'s	<u>709</u>	<u>783</u>	<u>964</u>	<u>1,169</u>	<u>1,345</u>	<u>1,502</u>	<u>1,378</u>	<u>1,345</u>	<u>1,206</u>	<u>1,250</u>	<u>1,469</u>
Subject Power Plant	65	117	189	218	259	243	249	212	148	109	39

Other Capital Requirements:

Redemption of Maturing Bonds	20				70	30	40		55		125
Acquisition of Bonds for Sinking Funds											
Miscellaneous Requirements	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total Capital Requirements	<u>\$ 729</u>	<u>\$ 783</u>	<u>\$ 964</u>	<u>\$ 1,169</u>	<u>\$ 1,415</u>	<u>\$ 1,532</u>	<u>\$ 1,418</u>	<u>\$ 1,345</u>	<u>\$ 1,261</u>	<u>\$ 1,250</u>	<u>\$ 1,594</u>

Capital Structure (\$ & %) 1981      1982      1983      1984      1985      1986      1987      1988      1989      1990      1991

Long Term Debt	\$2867	48%	\$2167	47%	\$2467	47%	\$2992	48%	\$3572	49%	\$4142	49%	\$4532	49%	\$5002	49%	\$5397	49%	\$5672	49%	\$5997	48%
Preferred Stock	294	7	404	9	514	10	604	10	714	10	824	10	914	10	984	10	1094	10	1094	9	1194	10
Common Equity	1750	45	1987	44	2302	43	2649	42	3017	41	3469	41	3951	41	4211	41	4583	41	4869	42	5164	42
Total	<u>5911</u>	<u>100%</u>	<u>4558</u>	<u>100%</u>	<u>5283</u>	<u>100%</u>	<u>6245</u>	<u>100%</u>	<u>7303</u>	<u>100%</u>	<u>8435</u>	<u>100%</u>	<u>9317</u>	<u>100%</u>	<u>10227</u>	<u>100%</u>	<u>11034</u>	<u>100%</u>	<u>11635</u>	<u>100%</u>	<u>12355</u>	<u>100%</u>

3-21  
1 MR. ROZZELL: At this time, Your Honor, we would  
2 tender Mr. Dean for cross-examination.

3 JUDGE WOLFE: Staff?

4 MR. BLACK: Yes, we have a few questions.

5 CROSS-EXAMINATION

6 BY MR. BLACK:

7 Q Mr. Dean, in the NRC Staff's review of the  
8 financial qualifications of a construction permit appli-  
9 cant, the Staff usually looks at several things. One of  
10 those things we look at -- the Staff looks at -- is the  
11 company's stock and bond rating.

12 On Page 5 of your testimony you indicate what  
13 the HL&P's bond/stock rating is, indicating it's a  
14 "double A" from Standard and Poor and Duff and Phelps and  
15 an "A" by Moody's.

16 Going back to the Standard and Poor "double A"  
17 rating, has that rating by Standard and Poor of HL&P  
18 changed recently?

19 A. No, sir.

20 Q. Has the "A" rating by Moody's changed recently?

21 A. It was changed last November.

22 Q. And what was the reason or cause of that change;  
23 do you know?

24 A. It was as a result of a visitation with Moody's  
25 relative to an upcoming bond issue, and then discussing

3-22  
1 the then-current program for construction and adding  
2 facilities.

3 And at the same time -- or within a day or  
4 two, similar type discussions were held both with Standard  
5 and Poor and Duff and Phelps. It was indicated that we  
6 had just completed the construction program estimate  
7 for 1981 and the projections had been made from that  
8 point for the other years, and that we would have to come  
9 back and review that and make appropriate changes.

10 Moody's elected not to wait until such changes  
11 might have been made in that program and did, for their  
12 own reasons, see fit to downgrade the company from a  
13 "double A" rating to the "A".

14 Standard and Poor and Duff and Phelps took a  
15 situation of wait and see what we would do.

16 Q. Has Standard and Poor indicated to you that  
17 they may change the "double A" rating in any foreseeable  
18 time in the future?

19 A. After we did, in fact, make the change in the  
20 construction program, I went back and I visited with all  
21 of the agencies. Standard and Poor indicated that they  
22 thought that the new program that we had was one that if  
23 we could maintain it, and -- would be one which would  
24 continue, all other things being equal -- the current  
25 "double A" rating.

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Q So HL&P at this time does not have any indication from Standard and Poor that they will change the rating?

A We do not.

Q Is it also your testimony that all of these rating services do the ratings more subjectively than on an objective basis?

A I would think possibly so.

Q What is the significance of being rated "A" by Moody's, let's say, and "double A" by Standard and Poor?

A Well, certainly, it is not as good a rating as if you had "double A" ratings by both agencies. It indicates here that one agency sees more risk than the other does, and that if the investor is -- would also perceive that there is more risk since you do not have the "double A" rated security.

However, the Moody's rating -- the "A" rating is an investment-grade rating. But it is certainly one notch below the "double A".

Q The fact that one rating -- one agency rates you "double A" and the other "A", will that, in fact -- Well, how do you perceive that will affect any investors' potential to buy the bond or stock in question?

A Well, certainly he would prefer to have an investment in one that has the "double A" rating. And if,

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in fact, he is going to put his money in one that has what he perceives as somewhat more risk, then he'll want a little higher return on his investment for the additional risk that he perceives. So it could increase the cost of the funds to you.

Q. Is there any indication that Moody's will come back and change its rating?

A. Well, certainly, Moody's has not indicated to me that they are going to do that. They would not ever, I don't believe, based upon my dealings with them indicate "Yes, we are going to do thus and so in the future."

Certainly, I did go back after the changed program and talk to them about it. They were much impressed with the changes that we had made and the modifications that we had made in the yearly financial requirements.

And no change will be made by any of the rating agencies unless we go back and visit with them in conjunction with a new issue of securities, which we will ask them to rate.

If the interest rates are such that during the latter part of this year that we would want to do a first mortgage bond issue, we would, after filing a registration statement, make arrangements to visit with all of the agencies and review the company's position and

1 situation at that time, and that would be at the time that  
2 we could expect a change in the bond ratings.

3 Q When was the last time that HL&P went to the  
4 bond market?

5 A February 1981.

6 Q 1981. And what was the result of that?

7 A We sold \$125 million of first mortgage bonds at  
8 slightly over 14 percent cost to the company.

9 Q Was there any problem in selling those bonds?

10 A No.

11 Q When is the next time that HL&P foresees that  
12 it will go to the bond market?

13 A As I indicated, if interest rates are at such a  
14 position, we would like to do that later on in this  
15 year, before year-end.

16 Q When was the last major stock offering --  
17 equity stock offering?

18 A It was in March of this year. That was in  
19 Houston Industries, of course.

20 Q And what was the result of that offering?

21 A It was also ... of course, as you are aware,  
22 utility stocks are depressed because of -- they sell mostly  
23 on a yield basis.

24 Q And it's my understanding that HL&P will have  
25 to sell some common -- equity common stock in the next



1 ten years as well; is that true?

2 A. Well, Houston Lighting & Power Company will  
3 probably sell -- not Houston Lighting & Power, excuse  
4 me -- Houston Industries will probably sell common stock  
5 each year during the next ten years.

6 In fact, that's the projection that we have.  
7 And we anticipate that we will sell some more common stock  
8 from Houston Industries for investment in Houston Lighting &  
9 Power Company this year.

10 Q. Houston Industries is what? A holding company?

11 A. It is a holding company; that is correct.

12 Q. What else does it hold besides HL&P?

13 A. It holds Primary Fuels, which is an oil and gas  
14 exploration company, and it holds Utility Fuels, which is  
15 a fuel supply company.

16 THE REPORTER: I'm sorry, I can't hear you.

17 THE WITNESS: Houston Industries is a holding  
18 company. It holds Houston Lighting & Power Company. It  
19 holds Utility Fuels, which is a fuel supply company; and  
20 it holds Primary Fuels, which is an oil and gas explora-  
21 tion company.

22 BY MR. BLACK:

23 Q. Are you aware of the experience of other major  
24 utilities across the country with respect to their rating  
25 by the respective rating agencies in a general sense?

1 A In a general sense we are cognizant of those  
2 that -- as they are either uprated or downrated. But it's  
3 a matter of general knowledge.

4 Q With respect to utilities that have nuclear  
5 facilities or nuclear facilities under construction, is  
6 there a general trend of derating at this particular point  
7 in time?

8 A Not just because that they would have nuclear  
9 facilities under construction, it would be on the other  
10 things that the rating agency would take into considera-  
11 tion.

12 Q Would one of the primary things under considera-  
13 tion by a rating agency be the construction program over  
14 the next ten years?

15 A It would be the size of the construction program,  
16 the strength of the company's financial position currently,  
17 the regulatory climate, the area which it serves. It's  
18 many different things.

19 Q With respect to the regulatory climate, what  
20 is the regulatory climate in the State of Texas at this  
21 time?

22 A It is considered to be one of the top in the  
23 country.

24 Q Considered by whom?

25 A Duff and Phelps, which is a rating agency, and a

3-28  
1 number of the investment banking houses also rate the  
2 regulatory climate in the various states.

3 And it ranks at the top on all of those.

4 Q Is there any indication that that regulatory  
5 climate is in the process of change or will change in the  
6 next ten years?

7 A Well, certainly, to say what is going to happen  
8 to the climate in the next ten years is very difficult.  
9 But currently I see no change in the climate.

10 Q Is it the Texas Regulatory Utility Commission?

11 A Texas Public Utility Commission.

12 Q That is a commission -- a politically appointed  
13 commission?

14 A It is appointed by the Governor.

15 Q Is there any permanent member of that Commission?

16 A The terms are for six years.

17 Q Which is the term of the Governor as well?

18 A I believe the Governor has a four-year term.

19 Q So the Commission may transcend a Governor's  
20 term then?

21 A Yes.

22 Q When you talk about construction work in progress  
23 being added to the rate base, and you indicate that the  
24 last two rate requests that HL&P requested 85 and 73  
25 percent respectively of CWIP in rate base, and the

1 Public Utility Commission allowed 60 and 69 percent  
2 respectively of CWIP in the rate base.

3 Is there any indication or -- any indication of  
4 a trend of the Commission in allowing CWIP in the rate  
5 base of any utility in the state?

6 A. Well, the provisions for the inclusion of CWIP  
7 in the rate base is for the Commission in its own mind to  
8 allow whatever amount of CWIP it thinks is necessary to  
9 maintain financial viability of the company.

10 And I believe in each case that has been brought  
11 before the Commission, since its inception, it has allowed  
12 a percentage of CWIP in the rate base.

13 Q. When you testified previously that the Texas  
14 Utility Commission was rated one of the better commis-  
15 sions across the country, is that rated on some objective  
16 standard, like return of -- well, what do they call it --  
17 the amount necessary to maintain the financial integrity  
18 of the company percentagewise or what have you?

19 Is there an objective standard that it's  
20 rated as, or is it again subjective?

21 A. I think it's probably -- and I will surmise  
22 here -- rated on the basis of return on common equity,  
23 overall return on investment, internal cash generation  
24 allowed and the coverages that are allowed to be earned  
25 on the senior securities and the timeliness of the rate

3-30 1 decisions themselves.

2 There are many things that I would surmise  
3 would go into that rating.

4 Q And, obviously -- I shouldn't say "obviously."  
5 If a Public Utility Commission would allow higher return  
6 of equity, would that necessarily mean that a utility  
7 could sell its common stock better?

8 A Well, certainly, the better return -- Cer-  
9 tainly, a utility with a better return has a better likeli-  
10 hood of selling its stock at a higher price than one that  
11 has a lesser return because the investor wants to be  
12 compensated for the risk he perceives he's taking.

13 And that's where his money is going to go,  
14 so he'll pay a higher price for a higher return.

15 Q You indicate on Page 9 of your testimony that  
16 "The Company's financial forecasts are based upon the  
17 assumption of a targeted return on equity of 15.8%."

18 Has that targeted return changed in recent  
19 years?

20 A Well, that targeted return that we used in  
21 that projection was based upon what was allowed by the  
22 Public Utility Commission in its last rate order.

23 Q Has that return of equity been increasing or  
24 decreasing in recent years?

25 A So far as the allowable it has been increasing.

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Q And why has it been increasing?

A I would assume that it is because that the interest rates on senior securities have been going up. The yield and return that an equity investor demands has been going up.

And the Utility Commission has been responding to that.

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1 Q In light of the most recent high interest rates  
2 in the bond market, has HL&P changed its financing forecasts  
3 to reflect those higher interest rates?

4 A Certainly we have run into our forecasts what  
5 we perceive to be the rates that might have to be paid to  
6 sell the securities.

7 Q On page 4 of your testimony you show a comparison  
8 of construction expansions from the time period 1970 to  
9 1980, and then show a comparison of 1981 to 1991.

10 Obviously, the period 1981 to 1991 construction  
11 expansions are projected.

12 My question is simple, that when you made  
13 projections in 1970, how did your actual expenditures  
14 compare to the projections in 1970 for the 1970-1980  
15 time period: Are you aware of those?

16 A I don't recall. I cannot give you an answer  
17 right at the moment on how they compared with the actuals.

18 Q Could you explain to us what AFDC is?

19 A It's allowance for funds used during  
20 construction, and that is the cost of the money that you  
21 have committed to the construction program or the balance  
22 in construction work in progress.

23 It's a carrying charge. It's made up of both  
24 an equity cost component as well as a debt cost  
25 component.

1 Q And so your table where you show internally  
2 generated funds less AFDC, that AFDC component --

3 MR. DOHERTY: Excuse me, Counsel. Where are  
4 you?

5 MR. BLACK: His Exhibit 1 attached to his  
6 testimony.

7 MR. DOHERTY: Thank you.

8 BY MR. BLACK:

9 Q The AFDC component is simply the carrying  
10 charges of debt and equity; is that basically what that  
11 stands for?

12 A Of the funds that are invested in construction.

13 Q So if you have simply like a construction loan  
14 or something like that, it's a carrying charge on that?

15 A Well, you have an amount invested and,  
16 certainly, you are having to pay a return to someone for  
17 the use of their money on those funds; and during the  
18 period of time that it is not actually in service and  
19 earning, but during the construction program, you make a  
20 charge in there as to what the funds that you have invested  
21 in the construction are costing you.

22 The reason it's deducted on that statement is  
23 that we have on that statement net income and allowance  
24 for funds used during construction is a credit on the  
25 income statement and would serve to add to the net income

1 and to get to what your cash net income was you have to  
2 deduct the AFUDC or AFDC.

3 Q Now, we've heard testimony previously in this  
4 proceeding with respect to the completion deferral date  
5 of the Allens Creek Project.

6 Could you explain why Allens Creek was -- why  
7 the construction period was stretched out for Allens  
8 Creek, insofar as the cash construction funds?

9 A Well, it was a means of adjusting the  
10 construction expenditures for that timeframe to one which  
11 could be financed during the timeframe that the  
12 construction was being performed.

13 Not only did we delay or stretch out the  
14 completion date of Allens Creek, we also stretched out  
15 the completion dates of the Limestone plant and the Site X  
16 plant

17 Q Okay. To the extent that you delay completion  
18 of Limestone or Allens Creek, you in fact have to make  
19 purchases of power during those periods of stretch-out.

20 How does the purchase of power and the funds  
21 that you would be using for that purchase of power compare  
22 to the funds that you may be using to complete or stretch  
23 out the construction project?

24 A Well, the funds that would be used to pay for  
25 the purchased power would be recovered through rates as

4-4

1 you are paying for them.

2 The demand charge would be included in the cost  
3 of service and would recover the other costs, the energy  
4 costs, as you bill your customers.

5 Q But isn't it in fact true to a limited extent  
6 that you are also recovering the cost of construction  
7 through rates?

8 A If you are in fact putting your construction  
9 work in progress or a portion of your construction work in  
10 progress in rate base, yes, you are.

11 However, the thing that we need at that point in  
12 time that we are purchasing other power is the capacity and  
13 the ability to purchase the power is one that we can  
14 accomplish during that timeframe as opposed to trying to  
15 secure sufficient funds to get all of the plants that would  
16 be required in service within the time frame to furnish  
17 that power.

18 Q I guess the thing that I'm somewhat confused  
19 at and I don't remember the exact figures, but let's say  
20 that in the year 1990 you for needed capacity had to  
21 purchase power from the City of Austin or from the City of  
22 San Antonio.

23 That purchase of power to make up needed  
24 capacity would cost you X amount of dollars. Do you  
25 remember what that X amount of dollars was?

4-5

1 A. No, I do not.

2 Q My question simply would be when you compare that  
3 purchase of power at X amount of dollars, wouldn't it in  
4 fact cost you less to put that money in Allens Creek  
5 construction so that you can complete it by 1989 so that  
6 you wouldn't have to purchase X amount of dollars of power  
7 in 1990?

8 Do you understand where I'm coming from?

9 It's confusing in my mind. I'm probably not relaying it  
10 too well as a question to you, but I do not understand how  
11 you can say that -- let's say if you had to purchase  
12 \$400 million worth of power in 1990, why you couldn't  
13 front load that into a construction to complete Allens  
14 Creek by 1989 so that you wouldn't have to purchase power  
15 in 1990?

16 A Well, certainly, we would prefer to build a  
17 plant to serve, but it gets to be a point of whether or not  
18 you can pay for the cost of the plant during the timeframe  
19 that you would have to to get it on line to preclude you  
20 paying for the purchased power.

21 So purchased power is a good interim step to take  
22 so that you can orderly do your construction and orderly do  
23 your financing.

24 Q So in other words, you are saying that assuming  
25 as a hypothetical that basically for the time period, let's

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1 say 1985 through 1988, HL&P's funds were saturated during  
 2 that time so that you couldn't in fact put more money into  
 3 Allens Creek or any other project to complete it more  
 4 expeditiously? Is that a fair statement?

5 A Well, we did take a look at the other program  
 6 and determined that the needs were more than could be  
 7 financed during that time period and the optimum  
 8 conservation was to buy purchased power, and it's my  
 9 recollection that the purchased power, even though I can't  
 10 give you the exact figures, is one that if you look at  
 11 what the demand charge is, is very reasonable so far as  
 12 what the plant investment would be and the carrying charge  
 13 on that plant investment.

14 So I think that what we can say here is that  
 15 the purchased power is one which is a reasonable way of  
 16 correcting a situation that needed to be corrected, and  
 17 one which will be advantageous to our ratepayers.

18 Q If situations would change in the mid-1980's  
 19 whereby HL&P would have more money internally available,  
 20 would it seek to expedite the construction program  
 21 schedule or would it seek to play a little bit more  
 22 conservative role with respect to its construction programs,  
 23 or would it be a combination of looking at what your  
 24 demand is and looking at what your purchase agreements  
 25 were and balancing everything?



1 A Well, I'm not quite sure that I understand what  
2 you mean about a more conservative role in its construction  
3 program.

4 Q I mean keeping things on the program as set up  
5 right now with completion by 1991, as opposed to trying to  
6 expedite a program and put Allens Creek on line as  
7 originally scheduled, in 1989, let's say.

8 A If it could be accelerated and, certainly, if  
9 the cash generation was such that it could, it would be  
10 to the advantage of all concerned to expedite that  
11 construction program.

12 MR. BLACK: That's all the questions I have.

13 JUDGE WOLFE: Mr. Baker.

14 CROSS-EXAMINATION

15 BY MR. BAKER:

16 Q On page 2 of your testimony you refer to a  
17 construction cost estimate of 2.09 billion, excluding  
18 AFUDC.

19 A Yes.

20 Q Does that figure include cost of transmission,  
21 or what does that figure include, just purely the  
22 construction of the plant itself?

23 A That is the cost of the plant, the structures,  
24 the reactor and turbine and all related components.

25 Q So that that's exclusive of transmission costs,

4-8

1 transmission network costs, rather, and nuclear fueling  
2 process?

3 A. That is the -- That is exclusive of nuclear  
4 fueling process, that is right.

5 Q. Could you tell us -- that estimate was made  
6 when, at what date?

7 A. That estimate was made and completed in March  
8 of this year.

9 Q. When was the last previous estimate of  
10 construction costs made?

11 A. It would have been made in late 1980, around  
12 November.

13 Q. So November 1980, to your best recollection?

14 A. Yes.

15 Q. And do you recall what that estimate of  
16 construction costs was?

17 A. I think it was a billion eight hundred million  
18 or in that area.

19 Q. 1.8?

20 A. Yes.

21 Q. What was the comparable figure, say, for 1976  
22 when this plant was proposed or was actually reactivated  
23 as a single reactor unit?

24 A. I don't recall.

25 Q. Was it in the neighborhood of a billion dollars?

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4-9

1 A. Since I don't recall, I don't know.

2 Q Are you familiar with the figure that was  
3 published in the SER, the NRC Report, for construction  
4 costs on this facility?

5 A. What is the SER?

6 Q Safety Evaluation Report. That's where the  
7 financial qualifications --

8 A. I was familiar with it at the time, but I do  
9 not recollect what it was.

10 Q Does the figure 1.05 billion ring a bell?

11 A. If that's the figure that's in there,  
12 Mr. Baker, I will accept that. I don't recall.

13 Q I think the people that read the SER here and  
14 are familiar with it will be knowledgeable of that.

15 MR. ROZZELL: Your Honor, I'd ask that that  
16 comment of Counsel be stricken from the record.

17 JUDGE WOLFE: I'll strike that, Mr. Baker. I  
18 would suggest that if you have the SER and the paragraph  
19 or paragraphs you're referring to to show to the witness  
20 to refresh his recollection, I think that's the way to  
21 go about it.

22 MR. BAKER: All right. Thank you, sir.

23 I didn't bring the SER with me. I did not  
24 anticipate that there would be a lapse of memory as to  
25 what the plant cost several years ago.

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JUDGE WOLFE: All right. Do other Counsel or parties have a copy of the SER?

MR. DOHERTY: I'm trying to find it right now, Mr. Chairman.

MR. BAKER: Do I need to show it to him?

JUDGE WOLFE: Just identify what you are showing to him and the date of it, please.

MR. BAKER: Okay. This is a Safety Evaluation Report prepared by the NRC based on data provided by Houston Lighting & Power. It's dated March 1979.

Construction cost estimates here --

JUDGE WOLFE: Well, show it to the witness now and have him --

MR. BAKER: All right.

BY MR. BAKER:

Q Would you read here, Section 20.2, Construction Cost Estimates, down through there.

(Document handed to witness.)

A (Witness complied by reading the document.)

Yes, that figure was in there.

Q Is that figure an accurate representation of the construction cost estimates as of March 1979, to the best of your knowledge?

A As of that date, to the best of my knowledge it would have been an accurate figure.

4-11

1 Q That represents -- The difference between  
2 1.05 billion and 2.09 billion, which represents a rough  
3 doubling of costs in that period from March 1979 to  
4 March 1981, is that a figure that you are happy with or  
5 that your company likes to see in its construction projects?

6 A Certainly we are not happy with a figure that  
7 large, but that is our best estimate, and it also takes  
8 into consideration a two-year change in the completion date  
9 of that facility.

10 Q What would you say is the major factor in the  
11 increase over that period? Is it simply the deferral of  
12 construction or are there other factors involved?

13 A From the 1.8 billion to the 2.090, it is  
14 escalation cost. I cannot tell you what the major  
15 component of cost is from the 1.05 to the 1.8.

16 Q At the time that the -- say, in March 1980 when  
17 the figure was 1.8 billion, was it brought to your  
18 attention then or were you aware that that was rather a  
19 large increase over a one-year period, from March 1979 to  
20 March 1980?

21 A Yes, we knew that it was a large increase,  
22 Mr. Baker.

23 Q But you're not prepared now to tell us where  
24 that \$800 million roughly came from?

25 A Some of it was escalation, and I believe there

4-12

1 was more engineering that had been done on that project, and  
2 they had a better definitive estimate.

3 Q What is the status of the engineering that's  
4 been done on the project now, how much is complete?

5 A I believe about 60 percent of that is complete,  
6 or was the last time that I talked with the construction  
7 people.

8 Q And what percentage had been completed in  
9 March of '79?

10 A I do not know that.

11 Q Are you fairly confident in this 2.09 billion  
12 figure, that that will not rise over the course of the  
13 construction?

14 A We think that based upon what we know now that  
15 that is a reasonable figure for completion.

16 Q Did you think in 1979 that 1.05 billion was  
17 a reasonable figure, to use your words?

18 A So far as I know, based upon what we knew then,  
19 yes.

20 Q Do you think it is possible that over the  
21 next decade that this 2.09 billion estimate could also  
22 escalate?

23 A I think it could escalate.

24 Q Would you care to place an upper limit on how  
25 far it might escalate?



4-13

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1 A I cannot put an upper limit on there. It also  
2 is a possibility that it could de-escalate.

3 Q Are you aware of any nuclear construction  
4 projects that any utility has been involved in in this  
5 country that the costs have de-escalated over the cost  
6 of construction?

7 A No, nor any fossil fuel, either.

8 Q Fair enough.

9 I'd like to also talk about the South Texas  
10 Project because of the fact that the financing of that  
11 project and the amount of money you have to spend there  
12 I think will put some constraints on the amount of money  
13 that you have to spend at Allens Creek.

14 Do you happen to recall what the construction  
15 costs estimated for South Texas Project was at its  
16 original inception, approximately ten years ago?

17 A I think it was a little over a billion dollars.

18 Q And when was the most recent cost estimate made  
19 for that project?

20 A 1979.

21 Q What was that figure?

22 A 2.7 billion.

23 Q Do you know from referring with Counsel, with  
24 the contractor there, or with other officers of the company,  
25 if there is a new cost estimate in preparation now?

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A. It's my understanding there's a new costing schedule in preparation.

Q. Do you have any information as to, roughly, what that figure might be?

A. I do not.

Q. Are you aware of a report in a newspaper attributed to the Mayor of San Antonio to the effect that that figure was going to be roughly 3.5 billion?

MR. ROZZELL: Objection, Your honor.

I don't see how the witness' familiarity with reports in the newspaper are material or relevant to this inquiry.

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4-15

1 MR. BAKER: Well, the City of San Antonio is  
2 a partner in that project and the Mayor is fairly well  
3 informed on the subject.

4 I'm assuming that if he knows what the cost  
5 projection is likely to be that the chief financial  
6 officer of HL&P might also have an inkling of it.

7 MR. ROZZELL: Your Honor, the witness has  
8 just testified that he didn't know what that estimate would  
9 be.

10 JUDGE WOLFE: I think I'll allow the question  
11 in the form of are you aware of what the Mayor --

12 MR. BAKER: I just asked if he read the  
13 article or was familiar with that estimate.

14 JUDGE WOLFE: Yes. Are you aware of that  
15 article and of the alleged estimate by the Mayor of  
16 San Antonio as reflected in the newspaper?

17 THE WITNESS: I'm aware that there was an  
18 article published in the San Antone newspaper that had a  
19 figure of the cost of the plant, yes; but where the figure  
20 came from, whether that's the Mayor's figure, or whatever,  
21 I have no knowledge.

22 BY MR. BAKER:

23 Q As a hypothetical matter, if the South Texas  
24 Project cost estimates were to increase to that figure,  
25 how would that affect your financing plan for Allens Creek?

4-16

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1 A Well, it would increase the over-all financing  
2 requirements of the company and it would affect all of the  
3 projects, not just Allens Creek.

4 Q Might it be necessary to further defer  
5 construction of Allens Creek or other plants?

6 A Oh, it could, but we're talking about that so  
7 far is the requirements of Houston Lighting & Power on  
8 that increased cost being about 31 percent. So the total  
9 cost increase would not totally come back against Houston  
10 Lighting & Power Company.

11 Q I believe that Houston Lighting & Power owns  
12 approximately 31 percent of that project?

13 A That is correct.

14 Q So they would be paying 31 percent of any  
15 increase next year and every year until it is completed.  
16 I would assume?

17 A Thirty-one percent of the cost, or 30.8, I  
18 believe, is the actual cost.

19 Q As a general matter, how do your fossil fuel  
20 plants cost projections, how firm are they as compared to  
21 nuclear plants?

22 A I think they are as firm as the nuclear plants.  
23 I think they are reasonable cost projections, and the  
24 best that we have.

25 Q Would you say they are as firm or firmer or --

4-17

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1 Have you suffered the same escalation in fossil fuel plant  
2 costs as you have in Allens Creek and South Texas Project?

3 A. Well, we've suffered escalation. I have not  
4 related the percentages back, Mr. Baker, but I can tell  
5 you that they have escalated.

6 Q. Do you know of any fossil fuel plants that have  
7 undergone a tripling of estimated final costs over the  
8 course of construction?

9 A. No.

10 Q. Do you know of any that have suffered doubling  
11 even?

12 A. I do not recall that there are any.

13 Q. So that a hundred percent escalation of a fossil  
14 fuel plant would be about the maximum you could expect  
15 over the construction period?

16 A. Well, it depends upon how good your estimate is.  
17 However, I would like to say that the cost of building a  
18 fossil fuel coal-fired unit has just about tripled on a  
19 kw basis.

20 We're building one right now at \$600 a kw. We  
21 expect the Site X to come in somewhere around \$1800 a kw.

22 Q. But what I was getting at -- well, never mind.

23 Again on page 2, you say that 13 percent of the  
24 estimate \$2.09 billion has already been spent and, therefore,  
25 won't have to be spent in the future.

4-18

1           Could you give me a comparable figure for last  
2 year based on last year's cost estimate and how much had  
3 been spent last year?

4           In other words, in March of 1980 how much had  
5 been spent on Allens Creek?

6           A.     Through the year 1980 I believe there was about  
7 \$250 million spent, and backing away from that, it would  
8 have probably been somewhere around 225 million.

9           I do not have the actual figure.

10          Q.     Having referred to PC testimony, that's roughly  
11 correct. Would that be roughly twelve-and-a-half percent  
12 that had been spent as of March 1980?

13          A.     I do not know. You evidently made the  
14 calculation and I will accept your calculation.

15          Q.     All right.

16                 Over the course of the last year while the  
17 construction cost has gone up from 1.8 to 2.09, the  
18 expenditures have gone up from roughly 225 million (that's  
19 your figure) to -- this is through June -- to \$282 million.

20                 You have spent \$50 million and you've only  
21 gone up half a percent on the total cost; is that correct?

22          A.     We've changed the basis, have we not?

23          Q.     What do you mean by that?

24          A.     Didn't we increase the base from March of 1980,  
25 the total completed cost?



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Q Right. Yes, the total completed cost. Yes.

That's my point here. It looks to me like, just without figuring it all up, that you have more left to spend now than you did a year ago, having spent \$50 million?

A But did we not extend the length of time for the completion of the unit, which increased the cost through escalation.

Q Okay. Let's go back to March of 1979, since there's a -- How much had you spent on Allens Creek in March of 1979?

A I do not know. I do not recall.

Q Something less than 200 million?

A If I don't recall, I cannot really speculate with you as to what it might be.

Q I believe my main point is that as you make expenditures on Allens Creek, every year you make expenditures the estimated final cost goes up, also. Is that correct?

A Not necessarily, no.

Q When you say "not necessarily," would that be no, or are you saying you don't know?

A No, it does not go up every year. It went up from March 1980 to March '81 because of the two-year stretch-out on the completion date.

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Q. Now, wait a minute. Okay.

I see now why I'm somewhat confused. You just testified that the estimated construction costs for Allens Creek in March of 1980 was \$1.8 billion?

A. I believe that's correct.

Q. Do you know Mr. R. S. Lethbetter?

A. Yes.

Q. Is he an employee of Houston Lighting & Power?

A. He is.

Q. What is his position?

A. Vice President - Controller.

Q. Okay. Has he been assigned some responsibility for responding to discovery in this proceeding?

A. Yes.

Q. Did he respond on May 22nd to a set of interrogatories from myself in this proceeding?

A. I'm sure he did.

MR. BAKER: Should I show this to the witness?

JUDGE WOLFE: You may read what you think is important into the record, if there's no objection.

MR. BAKER: All right.

BY MR. BAKER:

Q. Referring to Interrogatory No. 2, the question is, "What is the most current estimate of the final construction cost of Allens Creek Nuclear Generating

4-21

1 Station?"

2 The answer is, "The most current estimate of  
3 the final construction cost of Allens Creek Nuclear  
4 Generating Station, exclusive of AFUDC is \$1.484 billion."

5 Does that jive with your 1.8 billion figure?

6 A. Well, I was taking my 1.860 from the February  
7 3rd, 1981, prospectus that we filed. So evidently there  
8 was an estimate made subsequent to that one, Mr. Baker.

9 Q. Okay. So would you like to change your  
10 previous testimony on the final construction cost projected?

11 A. The final projected construction cost --

12 Q. Projected cost of March 1980 --

13 A. I will say that the figure that I was talking  
14 about is one that I took from the February 1981  
15 prospectus that was filed, in conjunction with a bond  
16 offer of \$125 million, and say that that is the date, and  
17 not go back and say that it relates to March of 1980.

18 Q. So in February of this year the estimate was  
19 1.8 billion; is that correct?

20 A. That was prior to going in and doing the stretch-  
21 out on the construction program, which included the four  
22 lignite units and the Allens Creek unit.

23 Q. Okay. Then from March of 1980 to February of  
24 1981, prior to the stretch-out, there was an increase from  
25 1.5 billion, roughly, to 1.8 billion.

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A. Yes.

Q. Do you know what the reason was for that increase?

A. No.

JUDGE WOLFE: So that the record is clear, Mr. Baker, the date of the Letbetter written interrogatory was what, again, please?

MR. BAKER: I was reading May 22nd from the cover letter, but let me see when Mr. Letbetter swore to it.

He swore on the 28th day of May that this information was true and correct.

JUDGE WOLFE: May of what year?

MR. BAKER: 1980.

JUDGE WOLFE: All right.

BY MR. BAKER:

Q. Referring now to page 3 of your testimony, about line 19, you say that, "A market will be maintained for the company's stocks and bonds which must be sold in order to raise the necessary external funds to finance construction." Is that correct?

A. That is correct.

Q. I'd like to discuss the external financing.

Did HL&P attempt to sell 30-year first mortgage bonds in December of 1980?

- 1 A. We did.
- 2 Q. Did you sell those 30-year bonds then?
- 3 A. We did not.
- 4 Q. Why not?
- 5 A. We didn't like the interest rate so we deferred  
6 it.
- 7 Q. Did you sell those as 30-year bonds at any point  
8 in the future?
- 9 A. No, we did not. We did not like the interest  
10 rate on 30-year bonds. We could get a better rate on  
11 10-year bonds so we sold 10-year bonds instead.
- 12 Q. When you say a "better rate," I assume you're  
13 speaking --
- 14 A. At a lower rate.
- 15 Q. -- in relative terms.  
16 What was the rate?
- 17 A. It was slightly over 14 percent.
- 18 Q. How does this compare to other bond issues  
19 that you've issued in the past?
- 20 A. It's somewhat higher than the others. However,  
21 I noticed here just the other day that Texas Power & Light  
22 sold some 30-year bonds at a better than seventeen-and-a-  
23 half percent rate.
- 24 Q. Those are 30-year bonds?
- 25 A. Thirty-year bonds.

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Q Okay, but these others are ten-year bonds?

A Ten-year bonds, that's right.

Q Is that like comparing apples and oranges in a sense?

A Well, I'm trying to give you a judgment here to make -- or a basis for making a judgment why we elected to go with the short-term rate as opposed to the longer rate on term.

Q Was in fact those ten-year bonds at 14 percent, was that the most expensive issue that HL&P has ever had in fact?

A Well, in modern-day times. I will not say that that's the highest rate bonds were ever sold.

Q Okay, but since you've been at the company?

A Presently outstanding.

Q What had been the trend in the interest rates on first mortgage bonds issued by HL&P over, say, the last six issues?

A It's been increasing.

Q Increasing every time?

A Yes.

In fact we can go all the way back to the mid-sixties and say that it has been increasing.

Q Do you expect this trend to continue?

A Hopefully, we would think that interest rates

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1 would become more reasonable, and if inflation can in  
2 fact be brought under control, we would expect that to be  
3 done.

4 Q I'm sure we all hope that, but do you have any  
5 assurance that it will go down?

6 A. No, I do not, Mr. Baker.

7 Q So it's possible that you will be issuing bonds  
8 in the future at continually increasing rates, based on  
9 historical performance?

10 A. It's very possible, but not just based on  
11 historical performance; but based on what the economic  
12 conditions are.

13 Q All right. I'd refer you to these responses to  
14 requests for additional financial information filed by  
15 Mr. Goldberg August 12th.

16 You previously said that this was prepared under  
17 your direction.

18 There's a projection here for -- there's no  
19 page number, but Question 3A, the Answer 3A, the  
20 assumption of the point on which the source of fund  
21 statement is based.

22 Number three, long and short term interest  
23 rates on first mortgage bonds. Have you found that yet?

24 A. Yes.

25 Q All right, I just now found it myself.

4-26

1           You project 1981 it will be thirteen-and-a-half  
2 percent. When you say "first mortgage bonds," are those  
3 30-year bonds or 10-year bonds?

4           A.     It could be either.

5           Q.     It could be either. So you are projecting for  
6 1981 interest rates of 13.5 percent.

7           A.     That's what we were projecting, yes.

8           Q.     How does that compare to your last bond issue?

9           A.     It's slightly lower.

10          Q.     All right. Well, without belaboring it, you  
11 say 1982, it will go down to 12.7; 1983, 11.8; 1984  
12 through 1991, it will be at 11 percent.

13                   Are those figures accurate or --

14          A.     They are our best estimates of what rates may  
15 be.

16          Q.     So you are projecting in your financial  
17 update information a, I should say, instantaneous downturn  
18 in interest rates; is that correct?

19          A.     We are projecting a decline in interest rates.

20          Q.     Okay. If the figures, say, went up from --  
21 instead of going down a percent and a half, went up a  
22 percent and a half, what effect roughly would that have on  
23 your financial update in terms of ability to finance  
24 through external funding?

25          A.     Assuming that the PUC was responsive to let us

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1 recover the cost, it would increase the amount of billings  
2 that would be necessary to recover the increased rates, so  
3 that we could continue to finance the program.

4 Q Does that mean you would be switching over from  
5 external funding to internal funding?

6 A No. It means that we would still be doing  
7 external funding because we don't have the bases for  
8 switchover, as you say, but we would have to be allowed to  
9 recover the cost of those funds.

10 Q Okay. When you say that the PUC would be --  
11 you would expect them to grant rate relief?

12 A I said if they were responsive, as they have  
13 been.

14 Q All right. Did HL&P plan a new issue of  
15 preferred stock in December of 1980?

16 A It did.

17 Q What were the details of that proposed issue?

18 A It was to be a perpetual preferred issue.

19 Q And what specifically does that mean?

20 A It means that to issue the security and it  
21 remains outstanding for the life of the company.

22 Q Was that preferred stock sold?

23 A It was not.

24 Q Why not?

25 A There was not a market for it.

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Q When you say there was no market for it, what do you mean by that?

A I mean that the investor did not want to put his funds in a perpetual preferred.

Q Are you saying no one would buy it at any cost or no one would buy it at the cost you projected?

A Well, at a reasonable cost, let's say that. If you pay a sufficient price, Mr. Baker, I'm sure that you can sell anything.

MR. ROZZELL: Your Honor, might this be an appropriate time to break for lunch? If not, might we have a two-minute break?

JUDGE WOLFE: We will recess until 1:45.

(Whereupon, at 12:30 p.m., the hearing was recessed. to reconvene at 1:45 p.m., the same day.)

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AFTERNOON SESSION

1:45 p.m.

JUDGE WOLFE: All right. Mr. Baker.

BY MR. BAKER:

Q. I would like to backtrack just a little bit here, to Page 2 of your testimony. You state on Lines 18 through 20 that "Through June 30, 1981 we had already spent approximately 13%" of the total construction cost.

A. Yes.

Q. Now, when I was cross-examining you about that, I was somewhat confused by the \$1.8 billion as opposed to the \$1.485, so I'd like to repeat some of my questions.

First of all, what is the meaning of -- What is the point of saying, "... we had already spent approximately 13% of this amount ..."?

Is that an attempt on your part to show that there is -- that that total cost does not have to be financed; and, therefore, you're gaining ground on the project?

A. The point is to show that of the total estimated costs we've already incurred or paid for \$282 million.

Q. Okay. I've had a chance over the break to run through the figures. As of March 1980, at that time you say that HL&P had spent approximately \$225 million.

5-3  
1 A. I said that if I backtracked, I thought it would  
2 be in that area, I believe.

3 Q. I believe \$215 million is probably closer.  
4 That was provided to the PUC. But I won't quibble over  
5 what --

6 A. I'll accept it --

7 Q. -- paltry \$10 million.

8 Now, we established, I believe, that at March  
9 30th, 1980 your construction estimate was \$1.485 billion?

10 A. That is the figure that you have there, yes.

11 Q. Well, that is the figure that Mr. Letbetter  
12 provided to me.

13 A. He provided that to you in May, was it not?

14 Q. Right. But his discovery -- Say, second part of  
15 that interrogatory was -- when was that figure prepared.  
16 He testified it was March.

17 MR. ROZZELL: Your Honor, rather than making  
18 an objection, perhaps I can make a suggestion here because  
19 I have no quarrel with Mr. Baker's statement. But I  
20 think for the purposes of clarifying the record, that the  
21 interrogatory that he referred to might best be read  
22 into the record, so that we don't have testimony of the  
23 party for that particular point.

24 JUDGE WOLFE: I thought Mr. Baker had read a  
25 portion at least of that interrogatory --



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MR. ROZZELL: He has read a portion of it. I didn't believe that the portion that he referred to as to the date of the estimate had been read into the record.

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You may --

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JUDGE WOLFE: All right. Why don't you do that? That's an objection on your part. Certainly you have -- You're entitled to read any other pertinent or relevant part of that interrogatory into the record, Mr. Rozzell.

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MR. ROZZELL: Okay. Mr. Baker, I don't have that in front of me; can I borrow your copy a second?

13  
MR. BAKER: Certainly.

14  
(Document given to Mr. Rozzell.)

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MR. ROZZELL: Your Honor, I'd like to read into the record, if I may now, an answer to an interrogatory propounded by Mr. Bryan Baker. The answer was prepared by Mr. Letbetter of Houston Lighting & Power.

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22  
Previously Mr. Baker has read into the record an answer in which Mr. Letbetter gave a current estimate of the final construction costs of the Allens Creek project, that estimate being \$1,484,783,000.

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At Page 3, Paragraph (b) of those answers to the interrogatory appears the following statement: "The most current estimate was prepared in January 1980 by

1 employees of the Project Management Department of the  
2 Applicant under the direction of the Project Manager,  
3 Paul Horn."

4 MR. BAKER: I appreciate counsel helping me over  
5 that difficult pass I was in there.

6 BY MR. BAKER:

7 Q Now, that January 1980 figure, I assume that  
8 was the figure that was current in March of 1980 also,  
9 so we're comparing the same month to month, right?

10 A (Nods head.)

11 Q Will the record show that he nodded in the  
12 affirmative?

13 A I didn't realize that was a question.

14 Q Yes. That January 1980 figure of \$1.485,  
15 that is the figure that was current in March of 1980?

16 A Do you want to say was it not, or are you  
17 making a statement? I'm trying to find out, sir?

18 Q I'm asking --

19 JUDGE CHEATUM: Was that a question?

20 MR. BAKER: Yes.

21 BY MR. BAKER:

22 Q Was that not the figure that was current in  
23 March of 1980 also?

24 A I'm sure that it was.

25 Q All right. Thank you.

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I've just run that off on my calculator here.  
And would you argue -- Would you agree that \$225 million is approximately 14.5% of \$1.485 billion?

A. I would accept your calculation.

Q. Okay. So that last March you had already spent something over 14% of the total construction costs estimated at that time. And as of June 1980 -- June 1981, pardon me -- you testified you're standing at 13% of the total estimated construction cost; is that correct?

A. That is what I testified, yes.

Q. Okay. Would you agree that it sounds like you're losing ground with regard to this project, in terms of being able to pay for it?

MR. ROZZELL: Your Honor, I object to that particular question. I believe that Mr. Baker has established the facts necessary for him to make whatever arguments he deems appropriate in his brief.

I think that that question is not only argumentative, but irrelevant.

MR. BAKER: I'm not sure I'm familiar with the legal definition of being argumentative. I'm trying not to be. But -- I'm just trying to find out what the meaning of this 13% figure is, if it means that they've already -- that they're getting somewhere.

In other words, it sounds like that they already

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1 have a good part of the project financed. What I'm trying  
2 to establish is whether or not in fact they're losing  
3 ground.

4 MR. ROZZELL: Mr. Baker, the witness has told  
5 you that his testimony is directed toward the point that  
6 the entire cost of the Allens Creek project will not have  
7 to be financed in the future because some amount of that  
8 cost has already been incurred and has, in fact, been  
9 paid by the Applicant.

10 You have brought out through your cross-  
11 examination that different amounts that have been spent  
12 compare -- or provide various percentages of the total  
13 estimate -- varying total estimated costs of the pro-  
14 ject.

15 Now, what you do with those figures, what con-  
16 clusions you draw from those figures, I think is best  
17 left to the presentation of your position and should not  
18 be the subject of argumentative questioning of this wit-  
19 ness.

20 And it's on that basis that I'm objecting.

21 MR. BAKER: Am I not allowed to ask the witness  
22 to draw a conclusion from those figures?

23 MR. ROZZELL: We'll let the Chairman rule on  
24 that.

25 (Bench conference.)

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JUDGE WOLFE: I think the witness' earlier response to your questioning has already indicated a basis or reasons for that difference between what the -- the 13% and the 14-some percentage.

So that being on the record, posing that question to him I think is being argumentative.

BY MR. BAKER:

Q Well, to get away from percentages here --

JUDGE WOLFE: And I will sustain the objection.

MR. BAKER: Certainly. I'll move on.

BY MR. BAKER:

Q Getting away from the percentages, I'd like to just talk about the gross amount left to be spent. We may have covered that sufficiently, but my calculations show that at March 1980, with a \$1.485 billion final cost projected and \$225 million expended, roughly, that would leave you with \$1.27 billion left to raise for this project; is that roughly correct?

A That sounds like the subtraction. It would be reasonable.

Q Okay. And at March of 1981, with a -- something over \$250 million spent -- I don't think that exact figure is in the record -- and a projected cost of \$2.09 billion, you had at that time \$1.81 billion left to spend. Is that roughly correct?

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A. That is roughly correct, as a result of a two-year stretchout in the completion of that project.

Q. Okay. It's your position that that \$600 million difference between the two figures -- I should say \$550 million difference -- that's between the \$1.27 billion left and the \$1.81 billion left -- that's completely a result of the two-year construction period stretchout?

A. I'm suggesting it is primarily a result of that, yes, sir.

Q. Okay, I'll move on then.

I believe when we recessed, we were discussing the HL&P issue of preferred stock in December of 1980. You testified that there was no market for that stock; is that correct, at that time?

A. For the perpetual preferred stock, that is correct.

Q. All right.

A. And I might add that when you have no market, that means at a reasonable cost.

Q. Okay. How do you determine what is or is not a reasonable cost for stocks that you issue?

A. You compare it with what has been the cost of the typical kind of security previously as opposed to what the investor demands now.



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Q Okay. Do you expect to be issuing any preferred stock in the near future or, say, within the next year?

A Over the next 12 months? We would hope that we would be able to, yes.

Q Has the market improved from last December to now sufficiently that you could issue preferred stocks, say, this month or next month?

A There is still not a very good market for perpetual preferred stock. Your investor now is looking for a preferred stock that has a sinking fund, which means that it has a terminal life instead of one that is indeterminable.

Q Are you prepared to venture a guess as to when conditions might improve sufficiently to allow you to issue new stock?

A No, sir.

Q Possibly you will not be able to issue any stock over the period of construction of this plant, say until 1991?

A Well, I don't think I would go that far.

Q Well, I don't think the question was -- I merely asked if it was possible that you would not be able to.

A I wouldn't go that far, to agree that it is possible.

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Q. Okay. Were the situation with preferred stock to continue over the construction period, how would that affect your financing plan as outlined?

A. Well, we're talking about types of preferred. And one is that we're unable to issue the perpetual preferred, which is the thing that we prefer to do.

If the perpetual preferred market is not there and we need the preferred stock, we will certainly seriously consider -- and probably issue a preferred that has a sinking fund attached to it so that it would be refundable, just as is a dead issue.

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1 BY MR. BAKER:

2 Q Has HL&P issued that type of stock in the past?

3 A We have not.

4 Q Are you fairly confident that you could sell  
5 that sort of stock at a reasonable price?

6 A Yes.

7 Q There's no doubt in your mind about that?

8 A It would go at the current rate that's being  
9 paid on fixed income type securities. I think they're  
10 sort of on the high side right now.

11 Q I believe you mentioned on voir dire that you're  
12 an officer of Houston Industries, Incorporated; is that  
13 correct?

14 A I did.

15 Q And that is a holding company of HL&P, correct?

16 A It is a holding company. One of the companies  
17 that it holds is HL&P, right.

18 Q What percentage of Houston Industries' assets  
19 does HL&P constitute?

20 A Over 95%.

21 Q To the average person it would seem that Houston  
22 Industries and Houston Lighting & Power would almost be  
23 synonymous then, I would think; is that correct?

24 A I don't know, sir.

25 Q Why was it felt necessary to set up a holding

1 company to, essentially, hold nothing but HL&P -- or very  
2 little besides HL&P?

3 MR. ROZZELL: Your Honor, I'm going to object  
4 to that question. First of all, it's not relevant as to  
5 this particular contention, which is the assurances that  
6 HL&P has to -- that it can adequately finance the Allens  
7 Creek Project.

8 But I also have a second ground, and I think  
9 that that calls for a legal conclusion on the part of the  
10 witness.

11 MR. BAKER: I would think that the financial  
12 health of Houston Industries is very relevant to the  
13 financial health of HL&P.

14 MR. ROZZELL: Well, I don't believe that was  
15 your question, Mr. Baker. Your question was: Why was it  
16 that a holding company was established to hold the assets  
17 of HL&P?

18 (Bench conference.)

19 JUDGE WOLFE: I'll sustain that objection.  
20 However, if you wish to plumb or probe more closely what  
21 you're trying to get at, I think that line of questioning  
22 would be --

23 MR. BAKER: I don't intend to give up. I'll  
24 try to rephrase the question in an acceptable way.

25 JUDGE WOLFE: All right.

5-14

1 BY MR. BAKER:

2 Q Would you say that the financial health of  
3 Houston Industries would be crucial to the financial health  
4 of HL&P, or that it would be closely related to the  
5 financial health of HL&P?

6 A Certainly, Houston Industries must sell common  
7 stock if it's going to provide the equity funds that will  
8 be required for Houston Lighting.

9 And it goes without saying that its health --  
10 financial health has got to be good.

11 Q I'm curious about -- I've looked through your  
12 testimony briefly, and I find no reference in it to  
13 Houston Industries. And I'm curious why that is, if the  
14 issuance of common stock by Houston Industries is so  
15 crucial, why in your testimony you don't refer to Houston  
16 Industries or its financial condition in your testimony.

17 A What is the question?

18 Q My question is: Why -- Given what you've  
19 just testified to, that the issuance of common stock  
20 by Houston Industries is important to the financial health  
21 of HL&P, why the finances of Houston Industries are not --  
22 in fact, the very name of Houston Industries is not men-  
23 tioned in your testimony.

24 It seems like somewhat of an oversight in trying  
25 to outline the financial picture for HL&P. I'm curious

1 why it was left out.

2 A. Well, we were talking about the financial cap-  
3 ability of Houston Lighting. And I think that we have  
4 covered the financial capability of Houston Lighting.

5 Q. But you just said that part of the financial  
6 capabilities of -- I mean, that the financial health of  
7 HL&P depends upon the issuance of common stock by Houston  
8 Industries; is that not correct?

9 A. To put the equity portion of the funds in,  
10 yes. And its ability to sell the common stock.

11 Q. Is there any way that Houston Industries could  
12 cause financial problems for HL&P?

13 MR. ROZZELL: Your Honor, I'm going to object  
14 to the form of that question as being impermissibly vague.  
15 Perhaps Mr. Baker could be a little bit more specific  
16 as to the sorts of problems he has in mind.

17 MR. BAKER: We've been discussing issuance of  
18 common stock by Houston Industries, which he has testi-  
19 fied that it's important to Houston Lighting & Power.

20 JUDGE WOLFE: The objection is as to the form  
21 of the question, that it's too vague.

22 I'll sustain that. If you could be more  
23 specific as to your question.

24 BY MR. BAKER:

25 Q. If in the future Houston Industries has



5-16

1 difficulty in the issuance of common stock and the sale  
2 of common stock, would that cause financial problems for  
3 Houston Lighting & Power?

4 A. Assuming those conditions, yes, that you could  
5 not sell the stock.

6 Q. Okay. Has Houston Industries -- Well, when  
7 was the last issue of common stock by Houston Industries?

8 A. March of 1981.

9 Q. What was the price per share of that stock?  
10 Do you recall?

11 A. It was around \$22 or \$23 at that time, I  
12 believe.

13 Q. How --

14 A. I beg your pardon. That was before the split.  
15 I don't recall offhand.

16 Q. Would the -- Am I permitted to refresh --  
17 Would the figure \$24.39 a share be --

18 A. That is the correct figure, yes.

19 Q. How does that compare to common stock values  
20 over the last five years?

21 A. We have been selling it somewhere in the area  
22 about 75 to 90 percent of book over the last several  
23 years. Only one time out of -- and I believe that was  
24 in 1976 -- did we sell stock wherein the price of the  
25 stock was over a hundred percent of book value.

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Q This latest issue, what was the market to book ratio of that issue?

A I believe it was about 75 or 76 percent.

Q Is it possible that it was more like 70 percent?

A It was in that area, Mr. Baker.

Q Was that, in fact, the lowest price for an HI common stock sale since 1976?

A I think that's correct.

Q Okay. Now, what has been the trend as far as price per share over the last six sales of common stock by Houston Industries? Has it been upward, downward, steady?

A Oh, it has been sort of up and down. Some we've sold at a little higher price than others. This last one happened to be at a point in time, considering the yield and the interest rate and all, that it was less than what we had gotten in earlier sales.

However, I might add that it was still above the average so far if you look at all of the utility stocks. It was selling at a higher than the average of all of the others on a price -- market price per book ratio.

Q I believe you said on voir dire that you had testified recently in the Public Utility Commission, HL&P

1 rate increase, I believe it's Docket 3950, PUC docket.

2 I may be wrong about that.

3 Is that correct, that you had submitted testimony  
4 in July?

5 A. I have.

6 Q. And did you testify at that time that your latest  
7 issue of common stock by Houston Industries was the sixth  
8 consecutive common stock sale below book value?

9 A. What page are you on?

10 Q. I'm reading that from Page 5 of your PUC testi-  
11 mony.

12 A. That is correct.

13 Q. And did you also testify that the price re-  
14 ceived at each of the six previous stock sales had been  
15 less than -- excuse me.

16 Did you testify that the price received at each  
17 of the six stock sales had been less than that received  
18 at the previous sale?

19 A. That is correct.

20 Q. So I'll repeat my question: What has been  
21 the trend in stock prices of Houston Industries over the  
22 last six stock sales?

23 A. It has been downward.

24 Q. Would you consider this trend alarming?

25 A. I consider the trend one that we are attempting

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to correct. And that is the reason that we have been before the PUC as frequently as we have, looking for additional rate increases.

I might add that at the present time that the price of the stock on the market compared with book is somewhere near 80%.

Q Did you testify before the Public Utility Commission that this trend was alarming?

A. You have my testimony here.

Q I'll refer you to the top of Page 6, the PUC testimony now?

A. Well, what we have said here is that if it continues that what we have a problem with is the continued dilution of the shareholders' equity.

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1 BY MR. BAKER:

2 Q Did you testify that if this trend is not re-  
3 versed, you may be unsuccessful in raising the capital  
4 required to support the large construction program?

5 A We did.

6 Q What are the implications of selling Houston  
7 Industries' common stock below book value?

8 A It's the continued dilution of the existing  
9 shareholders' equity, and as the potential investor  
10 continues to perceive that that is going to occur, he is  
11 less likely to want to invest. And if he does, he wants  
12 a higher return on his money.

13 Q Does that dilution have an effect on your  
14 ability to raise funds from institutional investors?

15 A It has.

16 Q What has that effect been?

17 A They have had less interest in buying the  
18 shares.

19 Q Would you quantify that, say, compare --  
20 How do the -- the percentage of institutional buyers buying  
21 your stock in the last issue compare with previous issues,  
22 say the 1973 issue?

23 A It's down substantially.

24 Q Is it down from 70% to 30%?

25 A Something on that order. I might also add that

1 the book/price ratio was better than 200% of the -- the  
2 market to book was better than 200% at that particular  
3 point in 1973. The earnings were much better on the  
4 company.

5 Q So that that situation, as far as market to  
6 book, has significantly deteriorated?

7 A Oh, it has.

8 Q -- from 200% to 70%?

9 A It deteriorated very rapidly after 1973.

10 Q Do you look -- Are you concerned that in-  
11 dividuals -- retail investors might follow the lead of  
12 institutional investors and resist sales of -- resist  
13 buying your stock?

14 A I think that the retail purchaser is interested  
15 in a return. And I might also say that the yield -- cash  
16 yield on our stock is substantially less than the general  
17 utility market as a whole. And certainly as we would be  
18 in a position to increase dividends and continue the  
19 payout raising that yield, there would be a greater demand  
20 for that stock, so that there would be a market for it.

21 Also, I would have to say that we are one of the  
22 lowest on our payout of dividends to earnings of the  
23 companies. And there has been a good market for that  
24 stock on those bases.

25 But if we paid 13 or better percent yield, as a



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1 number of the utilities do, and it being a tax-free  
2 dividend in a number of instances, because of return  
3 of capital, there would be an improvement.

4 But they, too, are selling below book.

5 Q You say if you were able to pay a 1% dividend.  
6 Can you pay such a dividend and still maintain the con-  
7 struction program?

8 A I said if we paid that. I didn't say if we were  
9 or if we could. I just said if we did, as the others  
10 did.

11 Q But my question is: Are you able to pay that  
12 kind of dividend?

13 A I --

14 Q -- and still maintain your construction program?

15 A If we got adequate earnings, certainly we could  
16 pay that. Only earnings slightly better than 13%, only  
17 invested capital, no.

18 And the invested capital being common equity.

19 Q Let me ask you -- I believe you may have testi-  
20 fied under cross-examination by Mr. Black, but I'd ask  
21 again: Which came first, the downgrading of bonds by  
22 Moody's or the deferral of construction programs?

23 A The downgrading by Moody's.

24 Q So --

25 A If we're talking about the extension of the

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1 completion dates of the four lignite units and the Allens  
2 Creek unit.

3 Q Would it be fair to say that the deferral of the  
4 construction program then was a direct result of the  
5 derating of your bonds by Moody's?

6 A I would say that that was one of the bases  
7 for making that determination. Another basis was that  
8 when we had an opportunity to look at the size of the  
9 outside financing requirements, we would have made that  
10 change without Moody's.

11 This is one of the things that I talked with  
12 the Moody's agency about at the time that I was there,  
13 that we were going to have to review that program and  
14 make changes in it.

15 I believe I testified to that earlier this  
16 morning.

17 Q Yes, I just wanted to clarify it in my mind.

18 Do you know a Mr. Myer, who is an investment  
19 banker with Kitter-Peabody?

20 A Gene Myer?

21 Q Yes.

22 A Yes, I know Gene.

23 Q Has he testified in all of HL&P's rate cases  
24 before the Public Utility Commission?

25 A He has testified in a number of them, yes.

1 Q Did he testify in Docket No. 2676?

2 A He did.

3 JUDGE WOLFE: That's the what, Mr. Baker?

4 MR. BAKER: PUC Docket No. 2676, the 1979,  
5 I believe, rate case for HL&P.

6 JUDGE WOLFE: All right.

7 BY MR. BAKER:

8 Q Do you recall -- Did he testify there that  
9 Houston Lighting & Power was one of the top five utilities  
10 in the country, in terms of inflexibility of its financing  
11 program?

12 A I'm sure that he probably did. But I do not  
13 have his testimony, so ...

14 Q You say you're sure that he probably did. Do  
15 you agree with that assessment?

16 A If you have the testimony there, I would like  
17 for you to read it.

18 Q Certainly. I'm reading from Page 58<sup>f</sup> of the  
19 cross-examination of Gene Myer by the PUC staff.

20 MR. ROZZELL: Wait a second, excuse me. Is  
21 this a transcript page or a page from the direct testi-  
22 mony? Exactly what document is it that you're reading  
23 from, Mr. Baker?

24 MR. BAKER: I'm reading from the transcript of  
25 the hearing before the Public Utility Commission in

5-25  
1 Docket No. 2676.

2 MR. ROZZELL: Docket 2676. Okay.

3 Are you going to ask the witness to -- Well,  
4 go ahead. Proceed.

5 MR. BAKER: I was going to ask the witness  
6 questions about some of the stuff -- He asked me to  
7 read him the testimony, and I will, if that's permis-  
8 sible.

9 JUDGE WOLFE: Go ahead.

10 BY MR. BAKER:

11 Q The question he's answering is -- The question  
12 is from a member of the PUC staff. It says, "You're not  
13 implying to us that HL&P is completely inflexible in its  
14 financing plans, are you?"

15 Answer from Mr. Myer: "I would rank HL&P in the  
16 top five in this country in the utility industry so far  
17 as inflexibility as to future financing requirements. And  
18 this stems primarily from the enormous, absolute amount  
19 of dollars that this company needs to raise as it goes  
20 into the next one, two and three years. Thus, I place it  
21 easily in the top five in the least amount of flexibility.  
22 It's hard to imagine a month going by over the next two  
23 years that this company will not either be selling some  
24 form of security or completing the preparation for the  
25 next month's sale of them."

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1 Would you agree with Mr. Myer's assessment at  
2 that point in time?

3 A. Well, that was Mr. Myer's assessment. We  
4 have not had a sale or completed the sale of a security  
5 in practically each and every month since that time. So,  
6 that was Mr. Myer's opinion.

7 And he believed it, or else he wouldn't have  
8 answered that. We did have some flexibility, evidently.  
9 But he says inflexibility or ... one ... with the least  
10 amount of flexibility ... or whatever.

11 But there is still some left, Mr. Baker.

12 Q. Let me clarify. When you and Mr. Myer speak of  
13 flexibility, what exactly do you mean?

14 A. Let me speak for myself.

15 Q. Certainly.

16 A. That flexibility here gives us the ability to  
17 extend the completion dates of a project so that you can  
18 space out the financing needs of the company in a much  
19 better position than you could, if you were locked into a  
20 particular situation.

21 And this is what we have done with the re-  
22 structuring of that program ... is to get some flexibility  
23 in our ability and to finance and do the construction.

24 Q. Well, would you say that with the deferral of  
25 construction that you are now pretty free, in terms of your

1 flexibility and financing then? Or are you still right  
2 there at the edge?

3 A. There --

4 MR. ROZZELL: Your Honor, I object once again to  
5 the form of that question as being impermissibly vague.  
6 I certainly don't know what "reasonably free" means.

7 MR. BAKER: I don't think it's any more vague  
8 than the term "flexibility," but maybe -- maybe I could just  
9 say "reasonably flexible" then, instead of "reasonably  
10 free."

11 I'll rephrase the question that way, if that  
12 will deal with the objection.

13 MR. ROZZELL: Well, I have an objection to  
14 that -- to the question that has been asked. If you want  
15 to state a new question, I'll reserve judgment until I hear  
16 it.

17 JUDGE WOLFE: Well, do you wish to restate or  
18 do you wish the Board to rule on your original question?

19 MR. BAKER: I don't mind just restating it  
20 and making --

21 JUDGE WOLFE: Fine, go ahead.

22 BY MR. BAKER:

23 Q. Would you say that the deferral of construction  
24 has put you in a considerably more flexible position with  
25 regard to financing than you were in in 1979?



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A. Well, now, we got into a discussion about the meaning of "flexible," and I gave you mine. If you're using the word in the same context and meaning that I was, I can answer your question.

Q. I'm trying to use it in the same context you are.

A. Yes, we do have more flexibility in the financing that we don't have to go, as Mr. Myer had indicated in his particular opinion, every month or completing one every month.

I have not been back to the financial market since last March. So I think that we do have flexibility on timing, the type of security that we can issue, and we're in a much more favorable position, yes.

Q. Even with the lowered bond rating in the interim from 1979 to the present, your position is still more flexible than it was then?

A. Than if we were locked into that program that -- and we could not change it, yes.

Q. Do you recall Mr. Myer testifying in that case that -- again under cross-examination -- that "I'll have to warn you, there's a first-class chance this company will not raise all the capital it needs with either an A rating through the markets that I see in the next two or three years ahead. I think that is one

1 first-class gamble, to gamble that this company can get  
2 the job done with an A rating."

3 Do you recall that testimony?

4 MR. ROZZELL: Your Honor, I object to that  
5 question. Let me tell you why: Mr. Baker is reading  
6 now from a portion of the transcript of a regulatory pro-  
7 ceeding before the Texas Public Utilities Commission. This  
8 transcript is not a part of the record in this proceeding,  
9 nor has any effort been made to authenticate that or to  
10 indicate that it is a true and correct copy of the  
11 transcript.

12 And, in fact, Mr. Baker is asking the witness  
13 to agree to testimony, supposedly appearing or allegedly  
14 appearing at that transcript page, without showing it to  
15 the witness.

16 And I would object to both the failure to --  
17 by Mr. Baker to authenticate that transcript and to his  
18 failure to show the statement to the witness before  
19 asking him to agree or disagree that that statement was in  
20 fact made.

21 JUDGE WOLFE: I can give the parties five  
22 minutes to look at the transcript to determine whether  
23 it's a true and accurate copy, if that's possible. And  
24 if it is a true and accurate copy, then you may show  
25 the portion of the transcript that you wish to have him

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read.

All right. We'll have a five-minute recess.

(A short recess was taken.)

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JUDGE WOLFE: Has there been any agreement<sup>4792</sup> on the transcript in PUC Rate Case Docket 2676, that it is accurate? Has it been verified?

MR. ROZZELL: Your Honor, I think that we have an agreement as to how to proceed, and let me see if I can state this jointly for Mr. Baker and myself and let him add whatever he feels is appropriate.

We do not currently have a way to verify whether the transcript that we're using here is a corrected copy of the transcript of the proceedings before the PUC.

However -- and I might also point out that we've discussed this with Mr. Dean, and he was not present for the entire examination of Mr. Meyer.

However, we have indicated to Mr. Baker, and I believe that he is agreeable in proceeding along the basis whereby we would not object to his reading or showing to the witness portions of this transcript so long as any questions that result from that are propounded to the witness after he has had a chance to review the portions of the transcript from which Mr. Baker is taking his questions.

JUDGE WOLFE: All right.

MR. ROZZELL: Have I accurately stated that, Mr. Baker?

MR. BAKER: Yes. I would just add that this

1 is the copy of the transcript, whether corrected or  
2 uncorrected, that was provided me by Baker & Botts during  
3 discovery, and that it was provided to me some six months  
4 or more after the final order was filed in that case.

5 JUDGE WOLFE: Well, there's no problem anyway.  
6 You've agreed upon the procedure.

7 I would like to interpose for a moment.

8 Mr. Dean, you have stated who Mr. Meyer is  
9 once before; but once again, who is he and what is his  
10 relationship to HL&P?

11 THE WITNESS: Gene Meyer is a vice president  
12 of the investment banking firm of Ketter Peabody located  
13 in New York.

14 Ketter Peabody is one of our investment  
15 bankers.

16 JUDGE WOLFE: I see. All right.

17 All right, Mr. Baker, back to you.

18 BY MR. BAKER:

19 Q Do you need to see this particular one?

20 A I would like to see it.

21 Q All right. I would like to ask Mr. Dean to  
22 just read this portion of the testimony at page 618, line  
23 12, if you all choose.

24 A May I read the question and then may I read  
25 the whole answer?

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JUDGE CHEATUM: Certainly.

THE WITNESS: The whole question is not there.  
See, you go from page 603 to page 620.

JUDGE WOLFE: Well, without more, we can't hear  
that answer or any testimony by Mr. Dean on that answer,  
absent the question.

The answer in and of itself doesn't mean anything.

MR. BAKER: I think the answer stands on its  
own, but I'm not sure what the rules of evidence are on  
this.

JUDGE WOLFE: Well, I've ruled.

MR. BAKER: Okay. That settles that.

BY MR. BAKER:

Q Getting back now to your own testimony before  
the Public Utilities Commission in the current docket,  
you were testifying as to the downgrading of securities  
by Moody. I'm reading from page 8, line 6.

Did you state there that, "Every downgrading  
eliminates a portion of the market for our securities"?

A. Yes, I did.

Q Did you further testify that, "Any further  
deterioration in HL&P's credit standing would jeopardize  
the company's ability to finance its construction program"?

A. I did.

Q Are you prepared to state now that there will



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1 absolutely be no further downgrading of ULP securities?

2 A. Absolutely not, but we are going to certainly  
3 do all in our power to keep there from being any  
4 downgrading, and we think that with the program that we  
5 have at the present time as it is now structured, that  
6 there's a good possibility that Moody's may reconsider and  
7 change their rating upward again.

8 Q. What has happened that leads you to believe  
9 that that might be the future course of your bond rating?

10 A. Well, Mr. Baker, as we have talked earlier  
11 today relative to the visitation with Moody's and  
12 Standard and Poor, Duff and Phelps and Fitch, when we  
13 had first just gotten the 1981 estimated budget together  
14 and made the projections of the ensuing year's costs from  
15 that, that we were trying to bring a bond issue to market.

16 In my visitation with those firms I explained  
17 to them what the situation was with that and that we were  
18 going to have to change it.

19 And as I indicated earlier, Standard and Poor,  
20 Duff and Phelps and Fitch maintained their ratings.  
21 Moody's elected not to.

22 We have made a substantial change in the outside  
23 financing requirements and the amount of expenditures that  
24 were projected to be made in those years, wherein we took  
25 \$900 million out of the three years 1981, '2 and '3 on that

6-5

1 program.

2 I think that when we go back and ask Moody's  
3 to rate any upcoming issue and we can show them those  
4 numbers again and where they are, that there is a good  
5 possibility they will reconsider; but I don't have any  
6 assurance whatsoever that they will. But I think that we  
7 have removed one of their main concerns, and that is that  
8 the size of that program and the timeframe that it was  
9 trying to be accomplished.

10 Q Was HL&P ever a AAA rated utility?

11 A It was.

12 Q When was that?

13 A It was downgraded in 1975 and that was because  
14 of needing to have a rate increase and it was not  
15 forthcoming in a timely manner.

16 So the earnings would not support what the  
17 rating agencies perceived to be the program at that time.

18 Q As I recall, was that the same year that you  
19 deferred construction of Allens Creek?

20 A Allens Creek was deferred subsequent to that  
21 downgrading. That is correct.

22 Q So you've had two bond deratings over the last  
23 decade, each of them associated with deferral of  
24 construction of this project; is that not correct? Is  
25 that correct?

6-6

1 A I don't think I can answer that that way. I  
2 would say we've had two down ratings and it was because  
3 of the size of the construction projects that we had  
4 going, not attributable to any one.

5 Q But is it not correct that at the time, either  
6 very shortly before or within a couple of months before  
7 or after that down rating, you deferred construction on  
8 the Allens Creek Project?

9 A Which down rating? The '75?

10 Q '75 and '81.

11 A We deferred the construction of Allens Creek  
12 in '75 as a result of trying to get a program manageable.

13 We have also deferred not only Allens Creek  
14 but four lignite units in 1981 to get the program to be  
15 one which is more financially manageable, and have  
16 extended the completion dates of those units, yes.

17 One was that in 1975 Allens Creek was  
18 indefinitely deferred. In this particular situation it's  
19 been deferred for two years, or a stretch-out period,  
20 really, for completion.

21 Q Did you testify before the PUC in the most  
22 recent docket with respect to the deferral of the  
23 construction program, did you testify that this deferral  
24 was prompted by the "inability to obtain the maximum  
25 amount of external funds that the prior program required"?

6-7

1 A. What page are you on, sir?

2 Q. Page 9, line 6.

3 A. That is correct.

4 Q. Was this inability based on any judgment by the  
5 company's investment bankers?

6 A. The inability was based in conjunction with  
7 consultation with the investment bankers, yes.

8 Q. And what was the result of that consultation?

9 MR. ROZZELL: Your Honor, I object to this.  
10 This question has been asked and answered at least four  
11 times. I don't know how many times we can circle around  
12 the same bush and try to come at the same question from  
13 a little bit different angle.

14 Mr. Dean has testified as to his understanding  
15 of the reasons for the stretch-out period, the consultations  
16 with the investment bankers both before and after that  
17 decision, and I think the record is perfectly clear on all  
18 of those points.

19 I don't see any reason for us to clutter it up  
20 with repetitious testimony.

21 MR. BAKER: The answer that I have not gotten  
22 from Mr. Dean refers to any maximum amount of new equity  
23 financing.

24 JUDGE WOLFE: I'm sorry, I missed that.

25 MR. BAKER: One thing that hasn't been gotten

1 out of this testimony so far is that there is considered  
2 to be a maximum amount of equity financing which is even  
3 possible to obtain in a single year.

4 I believe if you let me go on with the question,  
5 I can -- we will cover new ground.

6 MR. ROZZELL: I haven't heard that question,  
7 Your Honor, and I would still maintain my objection to the  
8 one that we have pending.

9 JUDGE WOLFE: I'll sustain the objection to the  
10 first question. You may pose your question or the question  
11 you just indicated you wanted to explore.

12 MR. BAKER: I'm sorry if I'm fumbling a little  
13 here.

14 JUDGE WOLFE: That's all right. Go ahead.

15 BY MR. BAKER:

16 Q Did you in consultation with your investment  
17 bankers establish a maximum amount of new equity financing  
18 which could be raised in any given single year?

19 A We established a figure which we thought  
20 could be obtainable, and that figure is the one that's  
21 set forth in this testimony you were reading from just a  
22 few minutes ago, if we carry on, that, "With input from  
23 its investment bankers as to the maximum amount of new  
24 equity financing, initially 200 million of common stock  
25 and 100 million preferred stock, that can reasonably be

6-9

1 obtained in a single year."

2 Now, they say "reasonably be obtained in a  
3 single year," and we think that that is pretty close to  
4 the maximum.

5 Q What are those figures as to the maximum amount  
6 of common stock and preferred stock that can be sold?

7 A Initially, 200 million of common stock and 100  
8 million of preferred stock.

9 Q Okay. Has HL&P managed to sell this much stock  
10 in any previous year?

11 A We have not sold \$200 million of stock in any  
12 previous year. We have sold in excess of \$170 million of  
13 stock in a previous year.

14 Q What is the largest amount of preferred stock  
15 you have ever sold in any given year?

16 A Fifty million.

17 Q So your plan is based on selling twice as much  
18 preferred stock as any previous year?

19 A That is correct.

20 Q And you've testified previously, I believe,  
21 that your last issue of specific kind of preferred stock,  
22 there was no market for.

23 A That is correct.

24 Q And you also, I believe, testified that the  
25 other type of preferred stock that involves a sinking fund,



6-10

1 you have never tried to sell before?

2 MR. ROZZELL: Your Honor, objection. That's  
3 been asked and answered.

4 JUDGE WOLFE: Sustained.

5 BY MR. BAKER:

6 Q Referring to page 10 of your PUC testimony now,  
7 did you testify that, "Despite the company's efforts to  
8 make financing its construction program attainable, major  
9 uncertainties still exist"?

10 A That's right, and continuing on, "For example,  
11 the dollar limits mentioned above could easily change  
12 with financial market conditions. Also, the total effects  
13 from the Moody downgrading are unknown. These and other  
14 uncertainties make adequate and timely rate relief all the  
15 more important if we are to continue to serve the customer  
16 in a reliable manner."

17 JUDGE WOLFE: Mr. Dean, if you have occasion  
18 to read again, would you move the microphone in front of  
19 you and talk slower?

20 THE WITNESS: Excuse me, sir.

21 JUDGE WOLFE: All right. Mr. Baker.

22 BY MR. BAKER:

23 Q The reference there to "other uncertainties,"  
24 what would you say the major other uncertainties are in  
25 the future?

6-11

1 A. Mr. Baker, if I had known those, I would have  
2 put them in there.

3 Q. Would you classify the cost of the South Texas  
4 Project as a major uncertainty?

5 A. That depends.

6 Q. What does it depend on?

7 A. How much the cost may be. If it's not much  
8 over and above what the current estimate is, that's not  
9 much of an uncertainty.

10 If it's substantially more, it could be.

11 Q. If you don't know what the cost will be,  
12 wouldn't that qualify as an uncertainty?

13 A. It is an uncertainty.

14 Q. How about the future cost of Allens Creek  
15 Station? Would that qualify as a major uncertainty?

16 A. We think that we have a good figure on Allens  
17 Creek. It's a current estimate.

18 The estimate on South Texas is a 1979 estimate.

19 Q. Well, while we're on the subject of  
20 uncertainties, I'd like to ask you what would be the  
21 financial picture at HL&P if there was a major accident  
22 involving loss of plant at one of your facilities somewhere  
23 in the next decade?

24 A. Could you quantify what that loss is?

25 Q. Suppose, say, after the startup of the South

6-12

1 Texas Project that there was an accident such that you  
2 lost that whole facility?

3 MR. ROZZELL: Your Honor, I object to that. I  
4 don't see how that's relevant. It seems to me to be  
5 beyond the scope of the contention here, which is whether  
6 or not the company has the ability to finance Allens  
7 Creek.

8 MR. BAKER: I'm just trying to establish what  
9 the uncertainties are and just how uncertain are they.

10 MR. ROZZELL: Mr. Baker, you're trying to  
11 establish the uncertainties that are associated with the  
12 witness' testimony that is addressed to an entirely  
13 different subject in an entirely different proceeding.

14 MR. BAKER: No, I phrased the question, what  
15 would be the effect on the Allens Creek construction  
16 program if there was a loss of plant accident at one of  
17 their other facilities.

18 He asked me to specify one and I chose the  
19 South Texas Project.

20 THE WITNESS: If we lost --

21 MR. ROZZELL: Wait a second.

22 Your Honor, I might refer you to the text of  
23 the contention itself.

24 JUDGE WOLFE: Yes, I'm reading that now.

25 I will have to sustain the objection. I think

6-13

1 the cross-examination goes beyond the scope of the  
2 contention itself, Mr. Baker.

3 MR. BAKER: Do I understand your ruling to mean  
4 that I cannot ask any questions as to what the effects  
5 would be of a future loss of plant accident at any  
6 facility on the construction program?

7 JUDGE WOLFE: It's not encompassed within the  
8 scope of your contention as worded by you, Mr. Baker.

9 You do advert to the TMI-2 accident. That's  
10 the only accident that you refer to, and I don't see how  
11 the question that you asked could be fitted within the  
12 scope of your contention.

13 I so ruled. Further, we're trying to keep this  
14 pretty much in the realm of what is reasonably foreseeable,  
15 and we could tack on other speculative questions that  
16 would lead us nowhere.

17 MR. BAKER: Well, what I'm trying to establish  
18 here, if I may, is we've had testimony here that they are  
19 right at the limit of how much money they can raise in any  
20 given year; and I'm trying to -- and they admit that there  
21 are some uncertainties there.

22 What I'm trying to find out is if they are in  
23 fact right at the limit of the amount of money they can  
24 raise, what would be the effect of some admittedly  
25 unforeseen and perhaps unlikely occurrence on their

6-14

1 financing program for Allens Creek.

2 MR. ROZZELL: Your Honor, as I understand it,  
3 there's no point of contention that's being discussed  
4 now, but I can't let pass noting that the Applicant does  
5 not agree with Mr. Baker's characterization of what has  
6 been established to this point in the hearing.

7 JUDGE WOLFE: I have ruled. Go to your next  
8 question, Mr. Baker.

9 BY MR. BAKER:

10 Q On page 7 of the testimony you submitted in  
11 this proceeding, the first line, you say that, "Of the  
12 61 companies which have nuclear plants under design or  
13 construction, only 15 companies have more assets than  
14 HL&P."

15 Do you know if any of these companies have  
16 construction programs that are as ambitious as HL&P's?

17 A No, I do not have the size of their construction  
18 programs.

19 Q I'm curious are there any utilities in the  
20 country that have as large a construction program over  
21 the next decade as HL&P, to your knowledge?

22 A I cannot name who it would be.

23 Q So it would be a safe guess then that most  
24 of these -- or would it be a fair statement that these  
25 15 companies with more assets do not have as much of a

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1 burden to carry over the next 10 years?

2 A Without seeing what the size of their program  
3 is, I cannot speculate.

4 Q On the subject of construction works in progress  
5 and rate relief in general, the allowance for funds used  
6 during construction figures in your Exhibit 1, I presume  
7 that they are based on some projection as to what the  
8 construction work in progress and rate base would be over  
9 those years; is that correct?

10 A Those figures were based on the parameters that  
11 were set in the last rate order.

12 Q So these figures were set assuming approximately  
13 70 percent construction work in progress on the rate base?

14 A That is correct.

15 Q Would not those figures go up substantially if  
16 construction work in progress were disallowed in future  
17 rate cases?

18 A Would what go up?

19 Q The amount of AFDC.

20 A Yes, they would.

21 Q Can you give us any rough idea of how much they  
22 would go up if construction works in progress were totally  
23 eliminated from the rate base?

24 A I cannot quantify that right at this point, no.

25 Q Even a ballpark figure?



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A. I am not going to guess.

Q. Okay. Would Houston Lighting & Power face -- well....

You testified that the PUC grants construction work in progress as necessary to maintain the financial integrity of the company.

Are there any other constraints in the regulation as to allowable construction works in progress, to your knowledge?

A. In what regulation?

Q. The Public Utility Regulation in Texas.

A. The Public Utility Commission has the authority to allow a hundred percent or zero percent or anywhere in between, and that's their responsibility, and I'm not quite sure I understand your question.

Q. My question is, is financial integrity the only criterion for deciding whether or not to grant construction works in progress?

MR. ROZZELL: Objection, Your Honor. I think that calls for a legal conclusion on the part of the witness.

MR. BAKER: It calls for a conclusion based on his experience with the regulation and the regulatory agency.

JUDGE WOLFE: I think this calls for a factual

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1 conclusion based on his experience. Objection overruled.

2 THE WITNESS: It's my understanding that that  
3 is the basic criteria that they use as to the amount to  
4 allow is to maintain the financial integrity of the  
5 company in their opinion.

6 BY MR. BAKER:

7 Q Does not a part of the regulation regarding  
8 construction works in progress require that such plant  
9 be, quote, used and useful, end quote, to the public?

10 A Would you rephrase that question or repeat it,  
11 please?

12 Q Is a part of the regulation which refers to  
13 construction works in progress, does it, in addition to  
14 financial integrity, require the plant in question be,  
15 quote, used and useful, end quote, to the public?

16 A The problem I'm having with that, Mr. Baker,  
17 if it's in construction work in progress, it's not in  
18 use at that point in time because it has not been  
19 completed.

20 Q I understand that, but is not that criterion a  
21 part of the regulations?

22 A I don't recall seeing it in there. If you have  
23 the regulation I would be pleased to read it and try to  
24 give you an answer.

25 Q I don't have it with me.

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Q. Has Houston Lighting & Power over the last few years experienced any resistance to placing of construction works in progress in the rate base?

A. We have had a substantial portion of construction work in progress allowed in rate base, yes.

There was 69 percent allowed in the last rate order, and that together with the nuclear fuel in progress got it up to about 71 percent, as I recall.

Q. Have other parties to the regulatory proceedings been fairly meek in accepting your request for construction works in progress?

MR. ROZZELL: Your Honor, I object. I don't see how that's relevant to the inquiry we're conducting here, other parties' position in respect to construction work in progress.

JUDGE WOLFE: Yes. We're not conducting a poll here. What the PUC has done, I think, is material.

Objection sustained.

BY MR. BAKER:

Q. Were you present at the City Council hearings on the HL&P 1980 rate request?

A. Yes.

Q. Do you recall if the City Council members at that time raised numerous objections to construction works in progress?

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1 A. That and to other items in that rate  
2 application, also.

3 Q. What was the result of that hearing? What  
4 action did the City take with regard to granting the  
5 necessary rate relief, or the requested rate relief?

6 A. Well, their finding was that they would allow  
7 less than what the PUC had found, and that was appealed  
8 back to the PUC and we put the rates in after the appeal  
9 that the PUC had found just and reasonable.

10 Q. Are construction works in progress charges for  
11 Allens Creek currently in the rate base?

12 A. In the current application, yes.

13 Q. I mean, are they being -- are they in the rate  
14 base now being charged to the consumer?

15 A. The rate base that was established in the last  
16 rate order?

17 Q. Yes, I believe it was 3320; is that correct?

18 A. That is the last rate order.

19 That was a settlement issue. The staff had  
20 recommended a disallowance of the Allens Creek expenditures,  
21 but I don't believe the stipulation that was entered into  
22 addresses what was allowed or what was disallowed.

23 Q. So is the answer to the question yes or no?

24 A. I gave you what the staff's position was and I  
25 gave you a statement as to what was included in the

6-20

1 stipulation, that it did not address whether it was in  
2 there or was not in there.

3 Sixty-nine percent of construction work in  
4 progress was allowed.

5 Q Sixty-nine percent of the total --

6 A Of the total construction work in progress,  
7 including the Allens Creek in that total.

8 Q And was there anything in the PUC final order  
9 or anywhere else that excluded that Allens Creek?

10 A No, the final order covered the stipulation.  
11 The staff's prepared testimony which was filed recommended  
12 the exclusion of Allens Creek construction expenditures from  
13 the rate base; but the stipulation or the order does not  
14 address that issue.

15 Q So in your opinion, construction works in  
16 progress by the final order was allowed for Allens Creek?

17 A I'm telling you that 69 percent of the total  
18 construction work in progress was allowed, that the  
19 stipulation nor the order addressed that issue.

20 Q Okay. If you have a number of projects going  
21 on at any one time, how do you decide how to allocate  
22 your financial resources to a variety of projects? In  
23 other words, how much money goes to which plant?

24 Is there a committee that decides those things,  
25 or a group within the company?

6-21

1 A. Well, you have a committee that determines  
2 what the over-all corporate plan is going to be.

3 You then have those costs of that project, and  
4 as those expenditures are made, they are budgeted, and that  
5 is approved by the board of directors of the company, and  
6 so we do make the expenditures to orderly complete the  
7 project after it's authorized.

8 But the board of directors of the company is  
9 the one that authorizes the budgeting and the projects.

10 Q. What input do the quality assurance or  
11 quality control personnel on your present and future  
12 nuclear projects have to this process?

13 MR. ROZZELL: Your Honor, I object to this  
14 entire line of questioning, as to the relevance of this  
15 entire line of questioning.

16 In looking at Mr. Baker's contention which deals  
17 with funds on hand and various other combinations which he  
18 contends may not leave reasonable assurance that the  
19 company can obtain funds for Allens Creek, I don't see  
20 how this line of questioning is at all relevant to that  
21 contention.

22 The line of questioning, as I take it, is how  
23 are funds internally allocated within the company.

24 MR. BAKER: The reason for the financial  
25 qualifications inquiry at all here is to determine whether



6-22

1 or not there may at some point be financial problems  
2 which might lead to safety problems.

3 My understanding is the safety problems are the  
4 main concern of the NRC and their main interest. So I  
5 think it is germane to the contention.

6 MR. ROZZELL: Well, I agree that that can be  
7 encompassed within the bounds of the contention. I just  
8 don't see how this line of inquiry furthers that inquiry.

9 (Bench conference.)

10 JUDGE WOLFE: I take it the thrust of your  
11 question is, Mr. Baker, that in substance -- and turning  
12 it around, I take it in substance your query is that  
13 what if HL&P ran into financial difficulties; would there  
14 be some shaving or paring down of the quality of the  
15 construction? Is this where you are going with this  
16 question or line of questioning springing from this?

17 MR. BAKER: More or less, yes.

18 JUDGE WOLFE: All right. Let's have your  
19 question once again, then.

20 I'll overrule the objection. Your question  
21 once again.

22 BY MR. BAKER:

23 Q Quality assurance/quality control may not have  
24 been the precise word I want. Let's just say in general  
25 there are people on the plant site involved with the

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6-23

1 engineering and the design, the building of the plant and  
2 who have responsibility to see that the plant is built  
3 safely and according to NRC regulations.

4 I would like to know who those people are and  
5 what input they have to the financial decision-making, as  
6 far as the allocation of resources?

7 That's what the question is, what input do  
8 those individuals with responsibility for building a safe  
9 plant have to your office in terms of being able to get  
10 what they need at any given time?

11 JUDGE WOLFE: All right. With that understanding  
12 can you answer the question?

13 THE WITNESS: That is a part of the over-all  
14 budget for that particular facility, and those costs are  
15 incurred through contract; and as the work is performed,  
16 then those costs are paid.

17 That comes in the budgeting procedure that is  
18 done annually. That budget, as I have indicated previously,  
19 is approved by the board of directors of the company, and  
20 so then it is an approved project, approved cost to be made.

21 BY MR. BAKER:

22 Q I'm not sure I understand your answer.

23 Are you saying that the people with the input  
24 as far as safety and engineering and design have to go  
25 through the board of directors to change the budget?

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1           A.       What I'm saying is that when the budget is put  
2 together, those people get their input in putting that  
3 budget together.

4                    It is submitted to the board for approval, yes,  
5 and to get the budget for that year authorized and the  
6 expenditures authorized, Mr. Baker.

7           Q       Well, suppose as a hypothetical matter that  
8 after that budget has been established, it turns out that  
9 in order to meet NRC standards, say for welding or for  
10 concrete or any number of the safety-related structure  
11 construction, if they find that it's necessary to go  
12 outside what's been budgeted, how can they bring that  
13 matter to your attention, or can they bring that matter  
14 to your attention and get the problem taken care of; or do  
15 they have to stay within the budget regardless of what --

16           A.       Well, in the first place, we're going to meet  
17 the NRC standards of building, and if the costs overrun  
18 over and above what was budgeted, yes, it can be  
19 changed. It can be brought right back through their  
20 vice president and right on up and get some action on it.

21           Q       My question is, then, what is the procedure  
22 whereby this can be done?

23           A.       To operate through their department, to bring  
24 forward here that they need the cost increased and explain  
25 why they need it; and certainly, anything in this area

6-25

1 that you are addressing here is justifiable and it would  
2 be approved.

3 Q Well, I believe at this point the experience  
4 with the South Texas Project is somewhat germane.

5 Has it been your experience that when safety  
6 problems came up or when more money was needed for welding  
7 or concrete work or whatever, that those people responsible  
8 did come to you and did ask for more money?

9 A Mr. Baker, there has not ever been a problem  
10 of money being available to cover the costs incurred.  
11 This has not been a problem to secure the funds to pay  
12 the costs.

13 Q Was the decision to hire Ebasco rather than  
14 Brown & Root at Allens Creek, was that decision made on  
15 financial grounds partly?

16 MR. ROZZELL: Your Honor, I must renew my  
17 earlier objection. I thought at the time we started down  
18 this road that Mr. Baker was getting a little far afield  
19 from his contention, and I think his subsequent questions  
20 have demonstrated that.

21 I think that that question is not relevant to  
22 the ability of the Applicant to raise the necessary funds  
23 for financing Allens Creek.

24 JUDGE WOLFE: I think you have gone afield  
25 there, Mr. Baker, and I'll sustain that objection.

6-26

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You may pursue the line of questioning you had with regard to how QA/QC or people working in the field at the site of the construction can get their complaints about being under-financed to the corporate authorities.

MR. BAKER: I believe the answer that I got was that there had never been a conflict. So I don't see how I can pursue it beyond that.

JUDGE WOLFE: All right. Then you've completed that. If you're satisfied, that's it.

MR. BAKER: I won't say I'm satisfied, but I guess I've completed it.

JUDGE WOLFE: All right.

- - -

7-1  
bm

1 BY MR. BAKER:

2 Q I want to go back and pick up one thing that I  
3 believe I skipped over, and I'll complete my cross-  
4 examination.

5 We covered this for bonds, but I'm not sure we  
6 covered it for common stock. You testified before the PUC  
7 and repeated it here as to the last six issues of common  
8 stock by Houston Industries.

9 I believe you testified that the price received  
10 in each of these six stock sales had been less than that  
11 received at the previous sale; is that correct?

12 A. Yes, that is correct.

13 Q I'd like to go -- return again to the August  
14 12th response to request for additional financial informa-  
15 tion filed by Mr. Goldberg and prepared, apparently,  
16 under your supervision.

17 Question 3(a) -- or Answer 3(a) rather: The  
18 assumptions upon which the source of funds statement is  
19 based.

20 No. 4, you say, "Market to book ratio, pro-  
21 jected common stock offerings."

22 You give -- list 1981 - 85%; 1982 - 90%;  
23 1983 - 95%; and then 1984 through 1991 - 105%.

24 I would just like to ask what you -- since  
25 apparently the market to book ratio has been going down



7-2  
1 for the last six issues, why you expect it to go steadily  
2 up over the next ten years, what basis you have for that  
3 belief?

4 A. Well, we have to take all of those assumptions  
5 in that answer together. And we are also projecting  
6 that your preferred dividend rate is going to go down from  
7 the present, down to the 1984-91 period to 10%.

8 We think that first mortgage bonds would be in  
9 the area of 11% during that period of time.

10 And the fifth assumption that we have in there  
11 is the common stock dividend payout would be 10% of the  
12 prior year's book value by 1984, which would put it in a  
13 very substantial position so far as cash yield is con-  
14 cerned.

15 We would expect to be earning more than that,  
16 so that there would be some bases to think that the price  
17 of that stock on the market would perform better than it  
18 has in the past, all of those other things being con-  
19 sidered.

20 Q. But you are asking us to believe, are you not,  
21 that right this moment as we sit here, you're turning the  
22 corner both in terms of mortgage bond interest rates and  
23 market to book ratio of common stock; in other words, that  
24 the past few years -- that that trend is going to be  
25 reversed right now?

7-3  
1 A. What we have done is given you our assumptions  
2 that we think are reasonable to attain, that we used to  
3 put together the answer to the NRC's question.

4 Q. If you were to graph this and show it to some-  
5 one, I wonder how reasonable it would look.

6 I guess maybe that's a comment and ...

7 MR. BAKER: I have concluded my questioning.

8 MR. ROZZELL: Your Honor, I will move that that  
9 last comment be stricken.

10 JUDGE WOLFE: It's so stricken.

11 We'll recess until a quarter of four.

12 (A short recess was taken.)

13 JUDGE WOLFE: All right, Mr. Doherty.

14 CROSS-EXAMINATION

15 BY MR. DOHERTY:

16 Q. Mr. Dean --

17 A. Yes, sir.

18 Q. -- is the company currently being sued by any  
19 of the partners in the South Texas Nuclear Project?

20 A. Not to my knowledge.

21 Q. Okay. Now, when you calculate -- Looking at  
22 Page 2 of your testimony, when you make an estimate of  
23 costs, I take it that if you had not excluded the  
24 allowance for funds used during construction, the figure  
25 would be higher?

1 A. That is correct.

2 Q. What is an allowance for funds used during con-  
3 struction? I don't understand what that is exactly.

4 MR. ROZZELL: Your Honor, I object. That question  
5 was asked and answered this morning. Asked by Mr. Baker.

6 MR. DOHERTY: I don't recall getting a satis-  
7 factory definition of what it is.

8 JUDGE WOLFE: I don't recall that that-- It  
9 was adverted to, I think, in this morning's testimony on  
10 cross-examination. But I don't think a definition was  
11 given as such.

12 Objection overruled.

13 THE WITNESS: Allowance for funds used during  
14 construction is a carrying cost of the nonproductive funds  
15 that are -- have been spent for construction during the  
16 construction period, inasmuch as that asset is not in ser-  
17 vice and not earning a return.

18 You have to pay the investor a return on his money  
19 that you ask him to put into the facility during the time  
20 that it is not earning. That is made up of two parts:  
21 One, an equity portion, the other, a part from your fixed  
22 income ... that security.

23 That is determined on the basis of what the cost  
24 of those funds are. That calculation is approved and  
25 signed off on by the Public Utility Commission. It is

1 applied to the balance of construction work in progress,  
2 that the Commission does not allow to be included in rate  
3 base, so that if a portion of your construction work  
4 in progress balance is included in rate  
5 base, then you are getting a cash earning on that,  
6 and you do not capitalize the allowance for funds, or the  
7 cost of the funds that have not been included.

8 BY MR. DOHERTY:

9 Q Well, would an example of that be the money that  
10 was spent to construct the reactor vessel, which I under-  
11 stand is constructed?

12 A Any part of a plant during the time it's under  
13 construction, yes.

14 Q Okay, thank you.

15 Is Allens Creek the most costly venture of the  
16 company at this point?

17 A In total overall dollars?

18 Q Yes, sir.

19 A Yes.

20 Q Well, you spoke earlier about internally  
21 generated funds. Will this be the largest amount of  
22 internally generated funds that you have needed up to  
23 this point?

24 A I'm not quite sure I understand that question,  
25 sir.

7-6  
1 Q Well, let's put it this way. Will the amount  
2 of internally generated funds -- now that -- Does  
3 internally generated funds just mean bills paid, es-  
4 sentially, money from that?

5 A No. Internally generated funds certainly comes  
6 as a result of the bills being paid. But -- because if  
7 you did not get your bills paid, you would not make return  
8 on any of your investment at all.

9 But it is the cash that is provided through  
10 the operation of the business. It's the retained earnings  
11 portion of your net income that you make as a result of  
12 selling your electric power.

13 It is the depreciation which is a non-cash  
14 expense. As you are fully aware, it is the recovery of  
15 the cost of the facility that's being used over its  
16 life.

17 Those are the two main items that provide the  
18 cash generation. But that is basically what it is. And  
19 if we assume here that we need to have -- which we have  
20 asked in the rate filings of 40% or so for internal cash  
21 generation, then you apply that to the two billion  
22 dollars.

23 And dollarwise it would take more dollars, but  
24 percentagewise, it would be the same as any other con-  
25 struction project.

7-7  
1 Q Well, will the company's requirements for -- of  
2 internally generated funds to be applied for Allens Creek --  
3 be applied to Allens Creek, be the highest percentage  
4 that it has ever required for a single construction --  
5 plant construction?

6 A No. I thought I was answering that inasmuch  
7 as we are looking to generate somewhere between 35 and 40  
8 percent of the construction program through our operations  
9 or internally generated funds.

10 The percentage that we would have would be the  
11 same. The absolute dollars would be more because the  
12 Allens Creek project is more -- is the most costly one  
13 that we have in total dollars.

14 Q Sticking with percentages though, have you  
15 ever -- has the company ever -- Has the company ever  
16 constructed power plants using a higher percentage of  
17 internally generated funds than 35 or 40 percent?

18 A Mr. Doherty, in the sixties in some years we  
19 had internally generated funds that exceeded 100% of  
20 the construction expenditure in that year. And there  
21 was more than one year.

22 Q Is there a company preference to do it -- to  
23 finance new construction through internally generated  
24 funds; or is there none?

25 A Well, certainly if we could generate all of the



7-8  
1 funds internally, we would prefer to do that.

2 But the size of the program we have, it's not  
3 conceivable. But the larger the portion could be from  
4 internally generated funds, the better it would be,  
5 yes.

6 Q Okay, thank you.

7 You speak of invested capital at Line 9. Does  
8 that term -- that means money invested in the company  
9 by outsiders? Is that what that means?

10 A Line 9 where?

11 Q On Page 3, I'm sorry I skipped the page.

12 A Would you restate your question, sir?

13 Q I wanted to know what you meant by invested  
14 capital there. It says, "As of December 31," etc.,  
15 "HL&P had invested capital ...."

16 A That is your total of your long-term debt,  
17 your preferred stock, your common equity which consists  
18 of both the paid in capital by the investor, together  
19 with the retained earnings.

20 Q I think you testified to Mr. Baker that the  
21 company -- I believe it was last year, perhaps the year  
22 before -- started out on a sale of bonds of 30 years  
23 and ceased that sale and then sold some for ten years.

24 Now, I gather from that that 30 years -- you  
25 had rather sell the 30 years than the 10 years. Is that

1 true or not true as a general rule?

2 A Well, let me first say that in December we did  
3 start to market with a 30-year security. It became  
4 apparent then that the rate for a 30-year security would  
5 be more than what we thought we were willing to pay. So  
6 we changed that security prior to the time that we were  
7 going to negotiate a price, to a 10-year security. It  
8 still was more than what we wanted to pay.

9 And we had 60 or so days that we could defer  
10 at least. So it was the consensus of opinion that  
11 there might be a downturn in the interest rates from where  
12 they were in December.

13 And so in February we did bring to market an  
14 issue which started out to be a 30-year issue again. And  
15 because of the rate on the 30-year issue, the term of that  
16 security was reduced to 10 years and we did sell it at  
17 slightly over 14%, which was less than what we could have  
18 sold a 10-year security in December.

19 But the answer -- now to get to the point of  
20 your question, yes, we would have preferred to sell a  
21 30-year security at a reasonable rate, but not at a  
22 high price rate.

23 We'd rather go it on the short rate and  
24 then try to think that the market would improve during  
25 that period of time.

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Q Okay. So that -- I was trying to get some way of putting that to you that didn't involve any -- you know ... just as a general rule ... it's preferable --

A I --

Q -- to do the 30 rather than the 10 --

A Excuse me. I interrupted. And let me let you restate your question.

Q Well, what I was trying to get at -- I wanted to make sure you understood me, was that as a general rule, is it preferable to sell long-term debt than shorter term?

A Yes, it is. Any security, the longer the term, the better.

Q I see.

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7-11  
1 BY MR. DOHERTY:

2 Q Now, when you speak of an operating revenue  
3 on Page 3, is that -- What is that? I mean, what is  
4 included in that?

5 A That's a total sales. That's for electric  
6 energy.

7 Q Okay. And then how is it distinguished from  
8 net income? What is net income?

9 A Net income is operating revenues less all of  
10 your expenses. That's what is left over.

11 Q Okay.

12 JUDGE LINENBERGER: Including taxes?

13 THE WITNESS: Including taxes, yes, sir.

14 BY MR. DOHERTY:

15 Q Let's see ... you state here that you have  
16 7% preferred stock as of the last of 1980. Has that  
17 figure held constant, that 7% for the past five years?

18 A No, it has varied.

19 Q Can you give me some idea of the variability?

20 A No, I do not seem to have that with me.

21 Q Okay. Well, has long-term debt remained about  
22 the same, in terms of percentages, over the last five  
23 years?

24 A In the last five years, no, it was in excess  
25 of 50% of the total capitalization in 1978, as I recall;

7-12

1 and that is when we changed the policy for the capital  
2 structure because of high interest rates. They have a  
3 larger portion included in the equity side, to strengthen  
4 the financial viability and capability of the company.

5 Q You said you changed the structure?

6 A The policy of -- the capital structure policy  
7 had been that we would maintain a -- long-term debt,  
8 part of the capital structure in the area of 50 to 55  
9 percent, and the balance to be made up of common and pre-  
10 ferred.

11 In 1978 we revised that policy so that the long-  
12 term debt portion would be something less than 50%, and  
13 the balance to be made up of common equity and preferred  
14 stock.

15 Q Let's see. That's a policy?

16 A Yes.

17 Q That's what ... just an agreement sort of, that  
18 that's the best way to go, or is that written anywhere  
19 as a rule?

20 A No, it's not written. It is a judgment of the  
21 company's management that it's in its best interest to  
22 have that type of capital structure.

23 Q Was 1978 the year that Houston Industries was  
24 formed?

25 A No, sir.

7-13

1 Q What year was that?

2 A Houston Industries became the holding company  
3 in 1976. It was actually ... 1976.

4 Q And has HL&P remained 95 -- I believe you said  
5 95% of the holding company's operation?

6 A It has been approximately that, yes.

7 Q I see. Are either of the other companies,  
8 Primar Fuels or Utility Fuels -- are they -- No. Are  
9 the profit-making companies themselves, each of them?

10 A Primary Fuels has been up until the present  
11 moment -- or the present time. It's in an extensive  
12 exploration program, and the costs that we have here in  
13 connection with that program and the reserves that had  
14 been certified to by the engineers -- reserve engineers  
15 are such that the writeoff of that over the certified  
16 reserves that you would expect have caused it to be in a  
17 loss position.

18 However, we expect when we get full testing  
19 and all on the wells that have been found that appear to  
20 be commercially productive, that that will turn around.

21 Q Have either of these companies been in uranium  
22 exploration or uranium development at all?

23 A Yes. UFI is currently in small mining operations,  
24 yes.

25 Q Well, if either of these companies -- the two



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1 companies: Primary Fuels and Utility Fuels ran into  
2 financial difficulty, that would in turn have an effect  
3 on the stock of Houston Industries, would it not?

4 A. That would depend upon the magnitude --

5 Q. Yes.

6 A. -- of that difficulty, yes.

7 Q. Okay. Now, you've testified here as to several  
8 previous rate hike requests and the outcomes. From the  
9 years 1979 through '81, what has been the rate increase  
10 for a residential customer under 500 kilowatts con-  
11 sumption -- percentage --

12 MR. ROZZELL: Objection -- I'm sorry, Mr.  
13 Doherty, were you finished?

14 MR. DOHERTY: The only thing more I said was  
15 "in percentage."

16 MR. ROZZELL: I object to that question, Your  
17 Honor, on the grounds of relevancy.

18 MR. DOHERTY: I believe in here the gentleman  
19 states that they expect regular rate increases through the  
20 Texas Public Utilities Commission. And I think it's a  
21 relevant matter if -- to take a look at how much bills  
22 have been going up.

23 I don't think it can be assumed that the PUC  
24 will always grant a rate increase, and I think the Board  
25 can have some inkling as to the sensibility of a statement

1 such as that we will be able to obtain rate relief by  
2 looking at the immediate past.

3 MR. ROZZELL: Your Honor, if I may, rate in-  
4 creases are composed of a number of factors, of which  
5 residential rates is only one. I don't see how that  
6 question is relevant, absent some more extensive founda-  
7 tion being laid by Mr. Doherty.

8 Just the question that he has asked has to do  
9 with individual residential bills.

10 MR. DOHERTY: Well, I believe he testified  
11 earlier that at one point, 1975 I think it was, they  
12 were unable to get a rate increase. And I think that  
13 residential rates often are -- and they were at that  
14 time -- one of the sources of the reasons why this  
15 governmental agency was unwilling to grant a rate  
16 increase because the consumers (that is, the residential  
17 payers) were not pleased.

18 In addition, I can certainly ask two questions,  
19 that is also asking the percentage of increase for  
20 industrial consumers, too, which would take care of the  
21 problem. I think if we covered both industrial and  
22 residential, we'd have a pretty substantial bloc  
23 of their consumption.

24 (Bench conference.)

25 JUDGE WOLFE: All right. We'll hear both of

1 those questions, one at a time.

2 Objection overruled.

3 THE WITNESS: I do not know offhand what the  
4 percentage increase is from 1979 to date. But one  
5 thing I would like to clarify relative to the '75 state-  
6 ment, if I did not, I think I said "timely." Maybe I  
7 did not.

8 It was a failure to do so. It was not that we  
9 did not get a rate increase. It was timely, and there  
10 were other considerations is the reason that was not  
11 done.

12 And then in April of 1976, the 1975 application  
13 was negotiated and settled with the City on a very at-  
14 tractive basis for both the City and Houston Lighting &  
15 Power Company.

16 BY MR. DOHERTY:

17 Q All right. So at this point then you can --  
18 Can you give us even a ballpark figure of the rate  
19 increases for either of these two rate classes between  
20 1979 and 1981, roughly?

21 A No, sir.

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Q Now, on construction work in progress, do you know of any state law -- do you know of any filing in the past legislative session that opposed construction work in progress?

A You mean proposed legislation?

Q Well, it would have been -- no, proposed legislation is too broad.

Do you know if anyone filed such a bill? It would not have been passed, I don't think. I'd know it if it were, but do you know if anything was just filed?

MR. ROZZELL: Your Honor, I object to that question as to form. First of all, I think it's vague.

I don't know what the difference between -- proposed legislation and a bill that was filed might be.

Secondly, I don't see that that is a relevant inquiry either.

MR. DOHERTY: I think it's highly relevant if the Legislature is in fact strongly getting ready to illegalize CWIP in the state.

MR. ROZZELL: The Legislature --

MR. DOHERTY: Excuse me.

JUDGE WOLFE: Getting re'ly to what?

MR. DOHERTY: If the Legislature is -- if there is any movement within the State Legislature to abolish CWIP, then obviously there's a good deal of relevance here.

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1 I mean, obviously, if CWIP is tossed out here,  
2 then we have a major change.

3 MR. ROZZELL: Your Honor --

4 MR. DOHERTY: I'm trying to give the Board an  
5 idea of what the climate here is.

6 MR. ROZZELL: Your Honor, for your information,  
7 the Legislature of the State of Texas will not be in  
8 session again until January of 1983.

9 MR. DOHERTY: That's not relevant. I asked  
10 him in the past most recent legislative session if anything  
11 were done that he knows of.

12 MR. ROZZELL: Well, if there were a law that  
13 were passed, Mr. Doherty, I suspect that you could ask him  
14 a question about that.

15 MR. DOHERTY: Well, there wasn't any. We  
16 know that. The question is, was anything filed?

17 (Bench conference.)

18 JUDGE WOLFE: Once again, we are not interested  
19 in things that might be nor in counting noses and having  
20 polls. It's entirely speculative.

21 Objection sustained.

22 BY MR. DOHERTY:

23 Q Mr. Dean, in 1972 what was the company's  
24 request to the Public Utility Commission for CWIP? What  
25 percent CWIP did they request?

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MR. ROZZELL: Your Honor, that question is asked and answered at page 7, line 17 of Mr. Dean's prepared testimony.

MR. DOHERTY: All right. I'll withdraw that.  
BY MR. DOHERTY:

Q Now, in 1979, Mr. Dean, what percent of CWIP did the company receive from the Public Utilities Commission?

MR. ROZZELL: Your Honor --

THE WITNESS: That's answered on page 8.

JUDGE WOLFE: Mr. Witness.

THE WITNESS: That's answered on page 8.

JUDGE WOLFE: You have something to say, Mr. Rozzell?

MR. ROZZELL: Yes, Your Honor. I was going to say that that's answered at page 8, line 1.

JUDGE WOLFE: When your Counsel is speaking, Mr. Dean, let him say his piece.

THE WITNESS: Yes, sir.

MR. COPELAND: He knows he knows more than we do.

JUDGE WOLFE: In any event, isn't that so?

MR. DOHERTY: Yes, sir, that's correct.

JUDGE WOLFE: Objection sustained.

//



1 BY MR. DOHERTY:

2 Q Mr. Dean, in 1981 what is the request for  
3 CWIP in percentage?

4 A Seventy-three percent.

5 Q Okay. In 1978 did Houston Lighting & Power's  
6 request for a rate increase total 12.6 percent?

7 A I don't recall, but that sounds reasonable.

8 Q Do you recall what the Public Utilities  
9 Commission granted that year as a result of that request?

10 A No.

11 Q Does seven percent sound reasonable?

12 A That's probably in the area.

13 Q In 1979, do you recall what the request to the  
14 PUC was for the Houston Lighting & Power?

15 A No, I do not.

16 Q Does 10.5 percent sound about right?

17 A Sounds reasonable.

18 Q And do you recall what the PUC gave as a result  
19 of that request?

20 A No. I think more in terms of what return we  
21 were granted, Mr. Doherty, and retain those. The other  
22 figures I do not retain, so I will have to answer, if you  
23 continue that, that I don't recall.

24 Q I have a figure 4.9 percent; does that sound  
25 about right?

8-5

1 A I will take your figure.

2 Q Okay. Now, when you stated here at page 3,  
3 you state that, starting at line 15, "We expect that  
4 over the time frame in which ACNGS is being built, the  
5 percentage of construction expenditures attributable to  
6 internally generated funds will approximate our past  
7 experience."

8 What did you mean by that? What were you  
9 getting at there, sir?

10 A That we would be able to generate internally a  
11 percentage in the same range that we had had in the past,  
12 which would be in the range of 35 or so percent.

13 Q Did the company -- excuse me.

14 A So that we would say 35 to 40 percent would be  
15 what we would anticipate that we would still be able to  
16 generate internally.

17 Q Is it your understanding that the company filed  
18 with the NRC that figure, that they expected to be 35  
19 to 40 percent financing Allens Creek through internally  
20 generated funds?

21 A That's the basis that we put our assumptions  
22 together, yes.

23 Q Okay. Is the company itself permitted to  
24 invest in other businesses? Can you take some of your  
25 assets and invest in Exxon or McDonald's or any sort of

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1 thing like that, or is that prohibited by law. I don't  
2 kn w --

3 A. I don't know of any prohibition, but we don't  
4 have funds to invest in that type of thing.

5 We do on a temporary basis invest surplus  
6 funds that we have from time to time in temporary  
7 securities so that they are not just lying over in the  
8 bank. They are out earning money.

9 We will buy commercial paper, maybe one-day  
10 paper or a little longer than that, but the cash flow on  
11 the outgo and intake is not just absolutely balanced out,  
12 so you find yourself in that position. We do make  
13 temporary investments, but not long-term investments.

14 Q. It seems like you have a term here on page  
15 4, "total capitalization," and that seems like a term of  
16 art. "Total capitalization."

17 That's at line, approximately 8, I guess, or 7.  
18 Does that refer to the amount of money invested  
19 in plant?

20 A. That refers to the total of the long-term  
21 debt, the preferred stock and the common equity.

22 Q. Okay. You have a statement on line 14, same  
23 page, "Therefore, on a relative basis, the growth in  
24 assets and in capitalization during the period 1981 to  
25 1991 will be less than that experienced by the company

1 from 1970 through 1980."

2 Now, that is a fairly critical statement it  
3 seems to me, and is that the way it's intended to be?  
4 There's no -- That's the way that's supposed to be,  
5 right?

6 You are saying that you actually will  
7 experience more growth in '70 and '80 than you expect  
8 between '81 and '91?

9 A. What I said there was that if you look at the  
10 number of times that your capitalization had increased  
11 during that period of time and compared with the number  
12 of times it increased during the period 1970 to '81, that  
13 on a relative basis it was less than.

14 We talk about an increase in assets during  
15 that first period, 1970 to '80, of 4.8; and we talk  
16 about 3.8 in the '80 to '90 period. So on a relative  
17 basis, the number of times it increases is less.

18 Q. May I ask you to pull the mike up a little  
19 closer to yourself?

20 A. Surely.

21 Q. Thank you.

22 Well, then, are you counting on greater  
23 external financing between 1981 and 1991 than you were  
24 from 1970 to 1980?

25 A. Percentagewise or total dollars?

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Q Percentagewise.

MR. ROZZELL: I object. That question has been asked and answered. It appears in the prepared testimony at the bottom of page 4 and the top of page 5.

MR. DOHERTY: Well, my question was with regard to external funds. I meant to make it that way, anyhow.

BY MR. DOHERTY:

Q Was that what you understood, Mr. Dean?

JUDGE WOLFE: Yes, that was your question, I thought.

MR. DOHERTY: The bottom of 4 and the top of 5, unless I'm incorrect, refers to internal.

MR. ROZZELL: That's right, Mr. Doherty. The difference between 100 percent and those percents that are expressed as internal funds are external funds.

BY MR. DOHERTY:

Q Is it true, Mr. Dean --

JUDGE WOLFE: You should have advised us, Mr. Dean it was not in your testimony.

THE WITNESS: Sir?

JUDGE WOLFE: You should have advised us it wasn't in your testimony.

THE WITNESS: You told me not to talk.

(Laughter.)

1 JUDGE WOLFE: Answer the question.

2 THE WITNESS: Making a judgment here that since  
3 the internal funds portion is going to remain relatively  
4 unchanged, I have to draw the conclusion that the external  
5 portion likewise will remain relatively unchanged.

6 MR. DOHERTY: Okay. Thank you to you both.

7 MR. ROZZELL: You are welcome, Mr. Doherty.

8 BY MR. DOHERTY:

9 Q On page 5 we get into the celebrated derating,  
10 and would you say, sir, that Duff and Phelps are comparable  
11 to Moody's and Standard and Poor as securities ratcrs?

12 A Well, I think that there are many of the  
13 investors that probably would rate Duff and Phelps higher  
14 because prior to the time that Duff and Phelps started  
15 the public rating of securities that, as I had indicated  
16 earlier, they had been doing a private rating for their  
17 clients.

18 These ratings were circulated on the street and  
19 there would seem to be more attention paid to the Duff  
20 and Phelps ratings there, so Duff and Phelps decided that  
21 they would go public with it and probably be able to  
22 charge more, a greater fee, for their service; and inasmuch  
23 as being used anyway, they just as well benefit by it  
24 themselves.

25 Q Do you recall when that happened?



8-10

1 A. When what happened?

2 Q. When what you described about this being for  
3 sale on the street and so forth? Do you recall --

4 A. No, no, I didn't say it was for sale on the  
5 s'treet.

6 Q. Well, what you described just a minute ago.

7 A. I described that they did private ratings for  
8 their clients.

9 Q. Yes, when were they doing that?

10 A. When?

11 Q. Yes.

12 A. They have been doing that for a considerable  
13 period of time. They went public with their ratings and  
14 started charging a fee to the issuer --

15 Q. When was that?

16 A. I was going to tell you.

17 Q. Good.

18 A. Last year.

19 Q. Last year.

20 A. In fact, I guess we were one of the first  
21 companies that had them publicly rate our securities.

22 Q. Have there been any other deratings of HL&P  
23 in the last five years than this one that you mentioned  
24 here?

25 A. '75 was the only other time.

8-11

1 Q '75 was the only other time, and that was --  
2 okay.

3 Was that with regard to first mortgage bonds  
4 that you thought that question was related to only?

5 A Which question?

6 Q The one we just went into if there had been a  
7 rating, I want to say derating, but that doesn't seem right,  
8 but a lowering of rating in the past five years. That  
9 was the question.

10 A If a rating agency lowers a rating, it lowers  
11 the rating on all securities at the same time.

12 Q Do they -- okay.

13 Well, did Moody's lower the preferred stock as  
14 well?

15 A Absolutely.

16 Q Okay. Now, in the market where stocks and  
17 mortgage bonds are sold, are there some institutional  
18 investors that by law can only buy in certain ratings,  
19 to your experience?

20 MR. ROZZELL: Objection, Your Honor. It calls  
21 for a legal conclusion.

22 MR. DOHERTY: I used the word "law." That does  
23 put it in that sphere.

24 I'll rephrase.

25 //

1 BY MR. DOHERTY:

2 Q In your knowledge of institutional investors,  
3 do you know of some that have rules which prohibit them  
4 from buying certain types of mortgage bonds or stocks  
5 because of the mortgage bonds or stocks ratings?

6 A There are those, Mr. Doherty, but I cannot  
7 give you the names of them; but yes, there are quite a  
8 few.

9 Q So that if a company's stock rating were  
10 lowered it might sort of like mean that some potential  
11 investors were lost; is that right?

12 A It will mean that some are lost, yes.

13 Q What is meant by "interest coverage," at the  
14 top of page 6? What does that term mean?

15 A That is the number of times that your earnings  
16 exceeds the interest requirements.

17 Q So it's a frequency?

18 A So if you -- say that you had one dollar of  
19 interest and your net income before interest was \$2, you  
20 had a ratio of two. Your times of coverage earned would  
21 be two.

22 Q And on that scale, that chart on page 6 would  
23 be 2.0 then, right, that example you gave there?

24 A That is correct.

25 Q Okay. Now, when you determine the debt equity

8-13

1 ratio, do you sum the value of the stock in the company  
2 that the holder is entitled to and say it is a ratio  
3 against the assets; is that how you do it?

4 A You take the total of your long-term debt, your  
5 preferred stock, and your common equity, and say that  
6 gives you a hundred.

7 Say that your long-term debt amounts to 50.  
8 You do your ratio and 50 over 100 is 50, so the  
9 capitalization portion of your structure represented by  
10 your long-term debt would be 50.

11 If your preferred stock was 10, it would be  
12 10, and your common would be 40 to sum up. It's just a  
13 percent of the total is all it is.

14 Q Uh-huh, and in the forecast, were you assuming  
15 these rate hikes that would be required within that  
16 calculation or the lower part of the chart there? Is  
17 that a presumed rate hike system?

18 A It would have the rate increases in there  
19 based upon the parameters that were set in the last PUC  
20 order, yes.

21 Q Based on the parameters of the last PUC order.  
22 Is that a figure? What is that?

23 A The parameters are that you would use the  
24 15.8 percent return on equity, the same portion of  
25 construction work in progress and all other things that

8-14

1 the PUC considered to determine the amount of the rate  
2 increase that was granted.

3 Q Is the company below the median on long-term  
4 debt for an A-rated company on that?

5 A Would you restate that question, please?

6 Q Certainly. Is the company below the median on  
7 long-term debt for an A-rated company?

8 A It indicated here that the A-rated company is  
9 52 percent and we are at 49 percent, so yes, we are below.

10 Q Okay.

11 A And it's a good place to be.

12 Q In your opinion, is it preferable to be  
13 capitalized on preferred or common stock?

14 A Pardon?

15 Q In your opinion, is it preferable to be  
16 capitalized on preferred or common stock? I guess it's  
17 inconceivable that it would be a hundred percent of one  
18 or the other, but which is healthier, to have a higher  
19 percent of which?

20 A The common stock.

21 Q Common, okay.

22 On the top of 7, you spoke of "61 companies."  
23 Are all these U.S. companies?

24 A Yes.

25 Q Were the public utilities excluded?

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A. These are privately-owned companies.

Q. These are all private?

A. Yes.

Q. Now, of the 15 companies that you mentioned there who are companies with more assets than HL&P, do you know if any of these companies -- or how many of these companies generate more electricity than HL&P?

A. I do not see that there would be more than five there could be more than five, because we are the sixth largest generator of electric energy in the United States.

Q. So at most it could be five, then?

A. That's right.

Q. Okay. Well, the company seems to have -- going to CWIP a minute, it seems to have requested more CWIP than it received.

Has the company been sort of trying to take a guess at what might eventually the decision be where it would get about what it really needs, or has it been somewhat overestimating?

A. Mr. Doherty, we ask for exactly what we feel that we need. As always, there is a difference of opinion, and the PUC grants in its opinion what they feel that we need.

So then we come back again. So we ask for what we think we need.



8-16

1 Q Well, I think we've pointed out that you have  
2 not gotten, then, what you need. Has that interfered with  
3 the construction program, to your knowledge?

4 A It just occasions us to come back and  
5 make a request to the PUC sooner than we would if we had  
6 gotten what we originally asked for.

7 We have been able to carry on the construction  
8 program in a stretched out mode, but we would have had to  
9 do that in all likelihood anyway because of the size of  
10 the program and the external needs that would have to  
11 be met.

12 JUDGE WOLFE: How many times during the course  
13 of a year can you come back to the PUC, or is it just on  
14 a yearly basis?

15 THE WITNESS: No. We could come back at least  
16 twice or more. Our rate lawyer is out there in the  
17 audience. He could probably answer that better than I.

18 JUDGE WOLFE: Well, from your experience, how  
19 often?

20 THE WITNESS: We received an increase in  
21 January of 1980 and we came back in July of 1980 with a  
22 rate filing, and we settled in September and put the  
23 rates into effect in October of 1980.

24 So we put two rate increases into effect last  
25 year.

8-17

1 JUDGE WOLFE: All right, Mr. Doherty. Go  
2 ahead.

3 MR. COPELAND: I'm sorry to see Mr. Dean  
4 thinks his rate lawyers know more than he does about  
5 rates and his nuclear lawyers don't.

6 (Laughter.)

7 THE WITNESS: Well, if he's going to sit out  
8 there and listen, I want him to work.

9 (Laughter.)

10 BY MR. DOHERTY:

11 Q Well, in following these more frequent visits  
12 to the PUC, have you still been able to get the amount of  
13 CWIP you need?

14 A Well, I have a hard time in divorcing it by  
15 pieces. It's the over-all results that we need. It's  
16 the dollars that we need, and if the PUC wanted to reduce  
17 the amount of CWIP and increase the return on equity,  
18 that would accomplish the same thing.

19 It's the amount of dollars we need to make it  
20 ongoing. It's not a matter of how much CWIP is in there  
21 as opposed to return.

22 It all goes together as to how it fits together  
23 to bring out the total results.

24 Q All right.

25 //

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BY MR. DOHERTY:

Q Then in putting it together, have you been able to get the money you need from the PUC to keep to the construction program?

A We have not gotten the amount that we felt was required, so we have come back more frequently than we would have otherwise.

Q And has that also resulted in a slowed construction program?

MR. ROZZELL: Objection, Your Honor. That question has been asked at least twice, and answered at least twice.

(Bench conference.)

MR. DOHERTY: I want the Board to rule. I don't want to say, "No, it wasn't."

(Further Bench conference.)

JUDGE WOLFE: Sustained.

BY MR. DOHERTY:

Q Well, in not granting the amount of CWIP that you've requested, what reasons has the PUC given?

A I don't recall that they've really had a reason. They have allowed -- They've found ... that they allowed so much CWIP. They have allowed a certain return on equity, and they've allowed the embedded costs. And they've said that this in their judgment is

1 reasonable.

2 Q On Page 8 there is a question here -- well,  
3 it's not really a question. It has got the little  
4 letter "q" in front of it, but it says it's not a  
5 question.

6 It just says, "Much of the forecasted internal cash  
7 position, earnings, rate of return on common equity, and  
8 coverage ratios depends upon receiving adequate and timely  
9 rate relief from the Public Utility Commission of Texas."

10 Do you agree with that statement?

11 A Sure.

12 Q Okay. Now, is the Public Utilities Commission  
13 the first body that makes a decision on a rate request  
14 by HL&P?

15 A It has been.

16 Q Doesn't the -- Don't you also have to go to  
17 the City -- each city in your rate -- service area  
18 first?

19 A No, sir.

20 Q -- before going to the PUC for a rate request  
21 for that particular city in the service district?

22 A The actual order is that we file with each of  
23 the cities that have jurisdiction and the PUC at the same  
24 time, because the PUC has original jurisdiction over  
25 the rural rates.

1 The cities have original jurisdiction over the  
2 rates within their corporate limits, if they have not  
3 opted to give that authority to the PUC.

4 So the filing is made simultaneously.

5 Q All right. Now, what happens if a city the  
6 size of Houston grants no increase whatsoever to -- or ...  
7 you know, dismisses your request with no satisfaction?  
8 What do you do then?

9 A Appeal to the PUC.

10 Q What percent of HL&P's -- I'm trying to think of  
11 the right term -- sales (I guess it would be) of service  
12 is to the City of Houston?

13 A I think it's somewhere in the area of 35-plus  
14 percent.

15 Q Okay. Now, you mention on Page 9 a neighboring  
16 utility. You state that "The Company's financial fore-  
17 casts ... target 15.8%," in the financial forecast.

18 And you say, "This return, which is .2%  
19 below that granted in a neighboring utility's most recent  
20 case, was granted by the Utility Commission to HL&P in  
21 its most recent order."

22 Who is the neighboring utility?

23 A I believe that's Gulf States.

24 Q Gulf States. Do you know if, in fact, Gulf  
25 State Utility has lower residential rates than HL&P at

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1 this time?

2 MR. ROZZELL: Your Honor, I object. I don't  
3 know what the relevance is of that particular question to  
4 the question of whether HL&P can generate sufficient  
5 funds to finance the Allens Creek Nuclear Generating  
6 Station.

7 MR. DOHERTY: The testimony puts forth as some  
8 type of evidence that they will be able to continue to  
9 receive, or will receive for the first time -- I'm not  
10 sure which -- 15.8% target return on equity. It  
11 buttresses this idea by indicating that one neighboring  
12 utility got a slightly higher amount in one case -- or a  
13 recent case.

14 What I'm asking him the question for is I want  
15 to find out if that particular neighboring utility has  
16 charged such low rates for such a long time that perhaps  
17 this is merely a catch-up going on, and that, indeed,  
18 getting 15.8% is not a reasonable expectation.

19 MR. ROZZELL: I continue my objection and would  
20 point out that the figures that we're talking about on  
21 Page 9, Lines 6 and 7, is return on equity.

22 MR. DOHERTY: All right. I'll withdraw that.

23 BY MR. DOHERTY:

24 Q So the neighboring utility was Gulf States  
25 Utility. Do you know if the return on equity for Gulf



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1 States Utility is equal to Houston Lighting & Power's?

2 A. I don't understand your question, sir.

3 Q. Doesn't your testimony state that the most  
4 recent order -- the most recent case of Gulf States  
5 Utility, that the PUC granted a 16.0% return on equity?

6 A. I state that, and that is .2 more than what  
7 they had granted us in our last rate case.

8 Q. Uh-huh.

9 A. So they have been granted by the PUC 16% against  
10 our 15.8, which is more. And, therefore, I really don't  
11 understand your question.

12 Q. Okay. The question got a little snafued in  
13 the beginning, and that's why I was trying to refit it  
14 and it doesn't work. Let's drop it. Okay?

15 A. Yes, sir.

16 Q. Do you know if the City of Austin, one of the  
17 South Texas Nuclear Plant partners, has planned a  
18 referendum to decide on staying in the South Texas Project  
19 Partnership or leaving the partnership?

20 A. I understand that there is a referendum being  
21 considered.

22 Q. I see. What would be the effect if the City of  
23 Austin withdrew on the financing of the Allens Creek  
24 construction?

25 A. There is a provision in the participation

1 agreement as to what happens to their share of that pro-  
2 ject, that they can sell it. The remaining participants  
3 have right of first refusal, I believe.

4 (Pause.)

5 MR. DOHERTY: Your Honor, having consulted with  
6 Mr. Baker about a couple of things, I think I have com-  
7 pleted my questioning.

8 JUDGE WOLFE: All right.

9 Is there redirect, Mr. Rozzell?

10 MR. ROZZELL: Yes, there is, Your Honor, but  
11 before we begin, if you will accept the representation  
12 of an oil and gas lawyer acting as a nuclear lawyer who  
13 has been advised by an electric lawyer, there is no  
14 prohibition in the State of Texas against multiple rate  
15 filings in any given year by a utility.

16 REDIRECT EXAMINATION

17 BY MR. ROZZELL:

18 Q Mr. Dean, do you recall your exchange this  
19 morning with Mr. Baker in which you discussed the \$1.055  
20 billion estimate that appears in Supplement 2 to the  
21 Safety Evaluation Report?

22 A Yes.

23 Q Do you know when that estimate was provided  
24 by HL&P to the Staff -- the NRC Staff?

25 A After looking at this report, it indicates it

1 was filed as an amendment in June of 1978.

2 In further review of that report, it indicates  
3 that most of the information was 1977 information. So,  
4 apparently, that figure is also a 1977 vintage number.

5 Q All right, sir. Do you recall your exchanges  
6 this afternoon with Mr. Baker concerning the corporate  
7 structure of Houston Industries as a holding company for  
8 HL&P?

9 A Yes.

10 Q Do you regard the existence of Houston Industries  
11 as a holding company an impediment to HL&P's capability to  
12 raise capital?

13 A No, I do not. I think that it is a benefit.

14 Q This afternoon I believe there was some dis-  
15 cussion between you and Mr. Doherty concerning the rate  
16 increase relief that had been requested by the company in  
17 its last three rate cases. Do you recall that dis-  
18 cussion?

19 A Yes.

20 Q Do you know in Docket 2676 what return on  
21 equity the company requested?

22 A I think it was 16%.

23 Q And do you recall what return on equity was  
24 granted by the Public Utilities Commission.

25 A 15.5, as I recall.

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Q All right, sir. And do you recall in Docket 3320 what return on equity was requested by the company?

A 16.5, if I recall.

Q And I believe your testimony states at Page 9, Line 6, that the return on equity granted by the Commission was 15.8%.

A That is correct.

Q With respect to Docket 3955, is that your currently pending rate case?

A Yes.

Q What rate of return on equity has the company requested in that case?

A 17%.

Q And has the Staff filed testimony in that case?

A It's my understanding they have.

Q Have --

MR. DOHERTY: Excuse me, counsel, staff of who?

MR. ROZZELL: The Public Utility Commission Staff. I'm sorry, Mr. Doherty. Thank you.

MR. DOHERTY: Well, I'm sorry to interrupt, too.

THE WITNESS: Yes.

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BY MR. ROZZELL:

Q And do you know what rate of return on equity the Public Utility Commission Staff recommended for HL&P?

A It's reported to me as 16.25.

Q All right, sir. Mr. Doherty asked you some questions concerning the City of Houston versus the Public Utility Commission rate regulation, I believe.

Does the Public Utility Commission of Texas ultimately set a uniform rate for all customers within the utility's service area?

A The Public Utility Commission is the appellate jurisdiction, and it has the -- it has always set, in our cases, the same systemwide rate.

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1 MR. ROZZELL: All right, sir.

2 No further redirect, Your Honor.

3 JUDGE WOLFE: Board questions?

4 BOARD EXAMINATION

5 BY JUDGE CHEATUM:

6 Q Mr. Dean, on Page -- the first page of your  
7 Exhibit 1 under "External Financing," you have a line  
8 labelled "Contribution from Parent." The parent doesn't  
9 seem to have been very generous.

10 (Laughter.)

11 And I would like to know who the parent is.

12 A. The parent is Houston Industries.

13 Q. That's what I assumed.

14 A. And just as a contribution to the capital  
15 structure of the Lighting Company, no. It has  
16 received stock issued by the Lighting Company in return  
17 for the investment that it has made in the Lighting  
18 Company.

19 And, rest assured, that the proceeds, with a  
20 very minor exception, that we have had from the stock  
21 sales of Houston Industries have all been invested in  
22 Houston Lighting & Power Company stock.

23 Q. Now, as I understand it, Houston Industries -- there  
24 are three companies which operate ... should I say  
25 "under" Houston Industries?



1 A Well, under their ownership, yes.

2 Q Under their ownership.

3 A Yes.

4 Q Is there any mutual supporting role of the  
5 three units in Houston Industries that is possible in the  
6 event that one of the units became financially embarrassed  
7 or troubled?

8 A Well, they --

9 Q In other words, is there any advantage to any  
10 of the three -- among the three to being in the umbrella  
11 of Houston Industries?

12 A Well, we think there's certainly an advantage  
13 to Houston Industries to have that ownership because it  
14 gives it the ability to have a more diversified operation  
15 than if it were just a public utility, and that it has  
16 been such that we have been able to keep those companies  
17 on their own for the most part.

18 We did take some of the funds of one of the  
19 stock sales and invested that in Utility Fuels to get  
20 more capital in it. And that was two million dollars, as  
21 I recall, of one of the stock issues that we took and put  
22 in there as additional common equity of that company.

23 So far as Primary Fuels is concerned, its  
24 equity, we started out with \$100,000 of common equity in  
25 that company and moved on into borrowed funds. And then

9-12

1 from the retained earnings, it has maintained all of its  
2 equity contribution that way and has, in fact, returned  
3 the original \$100,000 investment through dividends back  
4 to the holding company.

5 So, in effect, it has certainly been self-  
6 sufficient. And I think it could operate on its own, if  
7 it had to be.

8 But I think also it's a great benefit that  
9 the holding company have it because that is one of the  
10 added "kickers" that some of these investors see as a  
11 possibility that the earnings can be greater for  
12 industries than it would be if it were just a utility-  
13 type holding company, and one which I think has enabled  
14 the stock to sell at a higher price earnings multiple  
15 than many of the utility companies.

16 Q Would you say that that characteristic of the  
17 use of the industries is one of the, perhaps, major benefits  
18 to HL&P which you said was definitely a benefit in answer  
19 to a question just put to you a little while ago?

20 A Yes, sir.

21 Q I see. Going back a ways to some of the questions  
22 that Mr. Black asked you about the makeup of the Texas  
23 PUC. I believe you said that the members of the Commis-  
24 sion have six-year terms?

25 A Yes, sir.

1 Q I'm wondering if those terms are staggered?

2 A Yes, sir, they are.

3 Q They are staggered?

4 A Yes, sir. When the Commission was originally  
5 set up, three members had two-, four- and six-year  
6 terms. So at the end of this first-two year period, you  
7 got a six-year appointment and then a four-year period,  
8 and now it's on a six-year expiration.

9 Q In answer to one of Mr. Baker's questions re-  
10 garding the testimony of Mr. Myer before the cited  
11 hearing at which he appeared -- cited by Mr. Baker --  
12 was Mr. Myer a witness for Houston Power & Light?

13 A Yes, sir, he was.

14 Q Okay. I just wondered about that.

15 Getting back to the Houston Industries and some  
16 strength or advantage that the holding corporation brings  
17 to the members of Houston Industries, Houston Industries  
18 itself as a holding company, it is capable out of its  
19 own funds, capable of assisting any of the member units  
20 within Houston Industries?

21 A It would be able to do so through the sale of  
22 common equity.

23 Q I see.

24 A -- or through a debt facility that it might  
25 have. But at the present time it is dependent -- since it

9-14

1 has no operations itself, other than through its sub-  
2 sidiaries, then its income actually flows from the sub-  
3 sidiaries.

4 Q In many respects, Houston Industries is really  
5 a company which -- whose major function perhaps is sort  
6 of service, a service to the subsidiaries?

7 A That is correct.

8 Q As you know, this Board is -- let's say our  
9 primary interest in the financial health of Houston  
10 Power & Light is in terms of is it capable of safely  
11 constructing a nuclear power plant, and of course, in  
12 operating a nuclear power plant.

13 So that we are interested -- and I don't know  
14 whether you consider yourself qualified to answer the  
15 question -- but in the event of financial hardship along  
16 the way and down the line, in the course of construction  
17 of ACNGS in the event you had -- you were successful in  
18 getting a construction permit, how would the quality  
19 of construction (the labor, the materials that go into  
20 construction and all this sort of thing) -- how might --  
21 is there any way in which that quality might be jeo-  
22 pardized by a higher authority in HL&P or in, say, its  
23 board of directors ... in such an event of financial  
24 embarrassment?

25 A Is the thrust of your question that would the

1 management of Houston Industries make a decision that might  
2 be detrimental to the construction of that --

3 Q The quality.

4 A The quality.

5 Q Right.

6 A No, sir. Because we at the holding company  
7 level are just as interested in having a good safe facility  
8 as the Lighting Company would be.

9 In fact, we have a common board of directors,  
10 so that the board of directors of the Lighting Company are  
11 also the board of directors of the holding company.

12 They've got a -- There's no way that they can  
13 transfer their responsibility and the management of the  
14 holding company would not want to do that anyway.

15 Q And no way that they could cut corners in any  
16 way?

17 A No, sir.

18 Q -- in the construction costs by -- in downgrading  
19 quality?

20 A I do not see how that could occur.

21 JUDGE CHEATUM: I believe that is about all I  
22 have.

23 BOARD EXAMINATION

24 BY JUDGE LINENBERGER:

25 Q Following the thrust of that last question,

1 sir, let's put Houston Industries aside for the moment  
 2 and focus on you. You indicated earlier that the Allens  
 3 Creek project management comes in with a proposed budget  
 4 for -- I presume for the upcoming fiscal year for the  
 5 company and the board of directors approves that budget  
 6 or modifies it, and that becomes the operating budget  
 7 for the project.

8 Is that essentially the way the operating budget  
 9 is arrived at?

10 A. Let me put one more step in there. That budget  
 11 is presented to the management of the company, and the  
 12 management of the company reviews it to see how these  
 13 funds are being spent or proposed to be spent, and will  
 14 ask questions and get the answers from the people who  
 15 prepare the budget. And based upon the responses they  
 16 get, they will approve the budget or they will maybe reduce  
 17 the budget, and then management presents it to the  
 18 board for its -- with its recommendation that the board  
 19 approve it.

20 n Okay. Now, let's put you in this picture.  
 21 And you see trouble looming on the horizon. You're a  
 22 director. You're the chief financial officer. What  
 23 flexibility do you have from your vantage point, and with  
 24 respect to your responsibilities with the company -- what  
 25 opportunity do you have to, in essence, put in some



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guidance that says, "Okay, fellows, some things about this nuclear plant can stand cadmium-plating instead of gold-plating. Let's squeeze the nickel a little harder here and there. Let's not get the most expensive contractors. There are ways to economize a little bit. Now, sharpen your pencil."

Now, do you have an opportunity to exert pressures in that light, whereas you may not intend them to influence the quality of the work, they might end up in actually influencing the quality of the work.

A. Well, the position is -- that we take -- "Let's get the best that we can for the dollar we spend. If it's required, well, then, let's spend it. If it's necessary, let's spend it. If it's just desirable, let's don't do that. Let's do the necessary part."

And what you're telling me here is -- in the question that you asked -- this is required and it's necessary. And that's the kind of thing that has to go. And it's the things that would be desirable to have, but it's not absolutely necessary that get cut.

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1 Q Okay. I don't want to belabor this too long,  
2 but I have experience where I was a project manager and  
3 by golly, it was all necessary; and I've had some  
4 experience where project managers reported to me and I  
5 said, "Cut it out, fellows. I've been there before and  
6 you can't convince me it's all necessary."

7 Now, somewhere a judgment has to be made between  
8 the necessary and the niceties, and I'm just still a  
9 little interested here to what extent you -- we're talking  
10 to you and about you here -- to what extent you might  
11 help influence these judgments about necessary versus  
12 nice?

13 A Well, you have been there and we have part of  
14 our Officer Management Group that is responsible for  
15 building that project.

16 It is up to them to decide whether that is  
17 desirable or whether it's necessary. An accountant or  
18 finance fellow can't decide that that is necessary or it  
19 isn't.

20 It's his basic decision and he's charged with  
21 the responsibility for making that decision.

22 So if his project manager says that it is  
23 necessary and he having been involved in construction and  
24 he says, "No, it isn't," then we have to lean on his  
25 judgment in the financial area.

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1 We do not superimpose on anybody that we can  
2 determine what is necessary and what's desirable.

3 Q All right, sir, fine.

4 Let's approach your life from a little different  
5 perspective. It seems to me in these times you may be  
6 on somewhat of a narrow line walking with respect to  
7 what's best for the ratepayer and what's best for the  
8 shareholder, and I can conceive of what's best for one  
9 not necessarily be best for the other in financial  
10 and economic times such as you're living through right  
11 now.

12 Now, there's a -- I'll inject a third  
13 dimension, what's best for the nuclear project.

14 Now you are probably going to tell me that  
15 what's best for the nuclear project is what's best for  
16 everybody, also, but that's not entirely obvious to me.

17 I'd like to hear how you approach this kind of  
18 dichotomy.

19 A Well, I think that what we can say here is  
20 that as a result of what we did earlier this year when we  
21 came back in and reviewed the construction program that  
22 the engineers had laid out as one which was needed and  
23 one which we should attempt to build, and found that yes,  
24 it would be nice if we could build that whole program in  
25 the time frame that it was set forth; but there was one

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1 problem with it.

2 We've got a budget just like everyone else's,  
3 and you can't continue to live outside the budget, so let's  
4 get back within something that we can support.

5 There was nothing in here that says cut this  
6 or cut that. Let's see what we can do to reduce that  
7 program by extending it or whatever, and in the interim  
8 here to take care of the load requirements that we would  
9 be unable to serve by extending it, that we purchase  
10 power.

11 Now, this is something that we wrestled with  
12 in our company from about mid-November to the middle of  
13 March when the decision was ultimately made.

14 There as untold number of studies made as to  
15 what would be the effects of deferring this project or  
16 eliminating that, how we could structure it, what the  
17 expected growth in the company's area would be; and then  
18 came up with the program that we had adopted here, which  
19 cut \$900 million out of the expenditures for the three  
20 years 1981, '2 and '3.

21 It also stretched the completion dates here  
22 of the four lignite units and Allens Creek, and it added  
23 \$700 million to the cost, but that was a cost that we  
24 had to assume here because it got us in a position that  
25 we could, yes, finally this.

10-4

1 It did not entail cutting any corners on any  
2 of the construction. It just spread the expenditures out  
3 over a longer period of time which made it manageable and  
4 substituted purchased power in the interim.

5 Q Okay. Setting aside for the moment only the  
6 specific impact on the Allens Creek Project and putting  
7 things in an argumentative light for the sake of getting  
8 your comments, it seems to me that the approach you've  
9 taken in deferring these projects, be they nuclear or  
10 fossil, is an approach that really favors the shareholder  
11 because the additional costs of some of these construction  
12 projects, the cost of purchasing power due to delay of  
13 things, these go back on the ratepayers' shoulders.

14 So how is this a decision that looks after the  
15 interests of the ratepayers?

16 A Well, I think that the way that is done is it  
17 enables us to actually build the facility, which I am  
18 afraid that possibly if we attempted to build the facility  
19 under the schedule that we were looking at, we would not  
20 be able to obtain sufficient funds to pay the construction  
21 costs and we would wind up in worse shape than we are so  
22 far as the ratepayer is concerned.

23 You've got a project out here that you can't  
24 complete. You have to shut it down and pull your horns  
25 in and you've got the costs sunk there. You still have to

10-5

1 go out and get the power from somewhere else.

2 So I can understand your position in thinking  
3 it's in the best interest of the shareholder or the  
4 investor, but we feel that it is in the interest of all  
5 because, sure, it's going to cost the ratepayer more by  
6 stretching the time frame out than it would if we were  
7 capable of building it within the time frame; but not  
8 having that capability, then we feel that what we have  
9 done is the best interest in the whole company, which  
10 includes its customers as well as its investors.

11 Q All right, sir.

12 Speaking of the expense or the cost of purchasing  
13 power because of deferral of completion dates of some  
14 of these projects, where does that appear in your Exhibit 1?

15 I gather it's implicit in things such as  
16 operating revenues or something, because of higher rates  
17 that you may charge if that goes in the rate base, or how  
18 is it accommodated?

19 A Well, Exhibit 1 does not address that per se.  
20 It takes off at a point that has already given consideration  
21 to it which is net income. So that --

22 Q It is in --

23 A That's right. You have billed it out and  
24 deducted your expense and come down to your net income.

25 Q Okay. Now, sticking with Exhibit 1 for just

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1 a little bit longer, we have this AFDC item and first I  
2 need to understand the definition.

3 If you say that -- if PUC says 60 percent of  
4 CWIP is allowed, is that then the amount that is labeled  
5 AFDC in this table?

6 A. No, sir.

7 Q. Okay. Can you tell me how these definitions  
8 should be kept separate?

9 A. All right. Let's say here that the PUC did  
10 allow 60 percent of CWIP in rate base and 40 percent is  
11 not allowed in rate base.

12 So what we would do is compute the carrying  
13 cost of the 40 percent based upon the formula that's used  
14 to include a portion of the cost of the common equity  
15 component of capital and the debt portion, and we would  
16 apply that percentage against -- that percentage of  
17 carrying cost against the 40 percent of CWIP.

18 That is what produces the AFDC number.

19 Q. All right. Now, you don't have a construction  
20 permit for Allens Creek, but equipment is being purchased,  
21 quite a number of things are being done, quite a few  
22 million dollars worth of things have been done as evidenced  
23 by your testimony, and a certain amount of this gets  
24 designated as CWIP, I gather?

25 A. All of those expenditures have been designated

10-7

1 as CWIP, yes, sir.

2 Q All right. Now, suppose you do not get a  
3 construction permit for Allens Creek.

4 Does this -- After you quit tearing out  
5 your hair, does this obligate you to go back and make  
6 numerous prior years' adjustments for CWIP's that you  
7 no longer qualify for, or how does that --

8 A That would go forward. It would not be  
9 retro-fitted.

10 Q But that would upset, then, the whole balance  
11 of this analysis.

12 A If we did not get a construction permit, it  
13 would upset a whole lot of things.

14 (Laughter.)

15 Q Okay. I get the impression that if I were --  
16 had your job, I might be inclined to -- how shall I  
17 say -- paint a given picture with slightly different  
18 colors if it were to be viewed only by the PUC than I  
19 would if it were to be viewed only by Moody than I would  
20 if it were to be viewed only by NRC.

21 Does that present a problem to you? Obviously,  
22 facts are facts and you can't change them, but it seems  
23 to me how you emphasize them, what conclusions you draw  
24 about them, how you use them to project the future might  
25 very well depend on whom you're talking to. Is that a

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1 situation you have to cope with?

2 A Well. living in a fishbowl sort of eliminates  
3 that problem because what you present to one, all the  
4 others have access to.

5 So we really gave up having to face that  
6 problem a long time ago.

7 Q Okay. On page 3 of your prefilled testimony,  
8 the last sentence of the complete answer on that page,  
9 beginning at about line 17 or 18, you express a confidence  
10 about raising necessary external funds.

11 At the bottom of page 4 you express an  
12 anticipation of what the level of internal funds will be  
13 in the future; and those two pictures sort of go hand  
14 and hand, and you say, "This means..." at the top of  
15 page 5, "...the company's ability to rely on internal  
16 funds should remain unchanged."

17 Well, it seems to me what you've said  
18 there is, we expect it to remain unchanged, and here's  
19 what it's been in the past, so therefore it's what it is  
20 going to be in the future, and hence we expect it to  
21 remain unchanged.

22 I want to just probe a little bit what is the  
23 basis of your confidence that internal generation of  
24 funds will look as rosy in the future as it has in the  
25 last eleven years, if you call it rosy?

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1 A. Well, the numbers that we have presented were  
2 based on what we felt was a reasonable basis inasmuch as  
3 they were incorporated, the various parts of the rate  
4 case that the Commission used to determine the return on  
5 equity in setting the rates, the portion of the funds  
6 that would be generated from internal operations, the  
7 coverages on the senior securities and the amount of CWIP  
8 that was allowed in rate base and the offset to that, the  
9 amount of AFUDC that would be included in net income  
10 which would make up a portion of that return on your  
11 common equity because being a non-cash item, it's a very  
12 important thing.

13 That's the reason that CWIP becomes important  
14 in rate base, as you well know.

15 We think that based upon the commitment that  
16 we have in the present Commission to maintain the financial  
17 integrity of the companies in Texas which it regulates  
18 so that they will remain financially viable, that that  
19 will prevail during the next decade.

20 Now that's the reason that we have that  
21 confidence that we evidence there.

22 Q. I guess somewhat related to that confidence  
23 are the numbers that are expressed in the answer to  
24 Question 3A of Mr. Goldberg's 12 August submittal to  
25 the Nuclear Regulatory Commission, and things all generally

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1 seem to move in a desirable direction over the next several  
 2 years, to put it crudely I'm wondering how much of that  
 3 projection is, well, wishful thinking or -- let me not say  
 4 that, but a hope for a good future versus a faith in  
 5 Reaganomics versus founded on some hard cold analyses that  
 6 give you good reason to expect these trends to go this  
 7 way?

8 A. Well, I think here that the response that I  
 9 would have to make with that that our bases for these  
 10 trends are discussions that we've had with people in the  
 11 financial markets as to how they see things going and  
 12 people who are in the forecasting business and the  
 13 ones that we have talked to have seen a downtrend and  
 14 we have a group within our company that studies all the  
 15 various inflation factors and the GNP and the price  
 16 deflator and all of these sort of things so we can come  
 17 up with a concensus here.

18 You've got engineers, you've got construction  
 19 people and you've got financial people and you've got the  
 20 corporate planners and all that come up with these, and  
 21 there is some indication that they all feel that things  
 22 are going to come down.

23 Now, whether they are going to come down as  
 24 we've got them set here or not, that's something apart and  
 25 different. We had to come in here and make a set of

10-11 1 assumptions. We feel that they are realistic because  
2 we have got a problem that we have got to address  
3 realistically and we would be fooling ourselves to set  
4 these up here if we did not think that there were some  
5 reasonable assurance that they were going to be headed  
6 this way.

7 There's one thing that I do know about these  
8 numbers. They are wrong. They are either going to be  
9 high or they are going to be low, but they are wrong.

10 Q Let's hope they are wrong in the right way.

11 A I do so.

12 Q Incidentally, does HL&P retain any, I guess the  
13 end word is econometric type consultants to assist it  
14 in analyses such as these?

15 A We do not retain them as such. We do use their  
16 services from time to time through our corporate planning  
17 group.

18 JUDGE LINENBERGER: All right, sir.

19 I appreciate your comments. That's all the  
20 questions I have.

21 JUDGE WOLFE: I think Judge Cheatum had an  
22 additional question.

23 BOARD EXAMINATION

24 BY JUDGE CHEATUM:

25 Q On page 3, lines 7 and 8, I forgot to ask you



10-12

1 about this. I had intended to when I was questioning  
2 you before.

3 What is your definition of "healthiest?" What  
4 do you mean "healthiest service area in the United States"?

5 A. Well, I think that what we mean here is the  
6 employment situation is one where there is a demand for  
7 employees.

8 We do not have a depressed economic area as you  
9 do in other parts of the country, that anybody that wants  
10 to work can work, and if you look around this area and  
11 see all of the building that's going on, there's got to  
12 be some health here.

13 We only problem we have with it, we can't move  
14 the people around fast enough here. They sort of clog  
15 up the freeways.

16 Q. Okay, then, the healthiest, you are talking  
17 really basically about employment and economically?

18 A. Economic health, yes, sir.

19 Q. Okay.

20 A. There may be those that disagree that --

21 Q. Of course, I knew that you weren't talking  
22 about malaria, probably, or the humidity.

23 (Laughter.)

24 JUDGE CHEATUM: Okay, I guess that's about it.

25 Thank you.

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THE WITNESS: Yes, sir.

2

## BOARD EXAMINATION

3

BY JUDGE WOLFE:

4

Q Mr. Dean, I was reading the contention itself.

5

I was just wondering if you can answer why you didn't

6

address specifically, for example, one or more elements

7

of the contention.

8

For example, the foreword to the contention

9

reads that, in substance, Applicant must show that it

10

has sufficient funds available for construction or that

11

it has reasonable assurance of obtaining such funds

12

because, for example, the cost of scoring radioactive

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wastes are liable to increase.

14

Is any part of that projected increase in

15

storage of radioactive wastes included in your projected

16

financing and sources of funds in your exhibit attached

17

to your written testimony?

18

A We have a provision for the cost of on-site

19

storage, but other than that, no, sir.

20

Q So there's no projection other than for on-

21

site storage?

22

A That's correct.

23

Q I see. How about taking into account the

24

increased in costs due to requirements to upgrade certain

25

items or certain designs due to the aftermath of TMI-2?

10-14 1 A. Those are included. Everything that we have  
2 knowledge of are included in those cost projections.

3 Q. And this includes then -- when you say  
4 "everything" --

5 A. All of the requirements that have been set as  
6 a result of the TMI incident have been taken into  
7 consideration.

8 Q. Finally, as part of an element of this  
9 contention, in your projections did you take into account  
10 the possibility that uranium costs are likely to increase?

11 A. We have the fuel under contract at the present  
12 time.

13 Q. That's fixed firm, a fixed price, is it?

14 A. We have some of the fuel already in storage and  
15 we have about right at a hundred million dollars of the  
16 fuel already.

17 That's the part that we own and we do not have  
18 the balance of the fuel yet, but....

19 Q. Once again, it is a fixed price contract or  
20 not?

21 A. We do not have the contract on that. I was  
22 thinking of the South Texas Project, excuse me.

23 JUDGE WOLFE: All right.

24 In light of the Board questions, any cross,  
25 Mr. Black?

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MR. BLACK: I have no questions.

JUDGE WOLFE: Mr. Baker?

MR. BAKER: I believe so.

RE-CROSS-EXAMINATION

BY MR. BAKER:

Q In reference to some of your answers to Mr. Cheatum, you testified that the Public Utilities Commission has staggered terms.

Are members of the PUC allowed to succeed themselves, to your knowledge?

A. Yes.

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Q It is a possibility. It is possible that at the end of six years that we could have an entirely different PUC than what we've got now, though; is that correct?

A Well, it's a possibility that at the end of a six-year period you could have, but it staggers so that you've got a two and four-year term extending on two of the remaining members upon the expiration of a member's term.

Q So one member is coming up for renewal in two years and another in four years and, roughly, another in six, so that in six years they could all change?

A One is up for replacement now. His term expired on August 31, but he serves until his replacement is selected.

Q I'll rephrase that to say that at the end of four years, then, we possibly could have an entirely new Public Utilities Commission?

A That is conceivable.

Q Okay, and you said in answer to Mr. Linenberger's question where he asked what your optimism or wishful thinking was based on, you said it was based on your commitments from the present Commission; is that correct?

A On commitments? No, sir. We have no commitment

11-2

1 from the Commission.

2 Q Well, maybe I misheard you. I thought you  
3 said you had a commitment from the present Commission to  
4 maintain what you consider adequate rate relief and to  
5 maintain the various parameters that -- okay.

6 I just misunderstood then. I'm glad we  
7 clarified that.

8 In reference to Houston Industries' position,  
9 is Houston Industries regulated by either the Public  
10 Utilities Commission or the Nuclear Regulatory Commission?

11 A No.

12 Q Is it regulated by any government agency besides  
13 the SEC?

14 A No.

15 Q Does it have any legal responsibility to see that  
16 this plant safely constructed?

17 MR. ROZZELL: Your Honor, I object.

18 It calls for a legal conclusion on the part  
19 of the witness.

20 MR. BAKER: I'll wait for a ruling.

21 JUDGE WOLFE: Sustained.

22 BY MR. BAKER:

23 Q In answer to one of Mr. Cheatum's questions  
24 you said that the holding company was just as interested  
25 in the safety as Houston Lighting & Power, and part of



11-3

1 your basis for this was that there is an interlocking  
2 directorate.

3 Is this in the regulations and bylaws of the  
4 companies that the board of directors be overlapping?

5 A No.

6 Q So that there could be a change in the future  
7 in that situation as far as --

8 A That is correct, but bear in mind, it would  
9 still be a responsibility of Houston Industries if in  
10 fact this plant was not built safely or operated safely  
11 and it would have an interest in seeing that that were  
12 done.

13 Q All right.

14 You mentioned in answer to one of  
15 Mr. Linenberger's questions that the basis of your  
16 optimism was -- in terms of the figures in the letter  
17 of August 12th, the financial update, that you felt those  
18 figures were reasonable based on discussions with people  
19 in financial markets.

20 Could you specify who the major people are  
21 that you discussed this with?

22 A No, we didn't say markets. We said the  
23 investment community, and we visited with a number of  
24 different investment bankers as to what their thoughts  
25 were, their economists.

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11-4

1 Then, also, I also indicated that our group  
2 that we have looking at all of the indices and the  
3 direction that they feel that they are going had input  
4 to.

5 So this is not just the financial area of the  
6 company, but we tried to get input from others.

7 Q It's your opinion in the financial community  
8 generally there is this optimism for the next ten years?

9 A That was the indication that we got, Mr. Baker,  
10 yes.

11 Q Why has this optimism not been reflected  
12 in the, for instance, the Dow Jones industrial averages?

13 MR. ROZZELL: I object, Your Honor.

14 That calls for speculation on the part of the  
15 witness.

16 MR. BAKER: I never really got an answer to my  
17 other question as to who these people are that were  
18 consulted with.

19 I'm not sure if they are people who consult  
20 with other people or if they....

21 JUDGE WOLFE: Do you withdraw that question?  
22 I was going to rule. If you withdraw it and go on to  
23 something else, I don't have to rule.

24 At this time of night, I appreciate your  
25 withdrawal of the question or I will rule.

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MR. BAKER: I don't think it's a speculative question. I think it's --

JUDGE WOLFE: I'll sustain the objection.

MR. BAKER: Okay. No further questions.

JUDGE WOLFE: Mr. Doherty, cross?

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12-1

1 BY MR. DOHERTY:

2 Q Are either Primary Fuels or Utility Fuels,  
3 Incorporated going to sell any uranium to Houston  
4 Lighting & Power?

5 A Well, Utility Fuels does have a small amount  
6 of uranium. No decision has been made whether it will  
7 be sold to it or not -- to Houston Lighting & Power  
8 Company or not.

9 If it did, it would sell it at market price.  
10 Primary Fuels does not own any nuclear fuel or  
11 uranium.

12 Q I think you stated earlier they were in explora-  
13 tion for that -- one of those firms was; isn't that  
14 right?

15 A I stated that Primary Fuels was in the oil and  
16 gas exploration, that Utility Fuels was primarily a  
17 fuel supply company, but they did have a small mining  
18 operation that is winding down out in Wyoming. It was  
19 an 80-acre site that we have sold off about 150,000 pounds  
20 of yellow cake. It was not sold to the Lighting Company.

21 And there's about a million one left, I  
22 believe, that --

23 Q About what? I'm sorry, I didn't hear you.

24 A A million, one hundred thousand pounds of the  
25 yellow cake still available to dispose of.

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MR. DOHERTY: No further questions. Thank  
you.

JUDGE WOLFE: Redirect, Mr. Rozzell?

MR. ROZZELL: Yes, sir, one question.

FURTHER REDIRECT EXAMINATION

BY MR. ROZZELL:

Q. Mr. Dean, would the cost of uranium fuel be  
treated as a fuel cost for purposes of the fuel adjustment  
clause in your current rate structure?

A. It would.

MR. ROZZELL: That's all, Your Honor.

JUDGE WOLFE: Is the witness to be excused  
permanently?

MR. ROZZELL: Yes, sir.

JUDGE WOLFE: The witness is excused perma-  
nently.

(The witness was excused.)

JUDGE WOLFE: We will recess until --

MR. ROZZELL: Your Honor --

JUDGE WOLFE: Yes.

MR. ROZZELL: -- before we recess and before  
we leave this subject, I just wanted to bring to the  
Board's attention a proposed rule which appears at  
Volume 48 of the FEDERAL REGISTER. I believe it's Volume  
46, Page 41786, in which the NRC has proposed the

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1 elimination of the current financial --

2 MR. DOHERTY: I object, Your Honor. These  
3 proposed rules we've been all through --

4 JUDGE WOLFE: Well, I haven't heard what he  
5 was going to say yet.

6 MR. DOHERTY: It's a proposed rule. I'm sorry,  
7 I've heard it. But it's -- Okay. I'll hold my ob-  
8 jection a minute. I'm tired.

9 MR. ROZZELL: A proposed rule by which the NRC  
10 has proposed to eliminate the current financial quali-  
11 fication review and findings currently required by the  
12 regulations, and in the alternative, the limited reten-  
13 tion of financial review at the operating stage.

14 I just wanted to bring that to the Board's  
15 attention and let you know that we would keep you advised  
16 as to the status of that proposal as it progresses through  
17 the rulemaking procedure.

18 JUDGE WOLFE: We were aware of that, and we  
19 trust you won't object, Mr. Doherty, to someone bringing  
20 it to our attention in the event we were unaware.

21 MR. DOHERTY: Well, I think it's irrelevant.  
22 That's all -- And speculative. That's why I objected.

23 JUDGE WOLFE: Well, it's not speculative if  
24 they're making us aware of it. So --

25 MR. DOHERTY: Thank you.



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JUDGE WOLFE: We'll recess until 9:00 a.m.

(Whereupon, at 5:55 p.m. the hearing was recessed, to reconvene at 9:00 a.m., Wednesday, September 16, 1981, in the same place.)

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This is to certify that the attached proceedings before the  
NUCLEAR REGULATORY COMMISSION

in the matter of: HOUSTON LIGHTING & POWER COMPANY

DATE of proceedings: September 15, 1981

DOCKET Number: 50-466 CP

PLACE of proceedings: Houston, Texas

were held as herein appears, and that this is the original  
transcript thereof for the file of the Commission.

Mary L. Bagby  
Official Reporter (Typed)

Mary L. Bagby  
Official Reporter (Signature)