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Title: South Texas Project Units 3 and 4

Docket Number: 52-012-COL; 52-013-COL
ASLBP Number: 09-885-08-COL-BD01

Location: Bay City, Texas

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1 UNITED STATES OF AMERICA
 2 NUCLEAR REGULATORY COMMISSION

3 * * * *

4 ATOMIC SAFETY AND LICENSING BOARD PANEL

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 6 _____
 7 IN THE MATTER OF: :
 8 SOUTH TEXAS PROJECT NUCLEAR : Dockets Nos.
 9 OPERATING COMPANY : 52-012-COL and
 10 : 52-013-COL
 11 (South Texas Project : ASLBP No.
 12 Units 3 and 4) : 09-885-08-COL-BD01

13 _____ :
 14 Wednesday, June 24, 2009

15
 16 Bay City Civic Center
 17 Room 100, Main Hall
 18 701 Seventh Street
 19 Bay City, Texas

20 The above-entitled matter came on for oral
 21 argument, pursuant to notice, at 9:00 a.m.

22 BEFORE:

23 MICHAEL M. GIBSON, Chairman

24 GARY S. ARNOLD

25 RANDALL T. CHARBENEAU

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1 APPEARANCES (Continued):

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13 ALSO PRESENT:

14 Mark McBurnett

15 Karen Hadden

16 Elizabeth Brown

P R O C E E D I N G S

(9:01 a.m.)

JUDGE GIBSON: Good morning.

PARTICIPANTS: Good morning.

JUDGE GIBSON: Back on the record. Are we ready to get started?

MR. EYE: Yes, sir.

JUDGE GIBSON: I believe when we recessed yesterday we had concluded our discussion of Contention No. 15, and we will start with Contention No. 16.

MS. KIRKWOOD: Judge Gibson.

JUDGE GIBSON: Yes.

MS. KIRKWOOD: Pardon me. We had been asked a question during the session yesterday regarding the public availability of an RAI response. Would you like us to address that now or would you like to wait until the end?

JUDGE GIBSON: Actually it would be a great time. Please, go ahead. Thank you.

MS. KIRKWOOD: We looked into the public availability of the RAI response regarding the flood levels. We found that it is publicly available in ADAMS at the accession numbers that are cited in our brief and also in the Applicant's brief, and we can

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1 give those for the record. I have them here gain.

2 It is not on the public Website. We are
3 not exactly sure why. It is in the sense that it is
4 on ADAMS and ADAMS is on the public Website, but it is
5 not on the safety RAI list.

6 We're looking into why and working on
7 updating that list to make sure that it does, in fact,
8 include all RAI responses.

9 In this proceeding the safety RAIs have
10 become so numerous that we've changed it so that
11 there's a link to a report. So the first list of RAIs
12 you see on our public Website is the environmental
13 RAIs, and then there's a link that says safety RAIs,
14 and it takes you to a report where then it links you
15 directly into ADAMS for each one.

16 And the staff is trying to improve the
17 public availability of its information. So to the
18 extent that anyone has any suggestions for us on how
19 we can do that better, our product stuff is here, and
20 we would be quite open to those discussions because
21 adding all of the links was an effort to make it more
22 user friendly and not more cumbersome, but things
23 don't always work the way you plan.

24 JUDGE GIBSON: Thank you very much for
25 that clarification, and we appreciate your candor.

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1 I'm sure that no system is fail safe, and I think part
2 of the problem is pretty obvious. People end up going
3 through a particular search method. Maybe they ought
4 to think we've got to go through every possible search
5 method, but if they go through a particular protocol
6 in searching for documents and it's not there, they
7 assume it's not there. Had they go through another
8 method, they might have found it, and I appreciate
9 that.

10 MR. FRANTZ: Judge Gibson.

11 JUDGE GIBSON: Yes.

12 MR. FRANTZ: A bit more information on
13 that, too.

14 JUDGE GIBSON: Oh, please. Thank you.

15 MR. FRANTZ: I believe what happened is we
16 submitted our initial RAI response in January, and it
17 was basically a two-page response, I believe, with a
18 reference to the 40 foot and design basis flood with
19 a promise to provide the more detailed information in
20 February, which we, in fact, did.

21 But the February report never was placed
22 in the Web page. It was only placed in ADAMS.

23 JUDGE GIBSON: Okay. Thank you. Thank
24 you for that clarification, as well.

25 If there's nothing else, we will proceed

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1 to Contention No. 16. Counsel for Petitioners, it
2 appears that in Contention 16 you're questioning
3 whether there will be excessive groundwater depletion
4 as a result of the operation of Units 3 and 4, and
5 that this should have been addressed in the
6 environmental report or at least should have been
7 addressed in a more extensive manner. Is that a fair
8 characterization?

9 MR. EYE: It is.

10 JUDGE GIBSON: On pages 70 to 75 of the
11 Applicant's answer, it catalogs a number of
12 countervailing considerations to the assertions that
13 you've made in your petition and that you did not
14 choose to rebut any of them directly in your reply.

15 In particular, the Applicant seems to be
16 pretty clear that it's not going to be exceeding its
17 groundwater withdrawal permit from the entity we
18 discussed at the end of the day yesterday, the Coastal
19 Plains Groundwater Conservation District.

20 Do you dispute that, that they will be
21 exceeding the permit limits they have from that
22 district?

23 MR. EYE: Dr. Ross' analysis indicates
24 that they will be -- if I recall correctly, her
25 analysis does not have at least in the tables she

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1 prepared, Table 4, does not have them in excess of
2 their permit limit.

3 I think that the contention really, as you
4 mentioned earlier, Judge, it goes partly to the
5 statement in the environmental report that the
6 evaluation of groundwater availability and the draw-
7 down rates and so forth aren't going to be done until
8 a later stage when they get to the detailed
9 engineering for STP-3 and 4, and to the extent that
10 groundwater resources as described in the
11 environmental report are an essential part of the
12 operation of the plant, it seems to the petitioners
13 that to delay the analysis of availability and draw-
14 down rates is contrary to prudent planning, at the
15 very least.

16 And to the extent that there is a question
17 about availability that hinges on a permit, then it
18 seems to us that ought to be cleared and that permit
19 obtained before we get to this question about whether
20 or not they should be depending on groundwater
21 resources for plan operations. As I read the
22 environmental report, other than primary cooling,
23 groundwater plays a major role in operations at STP
24 now and certainly with Units 3 and 4 it would be an
25 even more prominent role.

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1 So it just seems wrongheaded to delay that
2 piece of the analysis until they get down the line and
3 start doing their detailed engineering. What is it
4 about the detailed engineering phase that makes it
5 more amenable to doing a groundwater analysis then
6 rather than now? And it would be different if
7 groundwater access was not an important aspect of
8 plant operations or was an option that they might take
9 if surface water was inadequate.

10 But this indicates really that not only is
11 groundwater essential, but by inference it says that
12 surface water will not be adequate quantity-wise at
13 any rate.

14 If you want to read these contentions sort
15 of in para materia, the whole question about adequate
16 surface water or the question we've raised about
17 adequate surface water resources is answered in some
18 respects by the fact that they've got to get
19 groundwater access.

20 So why not do this analysis now? Why not
21 go and get this permit and have some degree of
22 assurance that this parameter, plant operations, will
23 be secured?

24 That's really the point of this
25 contention, at least in part.

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1 JUDGE GIBSON: Okay.

2 JUDGE ARNOLD: May I just ask?

3 JUDGE GIBSON: Yes. Would it be possible
4 if we got the Applicant to address his reply to him
5 and then you can ask your question?

6 JUDGE ARNOLD: Okay.

7 JUDGE GIBSON: Do you mind?

8 JUDGE ARNOLD: No.

9 JUDGE GIBSON: You sure?

10 (Laughter.)

11 JUDGE GIBSON: Okay, okay. The only
12 reason is I would like to try to be sure that we
13 figure out where we are in dispute and where we just
14 may have some confusion that can be cleared up because
15 I got the impression at least that some of the
16 concerns that he has alleged were actually addressed
17 in their discussion, but I may be mistaken.

18 Yes.

19 MR. FRANTZ: I appreciate the opportunity
20 because I think there is much confusion here. We do
21 have an existing groundwater permit. That permit is
22 sufficient for us for Units 1 and 2, and if you add
23 three and four into that mix, given the current
24 estimates that we have for three and four, we would
25 slightly exceed our current permit levels. Now, we

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1 have an option to deal with that difference between
2 our current permit levels and our estimated calculated
3 water needs. One can apply for more permits. Two, we
4 can engage in water conservation to reduce our need
5 for water so we would not need any additional permits,
6 and three, we can simply use water from the main
7 cooling reservoir to make up that difference.

8 We have not chosen yet which option we're
9 going to be using. Petitioners appear to be
10 contending that we should look at the assumption that
11 we will need additional permit; we will take
12 additional groundwater; and that seems to be the
13 import of Dr. Ross' table on page 15, where her fourth
14 column deals with the levels from the currently
15 permanent draw-downs, and her last column deals with
16 the draw-down levels if we were to assume additional
17 needs for permits for groundwater withdrawals.

18 And our position basically is that even if
19 you take Dr. Ross at face value, even if you assume
20 that you will need additional permits, the additional
21 draw-down associated with the additional permits is
22 not significant primarily because there are no
23 existing water supply wells used for drinking water
24 within three miles of our plant, and the nearest well
25 of any sort is around over one mile away, and it's

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1 used for supplying water for cattle.

2 Given the distances between our plant and
3 the existing actual wells, we believe there's simply
4 no significant impact even if you assume additional
5 water withdrawals beyond our current permit levels.
6 There's no significant impact on any existing water
7 users.

8 JUDGE GIBSON: Okay. Thank you.

9 Sorry. Judge Arnold.

10 JUDGE ARNOLD: Based on your description
11 just now of this contention, I'd like to know how this
12 differs from Contention 1 where they list the permits
13 they have to get and they list a groundwater well
14 permit expected in December 2009 and a groundwater
15 well permit for new well operation, blah, blah, blah,
16 to be obtained in February 2011.

17 It sounds as though your description right
18 now is the same thing that you said in Contention 1
19 along with other things.

20 MR. EYE: There is some overlap, although
21 I think that it includes that. I think that's a fair
22 characterization. However, I think I misunderstood
23 your question, Your Honor, because I took your
24 question to mean at STP-1 and 2 are they in excess of
25 what their groundwater permits allow, and it does not

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1 appear that they are at this point, but with the
2 additional capacity that's needed under three and
3 four, then they start to bump up against that limit
4 and under some circumstances they would apparently
5 exceed it.

6 But so it's really -- I think that your
7 question, Judge Arnold, goes to part of what we had in
8 Contention 1, the omission, but then there is also the
9 question about will they be able to satisfy those
10 groundwater needs because that right now is
11 problematic. We don't know whether the groundwater
12 permit district will issue that permit.

13 It's expected in December 2009. If they
14 don't get it, are we back here with a new filed
15 contention? And I think that that's at least a
16 plausible possibility.

17 There are all of these assumptions that
18 are made about how these permits will be obtained, and
19 we have all been in enough proceedings to know that
20 applying for a permit is not the same as getting the
21 permit or even applying for a permit that you think is
22 going to be written in a particular way may not be
23 written in the way that you want ultimately, and that
24 to me indicates that there's uncertainty about whether
25 an essential part of their plan operations, that is,

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1 draw-down on ground water has been assured, and it is
2 certainly not. Even by their own admission they don't
3 have the necessary permit to draw down the groundwater
4 that they would need for three and four.

5 JUDGE ARNOLD: Well, let me just ask this.
6 If the licensing process continues and some day they
7 apply for the water permit and they don't get it, is
8 that either an environmental issue or a safety issue
9 or it's just a, well, STP is now stuck with a plant
10 they can't use issue?

11 MR. EYE: All three potentially. I mean,
12 if they don't get their permit, the environmental
13 impact is nominal or inconsequential because they're
14 not drawing down groundwater that would otherwise be
15 used for plant operations.

16 Is it a safety issue? Well, I suppose if
17 they are going to rely on other sources of water for
18 plant operations that might not be adequate, and why
19 would the Applicant have to rely on groundwater if
20 surface water resources are adequate. I wouldn't
21 think that they would go to the time and expense to
22 drill wells and maintain and pump those wells over
23 time if they didn't have to, if surface water
24 resources were going to be adequate.

25 My sense is that they're probably like we,

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1 looking at the draw-down on surface water resources
2 and realize that they've got to have a back-up.
3 They've got to have another stream, and that's
4 groundwater.

5 So if they don't get their permit and
6 they've built it, I mean, it's really almost
7 inconceivable that anybody would invest the billions
8 and billions of dollars to build these two units and
9 they don't have that permit in hand first. That's not
10 going to happen. I can't think that anybody would
11 think that that would be a prudent track to take.

12 So I presume that at some point there will
13 be a decision made about whether to proceed on the
14 basis of having these permits or not. So there would
15 be no environmental consequence if they didn't
16 operate. The safety would be inconsequential because
17 they're not operating, and they would have plants that
18 are sitting there idle because they didn't get a
19 permit.

20 That's a scenario that I just can't
21 embrace.

22 JUDGE ARNOLD: I think the date for
23 getting the latest water permit, groundwater well
24 permit, February 2011, and as fast as the license
25 procedure may occur, there won't be much in the way of

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1 a plant built before February of 2011.

2 MR. EYE: I agree. I agree, but I'm sure
3 that you can understand that, you know, we're dealing
4 now with all kinds of issues that should be dealt with
5 only if they get that groundwater permit. Why put
6 that off?

7 It's just there's a certain sequence and
8 order that these things ought to be pursued, and they
9 haven't here. They've decided that they're going to
10 put that piece off, and I know to a certain extent the
11 applicant is at the mercy of the agency that issues
12 these permits, and they have their own process, and
13 they have to deal with that.

14 But, on the other hand, we're here on the
15 assumption that they are going to get that permit.
16 That's the assumption. If they can't get the permit,
17 then they're going to have to back up and have some
18 alternative means by which to operate that plant for
19 water purposes, and again, you're right, Judge Arnold.
20 It does go back to a certain extent to the omissions
21 that are covered in Contention 1.

22 JUDGE ARNOLD: Thank you.

23 JUDGE GIBSON: Okay. I think that we've
24 essentially already plowed that ground when we talked
25 about Contention 1 and the whole issue of risk that

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1 the company might take if they proceed, but whether
2 the rules allow them to do that, and I realize you've
3 got your position and they've got theirs, but I think
4 we've already gone over that.

5 JUDGE CHARBENEAU: Can I?

6 JUDGE GIBSON: Yes.

7 JUDGE CHARBENEAU: When I looked at this,
8 the permit right that exists is for just under 1,900
9 gallons per minute, and when you look at all four
10 plants together, it's just over 2,000 gallons per
11 minute total use, and so already they're permitted for
12 a little over 90 percent of the potential water use.

13 And so when I looked at the question on
14 the lack of engineering design, is there a concern
15 about the impacts of the additional draw-down? Is
16 that maybe why this contention is here?

17 Because availability, we don't do
18 availability studies within ten percent margins, and
19 so availability questions have already been dealt with
20 with the permit they have. Is the concern primarily
21 focused on the impacts of the additional draw-down?

22 MR. EYE: It's partly that, yes. But you
23 know, demands for groundwater are greater now than
24 they were when they got their permit in the first
25 place. Demands for water generally are greater now.

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1 JUDGE CHARBENEAU: Yes, I'm aware of that.

2 MR. EYE: And consequently, again, we're
3 assuming that they're going to get their permit.

4 JUDGE CHARBENEAU: They have a permit. I
5 mean, they're permitted for 90 percent of that, which
6 in essence covers the availability question almost
7 completely, and the question that I have is are the
8 impacts that you're concerned with more the operations
9 and the impacts -- I don't think there would be draw-
10 down, and if the impacts are associated with draw-
11 down, what impacts are we looking at there?

12 MR. EYE: Draw-down. I mean, that's part
13 of it.

14 JUDGE CHARBENEAU: But what impact? I
15 mean, does that hurt the plant? Does it hurt -- who
16 does it hurt?

17 MR. EYE: Well, there's always a question
18 of subsidence. There's a question of off-site use,
19 and one of the things that Dr. Ross did in her well
20 equation table is I think you can infer from that that
21 if you draw down groundwater, notwithstanding the fact
22 that the wells may be spaced out from nearby users by
23 I forget what counsel said, some number of miles, I
24 believe, still they're drawing down the same aquifer.

25 So there is a use or an availability

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1 question in that regard, and I guess I'm not quite as
2 sanguine about the prospects for the automatic
3 increase in capacity that this additional permit or
4 the new permit would assure. I think that the whole
5 idea that groundwater resources are unlimited and
6 there for the taking indefinitely, I think that
7 attitude is changing because of the realization that
8 they are not infinite and that there has to be some
9 sort of careful apportionment of those resources.

10 I mean, I'm not going to try to speak for
11 the groundwater management district, of course,
12 because they've got their own interests, but again, I
13 don't think that anybody should just assume that
14 they're going to get this additional capacity, and if
15 it's such a sure thing, then why not just get the
16 permit instead of assuming it?

17 JUDGE GIBSON: Okay. I'd like to turn to
18 Contention No. 17. Judge Arnold I think you had some
19 questions about that.

20 JUDGE ARNOLD: Yes. Deja vu time. I
21 would like to know the reference used by Dr. Makhijani
22 in support of his statement that the doses due to
23 ingestion of fish and invertebrate are incorrectly
24 calculated by the older version of LADTAP.

25 MR. EYE: Judge Arnold, on page 23 of the

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1 reference study, the Savannah River study there's a
2 Table D-1, David-1, and this covers two broad
3 parameters, commercial fish and saltwater
4 invertebrates, and if you take a look at the
5 comparative analyses for commercial fish under the
6 LADTAP-2 and LADTAP XL, at the bottom of those columns
7 you will find the totals. The total under LADTAP-2 is
8 three times -- let me start again -- 3.7 times ten to
9 the minus second, contrasted with the LADTAP XL, which
10 calculates those same doses at a considerably higher
11 exposure rate, at 3.3 times ten to the minus first,
12 which yields a ratio of 8.9, I believe, 8.9 times
13 greater exposure.

14 The other parameter is saltwater
15 invertebrates, and the contrast there between the
16 differences between LADTAP-2 and LADTAP XL is even
17 more profound. Take a look at the bottom of those
18 columns. It indicates that under LADTAP-2 saltwater
19 and vertebrate exposures are estimated at 2.2 times
20 ten to the minus first. Under LADTAP XL, considerably
21 higher at 1.6 times ten to the second, yielding a
22 ratio of 727. That is the basis for our contention,
23 is that that table is indicative of a significant
24 difference in estimated dose rates between the LADTAP-
25 2 and LADTAP XL models.

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1 JUDGE ARNOLD: All right. What I really
2 wanted was for you to verify the source of that as
3 Westinghouse report RP-91-975 of November 18th, 1991.

4 MR. EYE: RP-91-975, correct. That is the
5 report, and the table is at Table D-1 listed at Page
6 23.

7 JUDGE ARNOLD: Thank you.

8 JUDGE GIBSON: Judge Charbeneau.

9 JUDGE CHARBENEAU: Well, a couple of
10 questions. It's clear that LADTAP-2 is being
11 criticized as obsolete. There's mention of LADTAP XL,
12 and what isn't clear is the suggestion that LADTAP XL
13 be used in place of LADTAP-2.

14 MR. EYE: Yes.

15 JUDGE CHARBENEAU: Is that an explicit?

16 MR. EYE: I think that the contention
17 includes a statement that the whole dose rate exposure
18 at model needs to be -- that relies on LADTAP-2 --
19 needs to be discarded and substituted with something
20 more accurate and reliable, and that would in this
21 instance be LADTAP XL.

22 JUDGE CHARBENEAU: And that's a
23 recommendation from the same report by the same
24 authors. It says that comparisons of LADTAP-2 and
25 LADTAP XL output show that these enhancements,

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1- referring to LADTAP XL, result in an insignificant
2 increase in the prediction of total doses for the
3 maximum individual, a ten percent increase for the
4 general Savannah River population. And that's in the
5 beginning of that report you just cited.

6 MR. EYE: Well, you're right, and I've
7 seen that as well, but there's also Table D-1 that
8 yields much greater than ten percent in terms of
9 additional exposures that is in the summary. So to
10 the extent that there's a difference between the
11 empirical data in D-1 and the summary, you know, I'm
12 not here to try to reconcile that. I'm here to
13 represent to you, Judge, that the empirical data
14 listed in Table D-1 yield the kinds of differences
15 that we've outlined.

16 JUDGE CHARBENEAU: Okay. Is there a
17 difference in the exposed population for that
18 calculation?

19 MR. EYE: A difference in terms of the
20 demographics or the --

21 JUDGE CHARBENEAU: Yes.

22 MR. EYE: As I understand it, the LADTAP
23 XL has a parameter that includes exposures to infants
24 that might yield part of this difference, but the
25 Table D-1 does not break out the exposures by

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1 demographics or age cohorts. It's simply an exposure
2 by population dose.

3 JUDGE CHARBENEAU: We won't go down that
4 path.

5 MR. EYE: But I think that you can
6 extrapolate from that that to the extent that the
7 commercial fish yields an exposure rate that's 8.9
8 times higher under LADTAP XL than LADTAP-2 and under
9 invertebrates it's 727 times higher, that irrespective
10 of age cohort or demographic or those kinds of
11 considerations, there's still a significant enough
12 difference that it raises questions as to whether
13 LADTAP-2 is a reliable model to be used here.

14 JUDGE CHARBENEAU: Are there differences
15 if you go way from the exposed populations; are there
16 differences in the parameters that are used in LADTAP
17 XL and LADTAP-2 that you're aware of?

18 MR. EYE: Parameters as far as whether
19 it's commercial fish, saltwater invertebrates or
20 others?

21 JUDGE CHARBENEAU: No, bioaccumulation
22 factors and things like that.

23 MR. EYE: I do not know the answer to
24 that.

25 JUDGE CHARBENEAU: Or utilization factors.

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1 MR. EYE: I don't know the answer to that.

2 JUDGE CHARBENEAU: Models for ingestion
3 pathways?

4 I mean, they're all the same in the data
5 sets that feed LADTAP XL, are taken out of LADTAP-2,
6 and so the only difference between the two that should
7 exist are the exposed populations.

8 MR. EYE: That would be what I think one
9 would infer from Table D-1 that we've focused on.

10 JUDGE CHARBENEAU: I've got a page and a
11 half of questions, but I'll pass.

12 JUDGE GIBSON: Go ahead.

13 JUDGE CHARBENEAU: Well, I think the
14 answer is going to be no to everything I ask.

15 (Laughter.)

16 MR. FRANTZ: Judge Charbeneau, I can
17 perhaps answer your questions. The reason that LADTAP
18 XL calculates a different dose than LADTAP-2 for
19 commercial fish invertebrates is because LADTAP-2
20 assumes that only a portion of that catch is actually
21 consumed by individuals within 50 miles of the plant;
22 whereas, LADTAP XL assumes 100 percent of the catch is
23 consumed by people within 50 miles of the plant.

24 Since we're only calculating a 50-mile
25 population dose, that accounts for this difference.

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1 I might also add that the reason that you see such
2 discrepancies between Table D-1 and D-2 that was
3 referenced by counsel and the conclusion on page 4 of
4 the report is because commercial fish and
5 invertebrates is simply one of many pathways for
6 accumulating dose. The other pathways include
7 boating, swimming, drinking water, shoreline
8 activities, and so forth.

9 It's very apparent that the pathway
10 associate with commercial fish and invertebrates only
11 contributes a small portion of the overall dose, and
12 that's why even though there is a significant
13 difference between the dose from commercial fish and
14 invertebrates, the total dose difference is
15 essentially nil.

16 JUDGE CHARBENEAU: Is it also your
17 understanding with the use of the model that, in
18 essence, the LADTAP XL does take the same radiological
19 pathways and parameters as LADTAP-2?

20 MR. FRANTZ: Essentially, yeah. There are
21 a few other differences.

22 JUDGE CHARBENEAU: There's a little bit of
23 accumulation on soil. It's accumulated for 40 years
24 as opposed to 15.

25 MR. FRANTZ: Precisely.

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1 JUDGE CHARBENEAU: And there's a couple of
2 other small changes, but in essence, you have the same
3 packaged model with how you disperse the dose.

4 MR. FRANTZ: That's correct.

5 JUDGE CHARBENEAU: I think that summarizes
6 a lot of my questions.

7 JUDGE GIBSON: Okay. Do you have anything
8 further?

9 JUDGE ARNOLD: No.

10 JUDGE GIBSON: I'd like to turn to
11 Contentions 18 and 19. Counsel for Petitioners,
12 you've asserted that the amount of land dedicated to
13 the uranium fuel cycle, which I believe is 21 acres,
14 and radioactive waste disposal, which is 160 acres, is
15 inadequate and that there is insufficient provision
16 made for financial responsibility related to this,
17 these two areas once the units no longer operate. Is
18 that a fair characterization of what those contentions
19 concern?

20 MR. EYE: Somewhat. I think that --

21 JUDGE GIBSON: Well, please, let us know
22 what else I didn't say there.

23 MR. EYE: Yes, sir. Contention 18 was
24 developed for the purpose of pointing out that unlike
25 most activities taken on in our economy and so forth,

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1 it struck us as, frankly, very significant when it
2 says that there will be 21 acres that will never be
3 available for any other purpose, never.

4 That kind of permanent dedication to a
5 particular activity that will at the best support 50
6 years of operation or so at a nuclear plant, assuming
7 everything goes well and they can run it for 50 years,
8 and yet we're dedicating 21 acres that will never be
9 available strikes us as contrary to the public's
10 interest, taken to its logical and perhaps absurd
11 conclusion.

12 If we continue to build nuclear plants ad
13 infinitum, we would dedicate 21 acres per plant and
14 can end up with, taken out to its logical conclusion,
15 an enormous amount of land that would be dedicated to
16 these purposes that would really only last for a
17 relatively short period of time.

18 It's hard for us to square that with the
19 public's interest under the Atomic Energy Act, and I
20 dare say that while 21 acres may not sound like very
21 much, I'm not disputing that it's in Table S-3 and I'm
22 not disputing that the Applicant and the staff have
23 their positions that these are carefully calculated
24 areas that are going to be permanently dedicated to
25 these activities. That doesn't necessarily square

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1 with what the Atomic Energy Act says.

2 That certain areas will never be available
3 for any other use? We're making decisions for
4 generations that we can't even imagine that they're so
5 far off in the future. I think it's hard to square
6 that with 42 USC 2133, Sub D, to find that that's in
7 the public interest.

8 We've gone down that road with 100 and
9 some odd commercial nuclear plants, each one getting
10 their proportionate share of this land mass
11 permanently dedicated to those purposes. It's
12 inimical to think that we can make those kinds of
13 decisions today in 2009 for generations that aren't
14 born, and that's the thrust of that contention.

15 Is it an attack of Table S-3? Yes, sir,
16 it is. It's an assault on Table S-3, and future
17 generations will wonder why we didn't assault it
18 earlier and more vigorously, and to that extent we
19 recognize that we'll probably not get much traction on
20 this contention with this panel or anybody else in the
21 chain of command at the NRC, and we may be derided for
22 bringing this up, but I'm proud to sponsor this
23 contention, and I think we have a responsibility to
24 press this and inform not only Your Honors, but others
25 in decision making capacities that when they decide

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1 that this should be issued, that this license should
2 be issued, they are making profound decisions about
3 dedication of resources that will never be available
4 for any other use.

5 And that seems to us to implicate
6 considerations that are contrary to the public
7 interest.

8 JUDGE GIBSON: Well, I guess I'd just need
9 to say that we are not about derision here. I think
10 there is a permissible scope within which this Board
11 is authorized to operate, and there are certain
12 matters that are removed from our consideration, and
13 so I assure you there is no derision involved in any
14 decision that we may make with respect to contentions
15 that you've asserted.

16 We are about trying to make sure that
17 legitimate contentions get heard and contentions that
18 have been removed from our legitimate consideration,
19 for whatever reason, are simply beyond the permissible
20 scope of this Board.

21 So I hope you can appreciate that.

22 MR. EYE: I can, Your Honor, and I wasn't
23 suggesting that you or your colleagues on the panel
24 were being derisive, but I think that there's a
25 certain amount of -- there's a certain assumption that

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1 because Table S-3 has been a cornerstone of regulatory
2 decisions now for a couple of generations as it turns
3 out, that somehow it's beyond question.

4 And the reasons that we raised what we did
5 in Contention 18 was partly to make a record because
6 we fully appreciate the legal restrictions that you
7 and your colleagues operate under. I'm not
8 criticizing you for having to observe those. We
9 operate under the rule of law.

10 But we know that there are competing rules
11 of law that may, in fact, collide with the judgments
12 about the propriety of applying Table S-3, and that
13 would be the Atomic Energy Act provision I cited
14 earlier, and I appreciate your comments, Your Honor.

15 JUDGE GIBSON: And let me just add one
16 other footnote to that. I believe the NRC staff
17 pointed out yesterday that there are mechanisms to do
18 this. I realize that some of those have already
19 passed because some of these rules have already been
20 made, but there are procedures for petitioning the
21 Commission for rulemaking, and I appreciate the fact
22 that making a record here may enable you to further
23 that process.

24 But I just want to be sure that we're, you
25 know, congruent as we go forward.

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1- MR. EYE: Thank you, Your Honor.

2 JUDGE GIBSON: Okay. Did you have
3 anything about 18 or 19?

4 JUDGE ARNOLD: Well, let me just ask
5 Applicant on 19, unquantified amount of land on site
6 would be dedicated to licensed radioactive waste
7 disposal facilities. That's not a permanent and this
8 land will never be available again type, is it?

9 MR. MATTHEWS: That's correct, Your Honor.
10 I think the term "disposal," in Table 10.1.2 there's
11 an unartful use of the term "disposal area." I think
12 otherwise in that same table it makes clear that the
13 storage area could be restored to other uses once the
14 material is removed. There's no plan for any
15 permanent disposal area on site.

16 I wanted to make a couple of
17 clarifications. Table S-3, what it does here with
18 respect to this 21 and 160 acres is there's 21 acres
19 that's permanently dedicated; 160 acres that's
20 temporarily dedicated, and those are the assumptions
21 in Table S-3. Those amounts are extrapolated from the
22 table. Petitioners haven't challenged the
23 extrapolation, but essentially the table is based upon
24 a 1,000 megawatt electric unit with an 80 percent
25 capacity factor.

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1 We scale that up so that in Table S-3 you
2 would see 13 acres, for example, but because this
3 would be a 1,350 megawatt electric unit with an
4 assumed 95 percent capacity factor, if we scale up the
5 13 acres, you can just do the math, and I think it
6 rounds up to 21 acres is the assumption.

7 And there's no discrimination as to
8 whether that's an on-site or off-site dedication of
9 plant. The real legal question here is an
10 environmental challenge under NEPA, and that's the
11 question of what's the impact of this dedication of
12 land, and so I think we shouldn't lose sight of the
13 land use conclusion in Section 5.7.1 of the
14 environmental report, which compares the commitment of
15 land here for this unit to alternatives, and the
16 alternative, for example, is a coal-fired plant where
17 you would have an annual temporary commitment of land
18 with a disturbance of 320 acres. So if you would
19 compare that over an assumed 40 or 60-year life of the
20 plant, the amount of land that would be disturbed
21 using an alternative is a multiple of what's dictated
22 here in Table S-3, which is why the impact is small
23 and the matter is addressed in the environmental.

24 JUDGE GIBSON: Okay. Thank you.

25 MR. EYE: Your Honor, may I respond to

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1 that?

2 JUDGE GIBSON: Do you have anything
3 further you wanted to say?

4 MR. EYE: I do.

5 JUDGE GIBSON: Please.

6 MR. EYE: Your Honor, there's a difference
7 between a disturbance of land because at 5.7.1 in the
8 land use section it says that a coal-fired unit with
9 the same megawatt output as the ABWR would disturb
10 about 320 acres per year for fuel alone, disturbance.
11 It's not a dedicated, permanent use.

12 I think the nomenclature difference here
13 is significant, and believe me. We're not here
14 advocating coal fired units, but to the extent that
15 the Applicant has chosen in its land use section to
16 compare a coal-fired unit, fine, but there's no
17 discussion in their land use section about a permanent
18 dedication of resources, land, that will never be
19 available for any other purpose.

20 And we know the scars that can be left by
21 strip mining and so forth, but we also know that there
22 is reclamation, huge amounts of money spent on
23 reclamation, and reclamation can sometimes be quite
24 successful.

25 So we would draw the distinction between

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1 -disturbance and permanent dedication.

2 JUDGE GIBSON: Okay. I have a feeling you
3 wanted to say something about that, right? Go ahead.

4 MR. MATTHEWS: I wanted to say --

5 JUDGE GIBSON: It's okay.

6 MR. MATTHEWS: -- I think it's worthwhile
7 to do the comparison because if you do the math of the
8 320 acres over the course of 60 years, I think you
9 come up with a number that will exceed 18,000 acres
10 that are disturbed, which roughly speaking that's 21
11 acres dedicated for 1,000 years. I mean, the
12 comparison in terms of environmental impact makes
13 clear that the land use impact for a nuclear power
14 plant is small compared to the alternatives.

15 MR. EYE: Well, maybe it's an apples and
16 oranges comparison, but I think it's interesting that
17 they chose to deal with strip mined coal, for example,
18 as the only thing that they use as a comparison under
19 land use. They didn't talk about wind, solar,
20 efficiency, geothermal. None of those got compared.

21 To that extent it's sort of an arbitrary
22 analysis. They cherry picked the one that they
23 thought that would contrast the most severely with
24 their 21 acres and say look at this stark comparison.

25 Well, I'm not going to argue that -- I'm

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1 not going to sit here and try to defend strip mining.
2 You could get on line and see counsel for
3 organizations that are challenging coal-fired units as
4 well, and so I'm going to be consistent in that
5 regard, but the Contention 19, on the other hand, I
6 want to address something specifically there.

7 We now get a clarification today from
8 counsel that says that the term "disposal" was an
9 unartful use of terminology. Once again, Your Honor,
10 the petitioners are put in a situation where we get
11 the applicant's documents and we have to interpret
12 those as best we can. The term "disposal" as it's
13 used in the Atomic Energy Act presumes permanent
14 isolation from the environment, some stabilized site
15 that sequesters radiation, to the extent that it can
16 be sequestered from the general environment.

17 So we see the term "disposal" in their
18 papers, and we take them at their word that this is
19 what they have in mind. Today we get a clarification,
20 but what is it that they really have in mind? What is
21 the specific activity because there's no elaboration
22 on it? What is the specific activity that will be
23 related to management of radioactive waste on site?
24 Are we talking about the independent spent fuel
25 facility? Don't know.

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1 We have to try to cobble together from
2 pieces and parts of the application and figure this
3 out. That shouldn't be necessary. It should be very
4 clear what plans they have over the long term for
5 management of particularly spent fuel on site. Is
6 this an inference to an on-site dry cask storage
7 facility?

8 And we're back to partly what we covered
9 in Contention 1. Because if it is, they ought to be
10 applying for a license.

11 JUDGE GIBSON: Okay. I appreciate the
12 concern you've raised by confusion that may have
13 occurred as a result of the word that is used,
14 "disposal," but just for purposes of a going forward
15 basis, would you please explain what it is you plan to
16 do with this acreage?

17 I mean, you know, we have a continuum in
18 waste that starts with, you know, generation that goes
19 to transportation and then storage and then
20 processing, then disposal, and within disposal there
21 is permanent isolation or there may be some sort of
22 temporary disposal which really would probably qualify
23 as storage since it provided it was safe storage.

24 Could you please describe what it is that
25 you're talking about here that really wasn't captured

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1 by the imprecise use of the word "disposal"?

2 MR. MATTHEWS: I will do that.

3 JUDGE GIBSON: Thank you.

4 MR. MATTHEWS: And this point is not being
5 raised for the first time today as implied by
6 Petitioners. In fact, it is clearly set out in our
7 answer on pages 83 and 84, which explains that even
8 though Table 10.1-2 specifies that a disposal area for
9 high level waste would only be operated -- I'm sorry
10 -- until such time as an NRC license high level waste
11 disposal facility is constructed, and that thereafter,
12 quote, the storage area could be restored to other
13 uses.

14 The environmental court is acknowledging
15 the possibility that there might be on-site storage of
16 high level waste. Okay? Applicant's point here is it
17 doesn't matter whether it's on site or off site.
18 Table S-3 tells you that we're going to have a land
19 use commitment of 160 acres temporarily and 21 acres
20 permanently dedicated to the plant, and there are
21 bases for those assumptions.

22 So the environmental impact here of
23 whether we're using land on site for this purpose or
24 off site, the environmental impact in terms of the use
25 of land and the land use commitment is specified in

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1 Table S-3. It may be the case -- we don't know what
2 the government is going to do. This is the federal
3 government's responsibility to take the fuel, the
4 Department of Energy's responsibility, and policy is
5 changing. It is impossible that ten years from now we
6 have an aggressive program of reprocessing in this
7 country where the government is picking up the fuel
8 and taking it off site to be reprocessed, in which
9 case there would be no on-site storage. There would
10 be some off-site storage at a reprocessing facility.

11 The land use commitment associated with
12 that is already accounted for in Table S-3. It may be
13 that we need to build an on-site storage facility in
14 15 years at South Texas project. But the
15 environmental impact of that has been accounted for in
16 the environmental report, and that's the plan.

17 JUDGE GIBSON: So it would be fair to say
18 that at least at this point we're not talking about
19 permanent disposal on site, correct?

20 MR. MATTHEWS: Absolutely.

21 JUDGE GIBSON: And what we're talking
22 about is, although you use the word "disposal," what
23 you were envisioning was storage albeit it could be
24 more permanent or less permanent, but it would not be
25 forever.

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1 MR. MATTHEWS:- It would be storage.

2 JUDGE GIBSON: And were it to be forever
3 disposal, you would have to apply for a permit for
4 that and obtain all of the authorizations for that,
5 correct?

6 MR. MATTHEWS: It will never be permanent.
7 It's really up to the United States Government and the
8 Department of Energy to decide upon the disposition of
9 appeal. We have a contract and the government will
10 take it, and under that contract if DOE opts to take
11 it sooner it might take the fuel sooner. It may
12 facilitate storage on site for a period of time.

13 JUDGE GIBSON: Okay. Recognizing that
14 you had some confusion, I just want to be sure you at
15 least understand what their plans are with respect to
16 this now.

17 MR. EYE: Well, I understand what they're
18 saying, but you know, once again, we hear counsel talk
19 about reprocessing ten years from now. Where are they
20 going to build that?

21 JUDGE GIBSON: I think he said the
22 government may reprocess.

23 MR. EYE: I understand, and is that a
24 legitimate way to anticipate that they're going to
25 manage spent fuel on a reprocessing option that is

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1 wholly undeveloped and so speculative at this point as
2 to be nothing upon which any decision should be made?

3 This just goes to all of the uncertainty
4 that surrounds disposition of spent fuel and other
5 waste streams for that matter, and it just highlights
6 it regrettably. It does.

7 JUDGE GIBSON: Okay. Fair enough. I
8 think we understand. I think we plowed that ground as
9 well, and we talked about the waste confidence rule.

10 Okay. Is there anything further on 18 or
11 19?

12 Okay. I think we'll take a ten-minute
13 break and start on Contention 20.

14 (Whereupon, the foregoing matter went off
15 the record at 9:54 a.m. and went back on
16 the record at 10:05 a.m.)

17 JUDGE GIBSON: Okay. We're back on the
18 record.

19 If we could turn to Contention No. 20,
20 counsel for Petitioners, if I understand correctly, in
21 Contention 20 you are asserting that inadequate
22 attention has been paid to greenhouse gas impacts from
23 the uranium fuel cycle and particularly to the
24 production of reactor fuel, plant construction,
25 routine operations, and decommissioning. Is that a

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1 fair characterization? - - -

2 MR. EYE: It is, Your Honor.

3 JUDGE GIBSON: Now, the Applicant claims
4 that it followed Table S-3, which establishes a zero
5 value for greenhouse gas emissions associated with the
6 uranium fuel cycle, and that because the applicant
7 followed Table S-3, there is nothing to litigate here
8 for what remains of Contention 20 would simply be an
9 impermissible challenge to the regulations.

10 What is your view of this?

11 MR. EYE: Your Honor, it's twofold. It's
12 both on the facts and the law. On the facts, it seems
13 you cannot make a finding that there's a zero CO₂
14 greenhouse gas impact related to the uranium fuel
15 cycle because there's not. Fuel fabrication itself
16 takes an enormous amount of electricity, much of it
17 coal-fired. Merely building the plant has its own
18 greenhouse gas footprint.

19 The UFC generally at each stage has a
20 greenhouse gas impact. To the extent that Table S-3
21 quantifies that at zero, it's wrong.

22 On the law, Massachusetts v. EPA elevates
23 the analysis of CO₂ into the Clean Air Act and says it
24 is a pollutant and should be accounted for. We think
25 that the failure to account for it in a more

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1 justifiable factual way in Table S-3 runs contrary to
2 what the Supreme Court directed in Massachusetts v.
3 EPA.

4 Subsequent to the decision in 2007 in
5 Mass. v. EPA, of course, the EPA has made its
6 endangerment finding, I believe, just earlier this
7 year, if I remember correctly, and essentially did
8 what the Court said to do: make a decision about CO₂.
9 The EPA has now done that.

10 And does this controvert the underlying
11 assumptions in Table S-3? Yes, sir, it does, and
12 again, we're making a record here because we do not
13 believe it can be justified to attribute zero to Table
14 S-3 for these greenhouse gas impacts.

15 JUDGE GIBSON: Counsel for the NRC staff,
16 let's focus if we could on the factual issue. I don't
17 think there is any assertion that the Applicant has
18 incorrectly used the table here. I don't think that's
19 the allegation.

20 I found it strange that in support of the
21 zero value for greenhouse gas emissions there are two
22 background documents. They were referenced in the
23 Applicant's answer in Footnote 312 on page 86. The
24 dates of those two background documents are 1974 and
25 1976, and I think we can probably take judicial notice

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1 of the fact that there really wasn't a great deal of
2 concern about global warming at that time.

3 MR. BIGGINS: The staff would agree with
4 that, Judge.

5 JUDGE GIBSON: And there certainly has
6 been since. I'm wondering does the NRC still view the
7 sources as authoritative, the 1974-1976 background
8 documents?

9 MR. BIGGINS: Yes, and to the extent that
10 they support Table S-3, the staff's view is that Table
11 S-3 is still an effective regulation. However, I
12 don't know that we would go so far as to saying Table
13 S-3 precludes all discussion of greenhouse gas
14 emissions, if that truly is the position of the
15 Applicants.

16 Rather, I believe the underlying support
17 documents do examine to a limited extent the carbon
18 dioxide emissions from the uranium fuel cycle.
19 However, as you correctly point out, it would not have
20 been in light of a concern for global warming or
21 global climate change.

22 At this point today though, the underlying
23 assumptions used to create Table S-3 and the
24 information to do so could be used to readily
25 calculate carbon dioxide emissions that would be

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1 associated with the uranium fuel cycle, and the staff
2 has looked at this issue in previous matters and
3 believes that as a whole the carbon dioxide emissions
4 from the uranium fuel cycle would be minimal.

5 And to that extent, where the petitioners
6 claimed that there are substantial greenhouse gas
7 impacts from the uranium fuel cycle, they haven't
8 provided anything, in the staff's opinion anyway, that
9 would contradict the staff's view based on Table S-3
10 and the underlying analysis and review of this issue
11 in other matters that there would be any substantial
12 greenhouse gas emissions from the uranium fuel cycle.

13 And so to that extent I don't believe that
14 this contention is properly supported by the
15 petitioners. They don't provide any references or
16 resources particularly, expert opinions or anything
17 else to show what they're relying on to come up with
18 the conclusion that there would be substantial
19 greenhouse gas impacts.

20 I would also point out that at the time
21 that Table S-3 was created and the staff did look at
22 carbon dioxide emissions to the extent that they did,
23 there have been advances in the technology used to
24 refine the fuel for nuclear power plants. There have
25 been efficiencies made in the use of that fuel at the

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1 nuclear power plants, and so even the values that
2 would have been calculated and used at that time and
3 the assumptions used in the underlying documents to
4 support Table S-3, those values today would be very
5 conservative.

6 And so the staff believes that the
7 analysis done at that time is still appropriately used
8 today.

9 JUDGE GIBSON: It strikes me though that
10 there is a difference between saying the greenhouse
11 gas emissions, carbon dioxide emissions from the
12 uranium fuel cycle would not be substantial to saying
13 that they are appropriately zero, which is apparently
14 what happens when you use Table S-3.

15 And I guess it doesn't sound like there's
16 been any update of the '74 and '76 background
17 documents. It doesn't sound like there has been any
18 effort to corroborate that. I can't imagine, and it
19 sounds like I correctly can't imagine that it would be
20 zero carbon dioxide emissions from these particular
21 activities associated with the uranium fuel cycle.

22 So it is strange that there hasn't been
23 any update of those background documents. Because I
24 think we can probably both agree that if there were
25 actually tests done with the sort of precision

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1 instruments that ~~we have now~~; that there probably
2 would be carbon dioxide emissions detected associated
3 with those activities.

4 Now, they would probably not be
5 substantial, and if the story that the NRC wants to
6 convey is that there's minimal carbon emissions with
7 the uranium fuel cycle and none at all with nuclear
8 power plants, that seems to me to be a pretty
9 important thing to convey to the public.

10 But it is difficult to see how it is not
11 -- I think it takes away from the message if it says
12 zero based on these two background documents.

13 Yes, you can speak. Just a minute. I
14 want him to finish first. Okay, please.

15 MR. BIGGINS: And, Judge, I don't believe
16 the staff is asserting that there are zero carbon
17 dioxide emissions from the uranium fuel cycle. I
18 think we can all acknowledge that there are some. I
19 think the more valid point though is that to the
20 extent that we would expect there to be, you know,
21 very limited impact from these carbon dioxide
22 emissions associated with the uranium fuel cycle, NEPA
23 would not require us to do some in depth analysis
24 because the analysis done under NEPA only needs to be
25 proportionate to the expected or anticipated impacts.

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1 ~~And so~~ when we're looking at the
2 information that we do have and we see that it's
3 conservative to compared to what today's analysis
4 would be, I think we can rightly conclude that there
5 doesn't have to be some in depth explanation or
6 analysis or study of carbon dioxide emissions from the
7 uranium fuel cycle. And you know, I don't think that
8 the staff's position is that Table S-3 completely
9 precludes any need for a discussion of carbon dioxide
10 or greenhouse gas emissions in the environmental
11 report or subsequently the environmental impact
12 statement.

13 And in fact, there is a discussion in the
14 environmental report to some extent about greenhouse
15 gas emissions, and I point to those in the staff's
16 answer where I've highlighted those.

17 JUDGE GIBSON: And I suspect we're going
18 to be hearing about that in a minute.

19 MR. BIGGINS: I suspect so.

20 JUDGE GIBSON: I want to focus on Table S-
21 3.

22 MR. BIGGINS: I won't go over those
23 specifically right now.

24 JUDGE GIBSON: Okay.

25 MR. BIGGINS: But my point is to support

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1 this contention, the petitioners needed to provide
2 something to show that they could contradict what's in
3 the environmental report or contradict the underlying
4 analysis done for Table S-3 to show that as they
5 state, there are substantial greenhouse gas emissions
6 from the uranium fuel cycle. We just don't have
7 anything to support that assertion made by the
8 petitioners that would deserve any additional review.

9 So at this stage, you know, as I said, the
10 staff believes that the analysis that was done
11 underlying Table S-3 allows us to appropriately
12 conclude that there would be minimal CO₂ emissions at
13 this point, and further analysis is not necessary.

14 JUDGE GIBSON: Okay. I believe you just
15 got some additional information from your technical
16 staff. So, please, amplify your remarks with those.

17 MR. BIGGINS: Thank you.

18 MR. EYE: Your Honor, I would like to make
19 a record objection if I could.

20 JUDGE GIBSON: You sure can, but let's
21 just focus on what -- let's wait until they're back so
22 that they can hear you make your objection --

23 MR. EYE: Right.

24 JUDGE GIBSON: -- because they're
25 consulting right now.

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1 ~~MR. EYE:~~ Thank you:

2 (Pause in proceedings; counsel conferred.)

3 JUDGE GIBSON: Did you have some
4 amplification of your prior remarks?

5 MR. BIGGINS: Well, just a couple points.

6 MR. EYE: Your Honor, this is what I want
7 to object to.

8 JUDGE GIBSON: What's that?

9 MR. EYE: I want to make an objection to
10 the information that is now being offered up as
11 evidence. They're consulting with their technical
12 staff, and I want to make sure that the record is
13 clear I object to this information being used as
14 evidence. These are statements of counsel.
15 Statements of counsel are not evidence, and I want to
16 make sure that the record reflects that.

17 I should have done this yesterday, and I
18 failed to do it, but I'm not going to fail to do it
19 today. I want that objection to be on the record, and
20 they can proceed as they see fit, but I --

21 JUDGE GIBSON: Okay. Your objection is
22 duly noted.

23 Please proceed.

24 MR. BIGGINS: Thank you, Judge.

25 And in light of that objection, I offer

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1 this only as legal argument.

2 Essentially, I would point out that the
3 underlying documents for Table S-3, in looking at
4 greenhouse gas emissions, particularly CO₂ emissions,
5 what we're talking about primarily in the entire
6 uranium fuel cycle would likely be the fuel processing
7 because the power needed to do the fuel processing
8 would come primarily based on percentages of power
9 availability over the grid from coal fired power
10 plants. So it would be the greenhouse gas emissions
11 or the CO₂ emissions attributable to those coal-fired
12 power plants that would contribute the majority of the
13 CO₂ in the uranium fuel cycle.

14 And to the extent that, you know, you
15 would suggest that Table S-3 be updated, I believe a
16 rulemaking may be in the queue, but I don't know what
17 level priority that's getting and whether it's
18 particularly attributable to the greenhouse gas
19 emissions issue associated with Table S-3.

20 JUDGE GIBSON: Okay. Thank you very much
21 for that amplification.

22 Now, I know that you've been anxious to
23 say something. You may proceed.

24 MR. MATTHEWS: Your Honor, I just wanted
25 to point out that Table S-3 is not saying that there

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1 are zero CO₂ emissions, and we're not arguing that.
2 What we're saying is Table S-3 says that -- and
3 basically this is the regulation -- says that the NRC
4 has analyzed the issue and determined that the
5 quantities of CO₂ are so small that they should be
6 treated as if they're zero.

7 The footnote in the table says, "In some
8 cases where no entry appears, it is clear from the
9 background documents that the matter was addressed and
10 that, in effect, the table should be read as if a
11 specific zero entry has been made."

12 In order to take advantage of the, quote,
13 unquote, zero entry, you have to show that the staff
14 did, in fact, find that there was something there
15 because they had to have analyzed it, and that's what
16 we're doing here, is in developing Table S-3, the
17 staff analyzed CO₂ emissions, acknowledged that they
18 existed in mining, milling and disposal activities,
19 and essentially concluded in formulating the table
20 that they weren't significant enough so that they had
21 to be counted as zero or they were appropriately
22 counted as zero. That's implicit.

23 The footnote in Table S-3 doesn't function
24 unless the staff has essentially analyzed and assumed
25 that there was something there.

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1 JUDGE GIBSON: ~~==~~Okay~~==~~ Thank you.

2 MR. MATTHEWS: I had one other point that
3 I wanted to make that's very important here.

4 JUDGE GIBSON: Go ahead, yes.

5 MR. MATTHEWS: And that is that this is a
6 challenge where the intervenors have an obligation to
7 set forth a viable alternative. In the environmental
8 report in Section 9.2.2, the applicants have evaluated
9 the alternatives and concluded that the only viable
10 alternatives are co-fired or gas-fired generation or
11 a combination of that generation, and it is clear in
12 the environmental report, the conclusion in Section
13 9.2.4 and in the tables, 9.2-3 and 9.2-4, that any of
14 these other options, including combinations, have much
15 more significant environmental impacts and that the
16 environmental impacts of the nuclear power plant are
17 small.

18 Now, in the Sharon Harris case, the
19 Licensing Board there ruled that unless the
20 intervenors could suggest that there was, in fact, a
21 viable alternative that had a lower carbon footprint,
22 that this issue simply couldn't be admitted.

23 Now, obviously, that's another board's
24 decision. It's not binding on this Board, but I think
25 the Board ought to accept that as a fairly persuasive

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1 argument.

2 JUDGE GIBSON: I think there was a similar
3 argument and a similar disposition in the Bellefonte
4 and Duke Lee cases as well with respect to carbon
5 footprint.

6 Well, and I think to make sure that we
7 are, again, on the same page of the same hymnal, I
8 think that to the applicant's credit, it did not just
9 try to hide behind the skirts of Table S-3 and it did
10 lay out alternatives and describe how essentially the
11 total carbon emissions would still be lower from what
12 they're proposing than what those alternatives would
13 be.

14 So I think Table S-3 has got some real
15 warts on it by virtue of the fact that it is based on
16 some old data and hasn't been updated, and there
17 clearly are some carbon emissions. But I think there
18 are some problems with it, but I think there also is
19 a bigger picture here with respect to its contention.

20 I want to focus on a question that counsel
21 has raised here about Massachusetts v. EPA. His
22 concern is that Massachusetts v. EPA and EPA's
23 rulemaking on carbon dioxide has somehow changed the
24 considerations that we should be giving to this
25 contention, and I would like for the applicant to

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1 either the case or the endangerment finding are
2 relevant to the decision that has to be made by the
3 Board regarding admissibility of this contention.

4 And even in light of those things, the EPA
5 has not promulgated any regulations to regulate
6 greenhouse gas emissions, and I'm not aware of them
7 even proposing any regulations as of yet. So to the
8 extent that there may in the future be or likely in
9 the future will be additional regulations from the EPA
10 on greenhouse gas emissions, particularly carbon
11 dioxide, that cannot support the contention that
12 focuses on the impacts from the greenhouse gas
13 emissions related to the uranium fuel cycle.

14 Certainly, the staff would acknowledge
15 that future regulations may constrain in some way
16 those emissions attributable to the uranium fuel
17 cycle, but that doesn't have any effect on our impacts
18 analysis under NEPA, and so the staff's position is
19 that those two authorities that he's relying on have
20 no effect on our analysis for this contention.

21 JUDGE GIBSON: Thank you.

22 Yes.

23 MR. EYE: Thank you, Your Honor.

24 Several points. One, I'll address the one
25 that counsel for staff just mentioned. Massachusetts

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1 v. EPA addressed, among other things, whether CO₂
2 should be considered a pollutant under the Clean Air
3 Act. The answer was, yes, it should be.

4 To the extent that the Clean Air Act is a
5 functional part of a NEPA analysis related to a major
6 federal action, it seems to follow perforce of logic
7 that the analysis of CO₂ would be implicit as a part
8 of a NEPA analysis, and arguably, that was a
9 requirement before Massachusetts v. EPA, but it's now
10 very clear that it's intended to be such.

11 And in terms of the scope of the decision,
12 it is true that it arose in the context of tailpipe
13 emissions, but the opinion itself makes no such
14 limitation in terms of the definition of CO₂ as a
15 criteria pollutant.

16 Second, this is a contention of omission.
17 Our argument is that there should be a full-blown
18 analysis of greenhouse gas impacts related to UFC.
19 To the extent that there are now unquantified advances
20 in refinement and fabrication, what are those
21 advances? How have they affected greenhouse gas
22 emissions? We simply do not know.

23 Moreover, to the extent that the, quote,
24 values are very conservative, end quote, that also, I
25 think, begs some further quantification based upon

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1 empirically-derived evidence. These are unquantified
2 assertions that I think the staff and implicitly the
3 Applicant are relying upon in terms of the actual
4 greenhouse gas effects because, frankly, we don't
5 know, and I think that there is some agreement based
6 upon counsels from the staff that primarily when fuel
7 is fabricated for these plants, it's using coal-fired
8 electricity.

9 But to what extent? Over what period of
10 time? And those kinds of parameters have not been
11 quantified. Moreover, what was insignificant in 1974
12 or 1976 related to greenhouse gas emissions, and
13 again, that's a qualitative kind of term, of course,
14 I think has to be revisited in light of what we now
15 know about the impacts of greenhouse gases on the
16 atmosphere.

17 As far as the Applicant's decision to
18 review alternatives as far as greenhouse gases are
19 concerned, again, they cherry pick. They pick the
20 ones that they were sure that they would match up well
21 against and omitted those that wouldn't, and I don't
22 know that that can be considered to be the kind of
23 analysis that decision makers ought to rely upon.

24 My colleagues pointed out that if one is
25 to use a Google search and ask for references related

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1 to CO₂ emissions from the nuclear fuel cycle, you
2 actually come up with 57,100 sites in a few fractions
3 of a second. This is not obscure territory.

4 On the other hand, to the extent that the
5 Applicant chose not to analyze it in the depth that we
6 believe it's required under the Atomic Energy Act,
7 it's our contention that this should advance in the
8 adjudication and that the Applicants should be
9 required to do a full range of alternatives in terms
10 of what they compare for greenhouse gas emissions and
11 take the 1974 and 1976 authorities that they cite and
12 use those as a point of departure perhaps and figure
13 out whether or not in the preceding or whether in the
14 succeeding 30 years, whether we know anything more
15 about these, and to do otherwise is implicitly relying
16 on 1974 and 1976 authorities that I think rightly so
17 have been called into question.

18 So we don't want to give short shrift to
19 this contention because we think that it has far
20 reaching implications not only for here, in this
21 particular adjudication, but those that are advancing
22 elsewhere. We understand that the Commission has
23 addressed this in the past, but the ground on
24 greenhouse gases is shifting even as we speak, and I
25 think it's important to recognize that and not make

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1 decisions-based-upon-authorities that would be dated
2 or unreliable.

3 JUDGE GIBSON: Okay. I want to focus on
4 setting aside Table S-3 and the basis for the numbers
5 in that, those background documents. I want to focus
6 on one specific aspect of this contention that you
7 just mentioned because I think that I want the
8 Applicant to address this.

9 You have said, but I need you to amplify
10 a little bit on your remarks, the Applicant provided
11 alternatives to plan, and you suggest that those
12 alternatives were cherry picked. So what I want to
13 know is what is it that you think they cherry picked,
14 and then I'm going to let the Applicant respond on
15 whether they agree with you or not, and if they don't,
16 why that that was cherry picked.

17 MR. EYE: Well, for instance, the CO₂
18 analysis for wind generated electricity, I mean,
19 that's in comparison to coal. We know nuclear is
20 going to match up differently against those two,
21 right? And there is an opportunity for a side-by-side
22 comparison of CO₂ emissions which should be done.

23 JUDGE GIBSON: Okay. This actually gets
24 into some other contentions.

25 MR. EYE: It does.

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1 -- JUDGE GIBSON: But that's okay. Let's go
2 ahead and take them now because I want to -- let's
3 just speak to the wind issue that he just raised. We
4 can get to the other ones in a minute.

5 MR. MATTHEWS: Yes, and we're spilling
6 into Contention 23.

7 JUDGE GIBSON: Right.

8 MR. MATTHEWS: And my partner Steve is
9 going to address Contention 23, but I will say --

10 (Laughter.)

11 JUDGE GIBSON: Sorry about that.

12 MR. MATTHEWS: I can say --

13 JUDGE GIBSON: It's okay with us if you
14 switch microphones. I'm sure counsel will not mind
15 that. Okay?

16 MR. MATTHEWS: Okay. Go ahead.

17 MR. FRANTZ: If you look at Section 9.2 of
18 our environmental report, we go through numerous
19 alternatives, including wind, solar power, and
20 combinations of wind with other mechanisms, and we
21 comprehensively look at each one to see whether or not
22 they would have an ability to provide basic power,
23 number one, and, number two, to see whether or not
24 they are basically commercially viable in today's
25 market.

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1 - We came-up as a result of that analysis
2 with basically four alternatives or three alternatives
3 plus nuclear. The alternatives are basically a coal-
4 fired plant, a gas-fired plant, and combinations,
5 including combinations involving wind power and solar
6 power.

7 And we then did a comprehensive evaluation
8 of those alternatives and including a comparison of
9 the various air quality impacts, and let me refer the
10 Board to page 9.2-37 of our environmental report,
11 which does do a comparison, for example, involving CO₂
12 emissions and other gaseous emissions. And that would
13 include wind plus combinations that would produce base
14 load power.

15 JUDGE GIBSON: Okay. Your reply?

16 MR. EYE: Well, we are looking at Table
17 9.2-4 on page 9.2-37. The comparison is between the
18 proposed action nuclear plant, a coal-fired unit, a
19 gas-fired unit or a combination of coal and gas.

20 JUDGE GIBSON: Perhaps we had a wrong
21 citation. Perhaps you have the wrong place in the
22 table. I want to make sure, again, that we're talking
23 about apples and apples and not talking past each
24 other.

25 MR. FRANTZ: If you go back -- they have

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1 not obviously read our environmental report. If you
2 look at Section 9 --

3 JUDGE GIBSON: I suspect they've read it
4 and they probably have. You didn't need to say that.
5 Go ahead.

6 MR. FRANTZ: I'm sorry.

7 If you look at Section 9.2.2.6.1, it
8 discusses what the combinations involve, and
9 explicitly mentions mixes of wind power and other
10 types of combined cycle units and other kinds of
11 production facilities that in combination could
12 produce base load power. So it's very clear that our
13 combinations do include wind in combination with other
14 mechanisms that are capable of producing base load
15 power.

16 JUDGE GIBSON: Okay.

17 MR. EYE: Your Honor, to the extent --

18 JUDGE GIBSON: Wait a minute. Do you use
19 the reference he's talking about?

20 MR. EYE: I do.

21 JUDGE GIBSON: I want to make sure that
22 you're seeing the reference he's talking about.

23 MR. EYE: I do.

24 JUDGE GIBSON: If you don't think it
25 addresses it, that's fine, but I want to make sure

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1 that we're at least talking about the same place and
2 the same table. Okay?

3 MR. EYE: I believe that I see what he's
4 referring to.

5 JUDGE GIBSON: Okay. Thank you.

6 Okay. Now, he has explained to you what
7 that means. Do you need to explain something else
8 about that table?

9 MR. FRANTZ: No, I think it's clear on its
10 face.

11 JUDGE GIBSON: Okay, okay. That's fine.
12 Okay.

13 Now, what is your explanation for why
14 that's cherry picking?

15 MR. EYE: It's because there's a
16 quantification in that table of air quality impacts
17 related to coal and gas-fired. They quantify it. On
18 the combination of alternatives, there is no
19 quantification except for the fact that they say that
20 emissions could be as low as zero.

21 JUDGE GIBSON: Okay.

22 MR. EYE: But they also say they could be
23 as much as the emissions from a coal-fired
24 alternative, but no quantification to support that.

25 JUDGE GIBSON: Okay. So you're saying

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1 that that's not really evaluating that alternative
2 legitimately because they did not provide a specific
3 quantification of the wind component in that
4 alternative. Is that what your concern is?

5 MR. EYE: That is a legitimate summary of
6 it.

7 JUDGE GIBSON: Okay. Now, would you
8 please address that specific point?

9 MR. FRANTZ: Yes. The reason there's no
10 quantification is because we looked at the range of
11 combinations. We looked at a range involving anything
12 where wind could produce basically 100 percent of the
13 capacity of nuclear to where it might produce 50
14 percent, 30 percent, all the way down to zero in
15 combination with fossil fuel plants which could,
16 again, produce a range of capacity factors in
17 conjunction with wind, and because we looked at a
18 range, there isn't obviously a single value. That's
19 why our table says the emissions could be zero. We've
20 seen some favor with their position, by the way.

21 JUDGE GIBSON: Correct.

22 MR. FRANTZ: Up to the maximum amount
23 which would be 100 percent coal when the wind is not
24 blowing, and that would be the equivalent to the coal-
25 fired plant. That's why we have a range in this

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1 fourth column in Table 9.2-4.

2 JUDGE GIBSON: Okay. Now, do you
3 understand that they have a range in that column?

4 MR. EYE: I do.

5 JUDGE GIBSON: From zero all the way up to
6 100 percent, right?

7 MR. EYE: I do, but I don't believe that
8 the underlying assumption about 100 percent or
9 equivalent to 100 percent emissions from coal is
10 legitimate. They make the assumption that sometime
11 alternatives such as renewables would sometimes not be
12 available. I mean, they're setting the perimeter for
13 how much renewal capacity would actually be available.

14 JUDGE GIBSON: So you're saying they just
15 give lip service to us. They don't actually evaluate
16 it as being a complete alternative.

17 MR. EYE: As a viable and complete
18 alternative, yes.

19 JUDGE GIBSON: Yeah. Would you please
20 response to that?

21 MR. FRANTZ: Yes. Obviously there are
22 times when the wind doesn't blow. In those cases, you
23 need a backup to produce the base load power, and that
24 backup in our case here is either gas or coal.

25 JUDGE GIBSON: Okay.

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1 MR. EYE:— The assumption that the wind
2 doesn't blow infers that it doesn't blow everywhere.
3 Intermittency is an issue with renewables, but we also
4 know and we're going into another contention here, but
5 it is also the case that intermittency problems with
6 renewables are becoming overcome. We're getting past
7 that with various technologies that the Applicant has
8 not used in its comparison, everything from compressed
9 air energy storage, for example, as a way to overcome
10 intermittency with wind.

11 This is not pie in the sky. It's no more
12 infeasible than other alternatives. So that's not
13 taken into consideration.

14 So the idea that, quote, the wind doesn't
15 blow and therefore you take it out of consideration
16 or that you weight it in a different way I don't
17 believe is reasonable. In fact, it is arbitrary.

18 JUDGE GIBSON: Well, let me just go back
19 on that point. I was under the impression from
20 something I looked at in the pleadings that compressed
21 energy storage that would enable one to store this
22 wind energy is not an available, off-the-shelf
23 technology right now. I thought that was something
24 that, you know, people are hoping to develop to make
25 wind energy more viable, more reliable, but that at

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1 this point it is an intermittent source because there
2 is no storage, whatever that storage.

3 MR. EYE: Compressed air energy storage.

4 JUDGE GIBSON: Compressed energy storage
5 is available.

6 Now, is that, you know, some hallucination
7 on my part or is that really the case?

8 MR. EYE: No, no. It is in the process of
9 being developed. It has actually been deployed in I
10 believe there were two or three plants in Europe that
11 have used it, and it is actively being pursued as
12 alternatives elsewhere. In Texas, for example,
13 Luminant in conjunction with Shell announced, I
14 believe, year before last that they were planning on
15 pursuing a compressed air energy storage system in the
16 northern part of the state.

17 JUDGE GIBSON: Okay, but again, we're
18 talking about pursuing a technology that one hopes to
19 develop. We're not talking about you can go out and
20 buy this stuff off the shelf and put it in, right?
21 Right now, I'm talking about right now, what they can
22 evaluate in terms of the alternatives available to
23 them. Is that available?

24 MR. EYE: I don't know what their capacity
25 is for going out and doing the same thing as their

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1 counterpart Luminant-is-doing with-Shell.

2 JUDGE GIBSON: Okay.

3 MR. EYE: I mean, that's a viable company
4 that has made a decision to pursue that particular
5 technology. So it's not so beyond the realm of
6 possibility that another utility company is -- I mean,
7 they're certainly looking at it, and they've announced
8 that they're going to pursue that. So I don't think
9 that it's -- it's not viable.

10 JUDGE GIBSON: Okay.

11 MR. EYE: Well, at any rate, moreover,
12 STP-3 and 4 presumably wouldn't be available for
13 service for realistically 2015, 2016, in that time
14 frame. In the meantime, there will other alternatives
15 that will be coming on much more mainstream. Again,
16 you know, if Luminant weren't pursuing a CAES, I guess
17 my argument would be somewhat different.

18 JUDGE GIBSON: Okay. Hold on just a
19 second. Let me go to the staff.

20 Are you all -- we're talking about the
21 evaluation of alternatives under NEPA. Okay? Now, I
22 believe we have relative congruence on the notion that
23 at this particular point in time this is not an off-
24 the-shelf technology that one can employ.

25 MR. BIGGINS: Judge.

1 JUDGE GIBSON: --Okay?-- The compressed
2 energy storage with respect to wind. Is this an
3 alternative that one would assume as 100 percent
4 available in light of that fact that there is no
5 proven technology available at this time, or is the
6 fact that it might be available within the next five
7 to six years one that you should consider as an
8 alternative under NEPA?

9 MR. BIGGINS: Judge, in order to look in
10 detail, in a detailed study or analyze a proposed
11 alternative, it would have to meet the purpose of the
12 proposed action, and my understanding of the
13 compressed air energy storage system is that it is not
14 currently available, but it's up to the Petitioners to
15 be able to show that it is, and merely referencing a
16 combined proposal that Luminant and Shell, you know,
17 might look into building a facility such as this
18 doesn't show in the least bit that this would meet the
19 purpose of this action.

20 The staff would point out --

21 JUDGE GIBSON: I'm sorry. I appreciate
22 your position about what Petitioners' burden is, but
23 I'm talking about what one does as the NEPA
24 alternatives analysis.

25 MR. BIGGINS: Right.

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1 JUDGE GIBSON: All- I want you to talk
2 about.

3 MR. BIGGINS: Of course, and for the NEPA
4 alternatives analysis, the Petitioners would need to
5 show that the compressed air energy storage system
6 would raise the capacity factor or reliability of wind
7 powered energy generation to the point where it could
8 be a viable alternative or, you know, that's the
9 language the Applicant used.

10 JUDGE GIBSON: Well, see, you're coming
11 back to what is their burden.

12 MR. BIGGINS: In other words, what is
13 their purpose?

14 JUDGE GIBSON: And that's not what I'm
15 asking you. I'm asking you what the NRC would do.
16 The NRC does environmental impact statements. They
17 consider alternatives to the proposed action. Okay?
18 My question is simply this. Is this compressed air
19 energy storage technology advanced to a point that
20 that's something that you all ordinarily consider in
21 your alternatives analysis or not. Just that; that's
22 all I need to know.

23 MR. BIGGINS: And a simple answer is, no,
24 we don't believe it is.

25 JUDGE GIBSON: Okay. Thank you. That's

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1 all I needed. Okay.

2 MR. FRANTZ: Judge Gibson, if I may, you
3 asked for a citation on the viability of compressed
4 air. We have one. It's an environmental report
5 Section 9.2 -- I'm sorry -- page 9.2-19. The
6 statement is, "For example" -- this is, by the way,
7 involving the combination of alternatives using wind
8 and solar power, including storage mechanisms -- "for
9 example, the storage of even one day's output at 2700
10 megawatts is well beyond any demonstration projects
11 using batteries, compressed air, hydrogen or other
12 storage mechanisms, and the cost of such systems even
13 if available would be prohibitive."

14 JUDGE GIBSON: Okay. Thank you. I
15 thought I had seen that somewhere.

16 Okay. Now, you don't have anything that
17 would be contrary to that. I realize there are some
18 things in the pipeline, but you don't have anything at
19 this point contrary to that assertion, do you?

20 MR. EYE: Well, there's a 110 megawatt
21 compressed air energy facility in McIntosh, Alabama
22 that has been commercial for almost 20 years. I mean,
23 it went commercial in '91. So, I mean, there is that
24 example that's out there that is a viable alternative.

25 JUDGE GIBSON: And this is a compressed

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1 air energy storage device that --

2 MR. EYE: Uses a cavern.

3 JUDGE GIBSON: -- is associated with what?

4 MR. EYE: With electric generation, 110
5 megawatt unit.

6 JUDGE GIBSON: Okay. Do you all know if
7 you looked at that? If you don't know, it's okay.

8 MR. FRANTZ: We have no objection to the
9 fact that there are demonstrate projects out there,
10 but one Petitioners have not alleged that they are
11 capable of producing base load power.

12 JUDGE GIBSON: Right.

13 MR. FRANTZ: And two, certainly not at the
14 level of 2,700 megawatts.

15 JUDGE GIBSON: Correct. I understand.
16 I'm just trying to make sure we're talking about the
17 same language here. Okay.

18 MR. EYE: But there's no showing that it's
19 not impracticable either.

20 JUDGE GIBSON: Right.

21 MR. EYE: To the extent that there's one
22 out there running --

23 JUDGE GIBSON: Okay.

24 MR. EYE: -- sort of contradicts that
25 idea.

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1 And, again, we would refer to the
2 attachment, the supporting document that we offered up
3 in I believe it's Contention 23 in alternatives --

4 JUDGE GIBSON: Right.

5 MR. EYE: -- where we do reference other
6 things that are being done here in Texas to either
7 product additional capacity or to minimize use through
8 demand side management, and that was Dr. Makhijani's
9 report of October 2008 related to San Antonio's energy
10 profile.

11 JUDGE GIBSON: The Bright Future or
12 whatever it was.

13 MR. EYE: San Antonio's Bright Energy
14 Future. That's the title of it, yes, sir.

15 JUDGE GIBSON: Okay. thank you.

16 MR. FRANTZ: If I may, Dr. Makhijani's
17 report does not even mention compressed air. They do
18 reference a Web page from the National Renewable
19 Energy Laboratory, but that has the following
20 conclusions: "development of the base load wind
21 concept will require a bigger understanding of the
22 local geological compatibility of their storage, and
23 additional work will be needed or required to examine
24 a feasibility of advanced wind]CAES concepts described
25 here."

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1 So even their own reference indicates that
2 this is not currently commercially viable.

3 JUDGE GIBSON: Okay. Thank you.

4 MR. EYE: Your Honor.

5 JUDGE GIBSON: Yes.

6 MR. EYE: The particular section of the
7 environmental report that was cited that says that
8 compressed air and so forth is not viable uses the
9 term that is well beyond any demonstration project and
10 talks about cost would be prohibitive and so forth.
11 But if there's a quantification of that, I haven't
12 seen it. So we don't have a side-by-side comparison
13 in terms of what those costs would actually be other
14 than a qualitative description of it as being, quote,
15 prohibited, end quote. So that would be a further
16 objection to the comparisons that have been made by
17 the Applicant in its ER.

18 JUDGE GIBSON: You're talking about side-
19 by-side comparison of the quantified cost?

20 MR. EYE: Yes.

21 JUDGE GIBSON: We'll get to that when we
22 get to 23. Okay? I don't want to -- we're getting a
23 little far afield as it were.

24 I've been dominating all of this
25 conversation. I suspect that Judges Arnold and

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1 Charbeneau may have something else:

2 I think what I would like to do though is
3 when we get to 23 we'll come back to this. I think we
4 talked about wind about as much as we can, but we will
5 talk about the other alternative sources at that point
6 in time.

7 Do you have anything else about Contention
8 21?

9 JUDGE ARNOLD: Which contention?

10 JUDGE GIBSON: Or 20. Sorry. I'm sorry.
11 It's 20. You're right.

12 JUDGE ARNOLD: No, I'm satisfied.

13 JUDGE GIBSON: Okay. On 21 this
14 contention concerns the possibility of an accident at
15 one of the units affecting another unit; is that
16 correct?

17 MR. EYE: Yes, that's correct, sir.

18 JUDGE GIBSON: In the answer the Applicant
19 file, they indicated that the combined operating
20 license application address these contingencies, but
21 that the distance of 1,500 feet between Units 1-2 and
22 Units 3-4 is so great that no adverse effect is
23 anticipated.

24 Now, I assume you disagree with that, but
25 if you do, could you explain why?

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1 MR. EYE: Yes, you know-- In terms of the
2 -- the question, I think, is is this a safety or
3 environmental question, or is it an operational
4 question, and our contention is that to the extent
5 that the verbiage that we used in the contention that
6 implies it's an operational question really presumes
7 that you already have an environmental issue that
8 implicates operations.

9 So we're assuming that in a major
10 radiological release from one of the other units, that
11 it contaminates the area sufficiently that it would
12 implicate environmental concerns and public health
13 concerns and then would follow on that there may be
14 operational issues as well.

15 But primarily, our contention is that
16 there has been no real consideration about what
17 happens in the event of, let's say, a major fire and
18 explosion at one of the units that contaminates
19 essentially the entire area, and whether that
20 interferes with either the capacity to control
21 environmental exposures or public health exposures,
22 and I think that it follows on that to the extent that
23 you've got personnel on site that are trying to
24 operate these plants, that their health and safety may
25 be also implicated by the accident in one unit when

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1 they're still trying to operate another three, for
2 example.

3 The close proximity, the collocation of
4 these plants we recognize in some respect makes sense.
5 You get some economies of scale and some shared
6 facilities that probably make sense, but then there's
7 also the implication that if one unit is severely
8 damaged with major radiological release, you could
9 implicate the other three, and that, as we mentioned,
10 has considerations in three parameters really:
11 environmental, safety or health, rather, and in safety
12 of the personnel and that we'd be expected to try to
13 operate the other three.

14 And 1,500 feet as the radiation flies is
15 not the kind of separation that would necessarily
16 negate these concerns, and that was the underlying
17 premise of the contention.

18 MR. FRANTZ: Yes, Petitioners have
19 absolutely nothing to support this contention. They
20 have no expert opinion. They have no technical
21 document that they've attached. They have no
22 references to other documents. They have nothing but
23 mere speculation.

24 This is an environmental contention. They
25 refer to our environmental report. NEPA is subject to

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1 a rule of reason, and they have posturing events which
2 are well beyond any rule of reason.

3 We have looked at reasonable accidents at
4 Units 1 and 2, and have shown that they would not
5 impact the safety of operation of three and four, and
6 I can go through those references if you like, but
7 they're in our answer.

8 There is simply no requirement and no
9 basis to go on and consider much more extreme events
10 and much lower probability events that they're
11 postulating. To conceive of an event at Units 1 and
12 2 that would be sufficient to affect Units 3 and 4,
13 even if it's possible, is such a low probability event
14 it's well beyond the rule of reason under NEPA.

15 JUDGE ARNOLD: When you say "low
16 probability," how low are you speaking?

17 For instance, you have an estimate of the
18 core damage frequency?

19 MR. FRANTZ: Yeah, we have both core
20 damage frequency and large, early release frequency,
21 or LERF as the acronym. LERF is probably the more
22 relevant here, but I'll give you both numbers, Judge
23 Arnold.

24 The core damage frequency for South Texas
25 1 and 2 is approximately ten to the minus fifth. The

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1 large, early release frequency is approximately six
2 times ten to the minus seventh per year. So you're
3 dealing with a large release frequency, for example,
4 of less than one in a million years.

5 JUDGE ARNOLD: Is there any requirement
6 that you know of for the environmental report to
7 address the potential of Units 3 and 4 to affect Units
8 1 and 2?

9 MR. FRANTZ: From a safety perspective,
10 no. From an environmental perspective, again, I think
11 we're dealing with the same type of analysis. You
12 have to postulate a risk of a large, early release
13 from three and four, and the probability of a large,
14 early release from Units 3 and 4 is even lower than
15 what I have just given you for Units 1 and 2. For
16 three and four, the large, early release is 2.2 times
17 ten to the minus eighth per year.

18 JUDGE ARNOLD: Thank you.

19 JUDGE CHARBENEAU: Are there any
20 disagreements from the Petitioners with regard to the
21 analysis and assessment of major fires and explosions
22 that are in the FSAR, in the radiological accidents in
23 the design control documents?

24 MR. EYE: Well, to the extent that they're
25 not inclusive of the requirements that there be a

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1 consideration of the impact of, for example, a large
2 commercial airliner, yes, and to the extent that they
3 rely upon fire models that are inadequate to postulate
4 the size of fires and explosions that would occur
5 subsequent to the impact of a large commercial
6 airliner, yes.

7 JUDGE CHARBENEAU: Okay, and that's been
8 discussed with the previous with regard to this
9 specific contention?

10 MR. EYE: Well, I think that the two
11 overlap. I mean, to the extent that they're relying
12 upon fire models or fire and explosion models, I
13 suppose, that are not as extensive as in terms of the
14 postulated damages would be expected from the large
15 loss of a plant due to those fires and explosions, and
16 we think that that's not a reliable source.

17 JUDGE GIBSON: I think we'll take a ten
18 minute recess at this point.

19 (Whereupon, the foregoing matter went off
20 the record at 11:06 a.m. and went back on
21 the record at 11:18 a.m.)

22 MR. FRANTZ: Judge Gibson, I'd like to
23 make one correction on the statement I made earlier in
24 response to a question from Judge Arnold about the
25 LERF for Units 3 and 4, I gave him a number of 2.2

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1 times 10 to the minus 8. That's actually ~~the~~ Large
2 Release Frequency or LRF. And there's a slight
3 difference in the definition between LERF and LRF.
4 And the number I gave was for LRF.

5 JUDGE GIBSON: Thank you.

6 Before we leave 21, I just wanted to ask
7 if anyone here has any -- can point us to any
8 regulation or guidance from the NRC that suggests that
9 1,500 feet is a sufficient distance to avoid any
10 adverse impact.

11 MR. BIGGINS: We don't have anything to
12 point to, Judge.

13 JUDGE GIBSON: Okay.

14 MR. FRANTZ: Perhaps if I could respond,
15 what happens if you look at the hazards, there's
16 chemical hazards, there's flammable hazards, and the
17 safe distance is calculated based upon NRC guidance
18 documents. And then you compare the safe distance
19 space upon the actual hazard against the distance
20 between the hazard and the actual reactor.

21 And that's the process that we followed in
22 our case. We looked at the actual hazards, fire
23 hazards, chemical hazards at One and Two, determined
24 what the safe standoff distance was, and then compared
25 that with the actual distance and showed that the

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1 actual distance was larger than the safe standoff
2 distance.

3 JUDGE GIBSON: So based on your -- based
4 on the Applicant's calculations using the NRC guidance
5 of what is safe, you came up with a distance that was
6 shorter than 1,500 feet. Therefore, 1,500 feet, based
7 on those calculations, was a safe distance.

8 MR. FRANTZ: Correct.

9 JUDGE GIBSON: Is that it?

10 MR. FRANTZ: Yes.

11 JUDGE GIBSON: Okay.

12 JUDGE ARNOLD: And that was based on fire,
13 chemical, and an explosion?

14 MR. FRANTZ: That's correct.

15 JUDGE GIBSON: And it was not based on any
16 kind of radioactive release calculation, correct?

17 MR. FRANTZ: Well --

18 JUDGE GIBSON: Because that wasn't
19 required.

20 MR. FRANTZ: -- no, we actually have
21 looked at also a radiological release from a design
22 basis accident at Unit One and Two and showed that the
23 dose there to a say a control room operator at Unit
24 Three and Four would be less than the dose that that
25 operator would receive from an accident at Three and

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1 Four.

2 JUDGE GIBSON: Okay. Thank you.

3 Okay. If we could turn to Contention 22,
4 this appears to me to be largely a reprise of the
5 previous material that we had on Contentions Five and
6 Six related to the commissioning, at least there's
7 certainly a great deal of overlap. But you do have
8 something new that I don't think we've talked about
9 before. And that is environmental justice.

10 Now in 79 to 80 of your answer, NRC Staff,
11 you discuss the 2002 generic EIS. Does that also
12 include environmental justice?

13 MS. BIELECKI: I am not sure.

14 JUDGE GIBSON: Well, while you are looking
15 for that, I mean just as a practical matter, it is
16 difficult for me to see how you could address
17 generically environmental justice --

18 MS. BIELECKI: Right.

19 JUDGE GIBSON: -- because it would seem to
20 me that it would be very unique to whatever the
21 culture and demography was at that particular area.

22 MS. BIELECKI: Right.

23 JUDGE GIBSON: And it is very site
24 specific. So to the extent then that the 2002 generic
25 EIS might be a bar to adjudication in this case, it

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1 would not be a bar to adjudication of environmental
2 justice issues provided they were properly planned.
3 I'm just talking about --

4 MS. BIELECKI: Perhaps. But with
5 decommissioning, there's -- the regulations don't
6 require them to submit a plan for how they are going
7 to decommission at this point.

8 So I think depending on the method of
9 decommissioning, the impacts of the environmental
10 justice would vary. And I think those considerations
11 would be more appropriately raised at the time a
12 decommissioning plan is selected by the applicant.

13 JUDGE GIBSON: Okay. But those are --
14 we're still talking about two separate questions,
15 though, right? One is does the generic EIS --

16 MS. BIELECKI: Okay, that's interesting.

17 JUDGE GIBSON: -- vitiate any possible
18 contentions with respect to environmental justice on
19 the one hand.

20 MS. BIELECKI: I don't believe --

21 JUDGE GIBSON: Then on the second hand it
22 is is this ripe for adjudication environmental justice
23 or is that something that would need to wait until the
24 point in time at which decommissioning would be a
25 legitimate subject if -- for adjudication.

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1 MS. BIELECKI: Okay.

2 JUDGE GIBSON: Which you claim it would
3 not be at this point in time, correct?

4 MS. BIELECKI: That's my position, yes.

5 JUDGE GIBSON: Okay. Now just with
6 respect to that one issue, do you all -- the
7 Applicant, are you in agreement with the staff, what
8 they just said?

9 MR. MATTHEWS: Your Honor, environmental
10 justice is addressed in the Generic Environmental
11 Impact Statement in Section 4.3.13.

12 JUDGE GIBSON: Okay.

13 MR. MATTHEWS: And I need to pull --

14 JUDGE GIBSON: With respect to
15 decommissioning?

16 MR. MATTHEWS: Yes, in the Generic
17 Environmental Impact Statement on Decommissioning,
18 which was revised in 2002. So --

19 JUDGE GIBSON: Now is it your position
20 that all environmental justice issues are addressed by
21 the Generic EIS? Or that -- and there are no site-
22 specific issues that might come up with respect to
23 environmental justice?

24 MR. MATTHEWS: Clearly there are
25 environmental justice issues that would be addressed -

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1 - I would think that would be addressed in the Generic
2 Environmental Impact Statement that are related to
3 offsite issues.

4 With respect to any site-specific matters,
5 the only time when you could really properly assess
6 the environmental justice issues would be when you
7 have an actual plan for how you are going to engage in
8 decommissioning.

9 Decommissioning planning takes place, you
10 know, at or around plant shutdown for a reason because
11 the options available and the choices that you would
12 make with respect to decommissioning vary depending on
13 the time of decommissioning.

14 If you had a premature shutdown scenario
15 in just 15 years, you would be looking at the
16 circumstances extent then versus -- and also there
17 would be potential economic issues around having
18 accumulated adequate decommissioning funds and things
19 like that that might drive your decision-making
20 whereas with license renewal, you would talking about
21 decommissioning occurring 60 or 80 years from now
22 which is a point in time that it just simply would be
23 meaningless to speculate at this point, you know, what
24 options would be available. That the actual plans are
25 going to depend upon disposal resources that are

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1 available and how cost effective they are.

2 There's just a new site that has been
3 licensed here in Texas. Right now there is a large
4 amount of capacity at the Clive facility for Class A
5 waste in Utah. Fifty years from now, I don't know
6 whether we'll be using the Clive facility or some
7 other facility. So it seems to me that you really --
8 you are going to be addressing those issues. And the
9 only way you could meaningfully address them would be
10 at the time you actually have a plan.

11 JUDGE GIBSON: Well that would make -- you
12 know, just intuitively, viscerally makes sense to me.
13 What I'm having difficulty comprehending is how you
14 could address environmental justice issues in a
15 generic EIS that would be dispositive of any possible
16 environmental justice claims because it would seem to
17 me that they are very site specific.

18 MR. MATTHEWS: Well, we do have a site-
19 specific analysis of the decommissioning issue. And
20 ultimately it concludes that the impacts are within
21 the bounds for GEIS. And we do consider, obviously,
22 environment justice issues in the environmental
23 report.

24 JUDGE GIBSON: Yes, right.

25 MR. MATTHEWS: I'm not really sure how the

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1 environmental justice issues with respect to
2 decommissioning would somehow be unique in a site-
3 specific way that they wouldn't be otherwise
4 addressed.

5 JUDGE GIBSON: Well, I think you,
6 yourself, said that there would be a very different --
7 there is a demography and a culture that exists at
8 this point in time that may not exist in 60 years,
9 right? I mean that by itself suggests to me that one
10 cannot -- that these site-specific factors are not set
11 in stone. That they are, in fact, quite volatile.
12 And that they might be very different at the point of
13 decommissioning than they are now.

14 Did you all have some additional
15 information that you wish to share with us with
16 respect to environmental justice and the 2002 Generic
17 EIS?

18 MS. KIRKWOOD: Sorry, I had to tag team,
19 you know, on this -- Sara Kirkwood -- we're not sure --
20 - we still haven't been able to find the reference
21 that the Applicant pointed to in what we have with us,
22 but just as an understanding of NRC processes, when we
23 have a Generic Environmental Impact Statement, we
24 still would do a site-specific analysis of something
25 like environmental justice even though the Generic

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1 Environmental Impact Statement might address it. It
2 wouldn't preclusively address it.

3 JUDGE GIBSON: Yes, that makes a lot of
4 sense to me. Okay. All right.

5 Now with that general contours of this
6 analysis, what is your response?

7 MR. EYE: Your Honor, you're probably
8 going to be able to predict what I'll say here but 42
9 USC 2133, subpart D would, we believe, require that
10 there be a forward-thinking analysis about
11 decommissioning that goes into much greater depth than
12 anything that the Applicant or the NRC staff would
13 contemplate here. And once again, putting things off
14 that in the public's interest ought to be dealt with
15 now.

16 In terms of the environmental justice
17 aspect, it goes back to the general trends in our
18 experience with the development of our industrial
19 technologies and so forth that facilities that are, in
20 this instance, intended to take on the remains of a
21 decommissioned nuclear plant will likely not be
22 located in areas that are affluent, for example. Nor
23 are they likely to be located in areas that would
24 otherwise receive a lot of attention just generally.

25 That's what environmental justice is about

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1 is to try and determine whether some groups have a
2 disproportionate burden compared to others. And it
3 is, I think, consistent with that along with other
4 aspects of decommissioning, to consider whether we are
5 essentially almost assuring that when decommissioning
6 does happen, some groups of people in some locales
7 will be expected to bear a greater or a
8 disproportionate burden of the radiological exposures
9 and other aspects -- the other negative aspects
10 related to decommissioning than others.

11 And this differentiation is really the
12 heart of an environmental justice analysis. It's very
13 unlikely that we are going to have remains of a
14 decommissioned nuclear plant taken to Beverly Hills or
15 Westchester County. They're going to be taken to
16 places where less affluent people live because less
17 affluent people will be less likely be able to resist
18 that.

19 Is that an analysis that can be done now?
20 Well, based upon the trends that we have as far as
21 other undesirable facilities being placed in locales
22 where there are disproportionate burdens, I think that
23 is an analysis that can be done.

24 But that's only one part of it. And
25 again, it is our contention that under the Atomic

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1 Energy Act provisions that I just cited that the full
2 scope of environmental impacts related to
3 decommissioning should be taken up now in the context
4 of this adjudication and not delayed under Commission
5 rules and procedures until some unspecified date in
6 the future when essentially the dye will have been
7 cast.

8 And there will be very little chance to
9 turn back and make decisions that would otherwise
10 perhaps be able to avoid, for example,
11 disproportionate impacts on groups of people that
12 would be contrary to our notions of environmental
13 justice.

14 JUDGE GIBSON: Okay. Would you please
15 respond --

16 MS. BIELECKI: Yes.

17 JUDGE GIBSON: -- in terms -- particularly
18 in terms of timing --

19 MS. BIELECKI: Yes.

20 JUDGE GIBSON: -- and what is right at
21 this point in time and what is not right at this point
22 in time --

23 MS. BIELECKI: Well, the Commission --

24 JUDGE GIBSON: -- in your estimation.

25 MS. BIELECKI: The regulations, 10 CFR

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1 52.110(a)(1) says that an applicant doesn't have to
2 notify us until 30 days -- within 30 days of
3 permanently ceasing operations.

4 And before two years of following the
5 permanent cessation of operations, they provide a
6 PSDAR. And that is the Post Shutdown Decommissioning
7 Activities Report. And that's when they specify what
8 approach they would like to use for decommissioning.
9 And at that point, any claims regarding environmental
10 justice can be evaluated based on their approach.

11 At this time, the Applicant has assessed
12 environmental justice but it is for the plant
13 operations.

14 JUDGE GIBSON: Correct.

15 MS. BIELECKI: So I think that at this
16 point in time, it is premature to assess environmental
17 justice for decommissioning.

18 JUDGE GIBSON: Now assume with me that we
19 are at that point in time, that the Applicant provides
20 you with notice that they are going to cease
21 operations.

22 MS. BIELECKI: Yes.

23 JUDGE GIBSON: You all will then evaluate
24 the plan that they submit and determine whether it is
25 acceptable. Do you -- is it standard NRC practice to

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1 do an Environmental Impact Statement on the
2 decommissioning plan? Or, if not, how is the
3 environmental justice issue addressed? And can
4 citizens participate in that process at that point in
5 time?

6 MS. BIELECKI: Well, in terms of a hearing
7 opportunity, before the license termination plan is
8 approved, that will require a license amendment. At
9 that point, there is an opportunity for hearing.

10 In terms of our assessment of
11 environmental impacts, let me just consult with our
12 technical staff.

13 Okay, before a plant can be
14 decommissioned, we will do our NEPA analysis. And
15 we'll look at both what they provided initially and
16 then any additional impacts. And specifically for
17 environmental justice, depending on the impacts, there
18 will either have to be an EA or an EIS before they can
19 decommission because those impacts may not have been
20 analyzed at this point in time.

21 JUDGE GIBSON: So it would be fair to say
22 that they could be analyzed -- you could have done --
23 you would do an analysis at this point in time of
24 decommissioning? You may well do one later --

25 MS. BIELECKI: Right.

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1 JUDGE GIBSON:---- but you are going to do
2 one right now, right?

3 MS. BIELECKI: Right. But not for
4 environmental justice.

5 JUDGE GIBSON: But not for environmental
6 justice.

7 MS. BIELECKI: I believe.

8 JUDGE GIBSON: So that's not going to be
9 addressed right now. Is that right? Environmental
10 justice associated with decommissioning is not --

11 MS. BIELECKI: Right.

12 JUDGE GIBSON: -- going to be addressed
13 right now?

14 MS. BIELECKI: Correct.

15 JUDGE GIBSON: The only environmental
16 justice you are going to be addressing right now is
17 for the --

18 MS. BIELECKI: Operations.

19 JUDGE GIBSON: -- operation of the plant,
20 proposed operation of the plant.

21 MS. BIELECKI: Correct.

22 JUDGE GIBSON: So any concerns that the
23 Petitioner has with respect to environmental justice
24 associated with the decommissioning would be, in your
25 estimation, not ripe for adjudication at this point in

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1 time because they would be afforded an opportunity at
2 the time the decommissioning plan is submitted to
3 challenge that. And I take it it would be in the form
4 of an amendment to the -- a proposed amendment to the
5 license?

6 MS. BIELECKI: It's not when the
7 decommissioning plan is submitted. It is prior to the
8 approval of the license termination plan.

9 JUDGE GIBSON: Okay. Okay. But the point
10 is they are afforded an opportunity to challenge what
11 the NRC is proposing to do.

12 MS. BIELECKI: Yes.

13 JUDGE GIBSON: Is that a fair statement?

14 MS. BIELECKI: There is an opportunity and
15 I can give you citations for that if you'll give me a
16 moment.

17 JUDGE GIBSON: You don't have to give it
18 to us right now. You can find it and then give it to
19 us later.

20 MS. BIELECKI: Okay.

21 JUDGE GIBSON: I just want to make sure
22 that we understand why, in your estimation, this issue
23 is not ripe for adjudication.

24 MS. BIELECKI: Okay.

25 JUDGE GIBSON: Now recognizing that you

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1 may not agree with me; do you understand the basis for
2 their position that this is not ripe for adjudication
3 at this time?

4 MR. EYE: Yes, Your Honor, I understand.

5 JUDGE GIBSON: Okay. Now is there
6 anything additional that you believe needs to be added
7 with respect to this issue of whether it is ripe for
8 adjudication at this time?

9 MR. MATTHEWS: Yes, Your Honor, I just
10 wanted to read into the record from the conclusions in
11 Section 4.3.13.4 of the Generic Environmental Impact
12 Statement on Decommissioning, which addresses
13 environmental justice.

14 And in the conclusion, the staff
15 concludes, "based on this information, the staff has
16 concluded that the adverse impacts and associated
17 significance of the impacts must be determined on a
18 site-specific basis."

19 And then the final conclusion is,
20 "Subsequent to the submittal of the PSDAR, the NRC
21 staff will consider the impacts related to
22 environmental justice from decommissioning
23 activities."

24 JUDGE GIBSON: Okay. So in your
25 estimation, this is also not ripe for adjudication at

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1 this time.

2 MR. MATTHEWS: Yes, Your Honor.

3 JUDGE GIBSON: Correct?

4 MS. BIELECKI: Yes.

5 MR. MATTHEWS: Yes.

6 JUDGE GIBSON: Okay. So, again, you've
7 heard the basis for it. I realize you may not like
8 it. You may want to challenge it. But I just want to
9 be sure that we at least understand where -- what the
10 basis for the position is.

11 MR. EYE: I understand.

12 JUDGE GIBSON: I did not -- I'd have to
13 say I did not understand that from looking at this
14 earlier.

15 MR. EYE: I think with the clarifications
16 made by counsel today, I have a better understanding
17 of it as well. But I still contend, the Petitioners
18 contend that if they've got a way to site a
19 decommissioning waste repository, let's have it. I
20 mean if they are confident that they can do this and
21 there is this underlying assumption that they can get
22 it done, that they can do this, then do it now.

23 Otherwise, you know, it's -- not to be too
24 cliché but the cards aren't any good if you don't play
25 them at some point.

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1 JUDGE GIBSON: -- Okay.

2 MR. EYE: And they're holding their cards
3 now and they're not playing them. And we don't know
4 what is in their hand.

5 JUDGE GIBSON: Okay. Well, thank you for
6 that metaphor.

7 Okay. Let's go to Contention 23. I think
8 we can get back into our -- hold on just a minute --

9 MS. BIELECKI: Judge Gibson --

10 JUDGE GIBSON: Yes?

11 MS. BIELECKI: -- would you like the
12 citations?

13 JUDGE GIBSON: Yes, please, that would be
14 great.

15 MS. BIELECKI: Okay.

16 JUDGE GIBSON: Thank you.

17 MS. BIELECKI: It is 61 Federal Register
18 39278 discusses the opportunity for hearing and then
19 a case where the license termination plan was assessed
20 is 58 NRC 262.

21 JUDGE GIBSON: Thank you.

22 MR. EYE: Could you give us the last cite
23 again please, Counsel?

24 MS. BIELECKI: Yes, 58 NRC 262.

25 MR. EYE: Thank you.

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1 MS. BIELECKI: Yes.

2 JUDGE GIBSON: One more thing while we're
3 getting citations, could you please let us know what
4 that cite was -- it was at the end of the Generic EIS
5 I believe. But could you have a specific reference
6 that we can use? It was at the end of the Generic EIS
7 about environmental justice.

8 MR. MATTHEWS: At the conclusion?

9 JUDGE GIBSON: Yes.

10 MR. MATTHEWS: Yes, it's 4.3.13.4.

11 JUDGE GIBSON: Okay. Thank you.

12 Previously with respect to Contention 23,
13 I got a little ahead of us when you talked about
14 cherry picking and I think we'll have to go back and
15 clean this up now. I think we only talked about wind.

16 But this is a rather broad contention that
17 addresses whether the Applicant has considered all of
18 the alternatives to building Units 3 and 4 as nuclear
19 reactors and specifically whether those alternatives
20 include wind, solar, energy storage, and energy
21 conservation.

22 Basically that is a fair characterization
23 of what your contention is?

24 MR. EYE: It is.

25 JUDGE GIBSON: I think that for purposes

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1 of our discussions hence forth on Contention 23, it
2 would be useful if Counsel for the Applicant could
3 address the Clinton decision that you discuss on pages
4 99 to 102 that give us a quick sketch of the
5 background facts and how that case came to get in
6 front of the Seventh Circuit. And what its
7 implications are for this contention because I think
8 it will hopefully set a framework within which we can
9 carry on our discussions about this contention.

10 MR. FRANTZ: Yes, thank you, Your Honor.

11 The Clinton case involved an application
12 for an early site permit, ESP is the acronym, by
13 Exelon. Exelon in Illinois at that point in time, and
14 still is, a merchant generator. It was not regulated
15 by the State Public Utility Commission with respect to
16 their rates.

17 The Petitioners in that case argued that
18 the environmental report should give more
19 consideration to alternatives involving conservation,
20 and wind, and solar power. There was also, by the
21 way, a separate allegation regarding combinations of
22 wind and solar power plus fossil fuel facilities that
23 could generate basically the power.

24 The Applicant -- and by the way, I was
25 their Counsel and argued this case -- the Applicant

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1 argued that conservation and wind and solar power were
2 not reasonable alternatives to a baseload nuclear
3 power plant. And that was the purpose of that
4 project. That those alternatives could not satisfy
5 the purpose because they could not generate baseload
6 power.

7 The Licensing Board rejected the
8 contention that pertained to conservation and wind and
9 solar alone. That was eventually taken up by the
10 Commission. The Commission affirmed that decision on
11 the grounds that conservation cannot produce power at
12 all and, therefore, cannot serve the purpose of the
13 project.

14 JUDGE GIBSON: Hold on just a second.

15 Okay, thank you. If you need to talk on
16 the -- if anyone needs to talk on the phone, please do
17 it outside. It is very disruptive.

18 Yes?

19 MR. FRANTZ: And then that wind and solar
20 power, by themselves, also could not produce baseload
21 power because, by definition, those are intimate
22 sources. They can't produce power when the wind is
23 not blowing and they can't produce power when the sun
24 is not shining.

25 The Petitioners in that case took the case

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1 up to the U.S. Court of Appeals for the Seventh
2 Circuit and the Court of Appeals affirmed the
3 Commission decision, again ruling that in that case,
4 there were a lot of alternatives that were considered
5 by Exelon, including wind in conjunction with other
6 methods to produce baseload power, coal, natural gas,
7 and others.

8 And in light of the fact that there were
9 numerous alternatives considered, and given the fact
10 that conservation, for example, could not produce
11 baseload power, the Court of Appeals upheld the NRC's
12 decision and ruled that in this case there was no
13 reason to even consider conservation because
14 conservation could not serve the purpose of the
15 project.

16 And the NRC was right to defer to the
17 Applicant's definition of the purpose of the project.
18 And that the NRC need not redefine the purpose as the
19 Petitioners had wanted to do in that case to include
20 the general goal of serving the energy needs of the
21 public.

22 JUDGE GIBSON: Okay. Thank you. I think
23 that that's helpful.

24 In your answer to my question as well as
25 in your answer that you filed here, there are -- there

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1 is a reference to a couple of terms. And, again, I
2 want to make sure that we're clear that we are all
3 talking off the same page of the same script.

4 Four terms, merchant generator, baseload
5 power, municipal supplier, and design side
6 maintenance. Now could you please explain what your
7 understanding is of those four terms as they are used
8 in the regulatory context?

9 MR. FRANTZ: A merchant generator
10 basically is a generator of electrical power that is
11 not subject to rate making by the State Public Utility
12 Commissions.

13 Demand Side Management, DSM, is basically
14 the same thing as mechanisms to achieve conservation.
15 They are designed to reduce the demand of power.

16 I forget the other two terms you
17 mentioned.

18 JUDGE GIBSON: Municipal --

19 MR. FRANTZ: Municipal utility --

20 JUDGE GIBSON: Yes.

21 MR. FRANTZ: -- municipal utility is
22 basically a utility, such as in our case, San Antonio,
23 that generates or sells power within its own service
24 area for that city.

25 JUDGE GIBSON: And baseload power?

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1 MR. FRANTZ: Baseload power is basically
2 a plant that runs more or less continuously except for
3 cases where you have planned outages, for example, for
4 refueling, or where you have unintended outages. But
5 it is basically a plant that produces power on a
6 continuous basis.

7 JUDGE GIBSON: Okay. Thank you.

8 Now if I understand your explanation of
9 the Clinton decision, it is predicated on the notion
10 that wind, solar, and energy conservation cannot serve
11 an Applicant's goal of generating base -- that if they
12 can serve the Applicant's goal of generating baseload
13 power, then the Applicant doesn't need to consider
14 those alternatives underneath it.

15 MR. FRANTZ: That's correct.

16 JUDGE GIBSON: Is that -- is that your
17 understanding of --

18 MR. FRANTZ: Yes.

19 JUDGE GIBSON: -- of the Clinton decision?

20 MR. FRANTZ: That's correct. Or they're
21 not -- I guess more precisely, they are not reasonable
22 alternatives. And, therefore, for example, an
23 environmental report can have a very short discussion
24 explaining why they are not reasonable. And that's
25 the end of the discussion.

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1 JUDGE GIBSON: And in your estimation, it
2 makes no difference whether the reactor is a merchant
3 plant, a regulated plant, or a municipal plant --

4 MR. FRANTZ: That is correct.

5 JUDGE GIBSON: -- with respect to the
6 Clinton decision, correct?

7 MR. FRANTZ: Yes. It wasn't quite as
8 clear in the Court of Appeals decision but it was very
9 clear in the Commission decision that they rejected
10 these alternatives because they could not produce
11 baseload power.

12 And then that Clinton decision has been
13 subsequently applied to the Summer COL application.
14 And the Applicant in Summer is a utility. And so it
15 is very clear that it has been applied well beyond
16 just a merchant generator.

17 JUDGE GIBSON: Okay.

18 Does staff have anything to add to the
19 explanation of the Summer case, regulated utilities,
20 and baseload power analysis we've just discussed?

21 MR. BIGGINS: The one point I would add,
22 Judge, is it is not so much necessary to look at the
23 characteristics of the proposed owners of the plant as
24 compared to looking at the proposed purpose of the
25 plant itself.

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1 In other words, if this plant were
2 proposed solely by a public utility, you know, it is
3 possible there may be other considerations to take
4 into account.

5 But the purpose of the proposed plant, the
6 proposed federal action in this case, we're looking
7 more at the purpose and need as stated by the
8 Applicants to generate baseload power at the level
9 that they are talking about.

10 And with that being the stated purpose and
11 need for this plant, that is what the staff would
12 defer to rather than how a potential owner might be
13 characterized because in reality, you can have various
14 kinds of owners for these plants.

15 And so looking in detail at, you know, the
16 nature of each of those owners doesn't give you the
17 broader picture of what the purpose for this proposed
18 plant is.

19 JUDGE GIBSON: Okay. Okay. You have
20 heard the explanation for the legal position of the
21 Clinton decision, about how the staff use it, and how
22 the Applicant use it. Now we can get into the
23 specific contingents in a minute, the implications for
24 baseload power, and consideration of alternatives.

25 But just with respect to the legal

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1 decision itself; is there anything that you wish to
2 dispute or add about what has already been said?

3 MR. EYE: Thank you, Your Honor, yes. The
4 underlying issue in the Clinton decision is whether or
5 not the NRC's rule was reasonable.

6 And to the extent that the NRC has adopted
7 a rule that was affirmed in the Seventh Circuit
8 decision, that still doesn't necessarily answer the
9 question whether that rule is consistent with the
10 public's interest and whether or not the rule,
11 therefore, is in compliance with the Atomic Energy
12 Act's requirements that these licenses be issued
13 consistent with the public's interest.

14 So the underlying administrative decision
15 was still a decision made by the NRC, obviously
16 affirmed by the Seventh Circuit.

17 But still it doesn't necessarily answer
18 the question whether today, in this adjudication, it
19 is consistent with the public's interest to engage in
20 the kind of analysis that the Applicant has done to
21 exclude alternatives.

22 So just in terms of trying to respond to
23 your narrow question, that would be what we would
24 offer.

25 JUDGE GIBSON: Okay. And so you might --

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1 you don't necessarily -- you certainly don't agree
2 with the reasoning of the Clinton decision and believe
3 that we should consider other things. Is that right?

4 MR. EYE: Well, moreover, the Clinton
5 decision, I think, was a 2006, I believe -- 2005 --
6 when was the Clinton decision?

7 JUDGE GIBSON: 2006 according to the
8 citation.

9 MR. EYE: Okay. Thank you. Since 2006,
10 we've had various kinds of advancements in terms of
11 looking at alternatives.

12 And just recently, Chairman Willinghoff of
13 the Federal Energy Regulatory Commission announced
14 that in his judgment, there was no need to build
15 another baseload coal- or nuclear-fueled unit in the
16 country.

17 And again, this is a little bit like
18 Secretary Chu's comments. Do they have legal force
19 and effect? Well, no. But on the other hand, are
20 they to be disregarded? Are they to be assumed that
21 they came with no basis of reliable information? I
22 don't think that's reasonable either.

23 So it is the events on the ground that are
24 transpiring rather rapidly both in terms of the policy
25 -- underlying policy considerations as articulated by

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1 Chairman Willinghoff and by the fact that there are
2 changes in terms of availability of alternative
3 technologies and the costs related thereto.

4 Plus the escalating costs of the power
5 plants or of the units that the Applicant is
6 proposing.

7 So these are fluid kinds of
8 considerations. And in that regard, I think the
9 fluidity of that is -- if you want to measure it
10 against what the Atomic Energy Act requires, it is to
11 say irrespective of what the Seventh Circuit may have
12 said in Environmental Law and Policy Center against
13 the NRC, let's take a look at what the circumstances
14 are today.

15 And certainly with the kind of observation
16 that Chairman Willinghoff made, it should give us
17 reason to back up and pause and ask the question is
18 there a need for this. Or are there alternatives that
19 fill the gaps sufficiently that we can avoid all of
20 the environmental and public health implications with
21 building a 2,600-plus additional megawatts of nuclear
22 capacity.

23 JUDGE GIBSON: Okay. Thank you.

24 Yes?

25 MR. FRANTZ: The Petitioners have

1 repeatedly referred to--42 USC 2133-- which is the
2 Section 103 of the Atomic Energy Act. And have
3 claimed that there is some public interest provision
4 in that section. That is just false. There is no
5 public interest provision in Section 103 of the Atomic
6 Energy Act.

7 The provision states that the license for
8 a nuclear power plant has to be considered with
9 respect to the health and safety of the public. It
10 does not refer to public interest.

11 There are numerous case law out there that
12 states that the Atomic Energy Act applies to
13 radiological safety. It does not apply to other kinds
14 of environmental issues.

15 I refer the Board to New Hampshire v. AEC,
16 at 406 F2d 107. And so their entire line of argument
17 is just fallacious. The Atomic Energy Act does not
18 apply to environmental issues like this. Instead this
19 is a NEPA issue and the Court of Appeals has ruled on
20 the NEPA issue.

21 JUDGE GIBSON: Okay.

22 MR. EYE: Well, Your Honor, actually the
23 case that counsel cited, I believe and I'm actually
24 looking for it now, but I think it said that if the
25 need for power can't be established and it is

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1 inconsistent with the NRC's obligations to issue a
2 license related thereto, that was back in the Seabrook
3 era. And that case said that there was an obligation
4 to establish need for power and if they couldn't -- I
5 think the term was issuing a license would be
6 problematical.

7 So there is an underlying public interest
8 consideration in 2133(d). How else can we read public
9 health and safety? And if we want to put those in the
10 context of NEPA, we know that those kinds of terms are
11 construed very broadly to include everything from
12 economic, to cultural, to environmental justice
13 considerations.

14 So I think that those two statutes ought
15 to be read so that they are compatible rather than --

16 JUDGE GIBSON: Are you talking about NEPA
17 and the Atomic Energy Act?

18 MR. EYE: Correct.

19 JUDGE GIBSON: Okay. Okay. Fair enough.
20 I think we've had a good discussion of the legal
21 issues involved in the Clinton decision and what it
22 means for our discussion. Appreciate that.

23 Counsel for the Petitioners, I would like
24 to get your view of what support you can provide for
25 us that the Applicant should consider solar power,

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1 wind power, energy storage, and energy conservation as
2 a currently viable method of generating baseload
3 power.

4 MR. EYE: Well, again, the rather recent
5 observation by Chairman Willinghoff certainly is a
6 kind of policy overview that I think should get some
7 consideration here. And, again, it's not as if
8 Chairman Willinghoff is speaking on behalf of the
9 Petitioners or other environmental groups or public
10 interest groups.

11 JUDGE GIBSON: I think it would be fair to
12 say the Department of Energy has made our lives very
13 interesting by some of their statements. But go
14 ahead.

15 MR. EYE: I agree. Interesting but I
16 don't think anybody has said that this was an
17 irresponsible comment.

18 JUDGE GIBSON: No, no, I didn't say that.

19 MR. EYE: Right.

20 JUDGE GIBSON: I didn't say that.

21 MR. EYE: I know. And I'm not saying
22 that.

23 JUDGE GIBSON: I just said they made our
24 lives interesting, that's all.

25 MR. EYE: Actually, I was sort of

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1 anticipating what others might say about it.

2 So in terms of answering your question,
3 however, the idea that there are means by which to
4 supply baseload energy other than large centralized
5 generating units like that which is proposed here, is
6 thoroughly fleshed out in various sources, including
7 Dr. Makhijani's analysis related to San Antonio, that
8 I think is a template that can be used to determine
9 whether there ought to be more analysis by the
10 Applicant here of looking at alternatives to supply
11 baseload energy.

12 The default position of the Applicant is
13 to go to a large centralized generating unit and make
14 the assumption that all others are inadequate to
15 supply their baseload generating needs.

16 And, again, I think as Dr. Makhijani
17 points out, there are means by which to fill this gap
18 with the alternatives that are not experimental, that
19 are ready to come off the shelf and be implemented
20 now. They're not something that we need to wait for
21 for further development to deal with.

22 And I think it was almost prophetic in a
23 way. A couple of weeks ago, driving between Austin
24 and Granbury, Texas, in anticipation of Comanche Peak
25 oral arguments, what do we see on flatbed trucks

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1 heading--south--or, I mean, heading north from
2 probably being offloaded in Galveston or someplace,
3 wind generator components.

4 Each one of those components represents
5 one more reason why this plant is less viable. Each
6 one of those is adding capacity to renewables and
7 adding capacity that can then be tapped in to by this
8 Applicant or others to supply baseload generating
9 capacity.

10 Are there issues with intermittency? Yes.
11 But there are issues with nuclear fired plants that,
12 as we've covered in the last day and a half or so,
13 that also, we would argue, preclude its effective
14 implementation.

15 And it is an apples and oranges. Is the
16 problem with no place to take spent nuclear fuel that
17 same thing as intermittency? They are two completely
18 different kinds of problems, of course. But one, the
19 intermittency problem with wind is rapidly being
20 overcome contrasted with spent nuclear fuel
21 disposition, we're stalled at the starting line.

22 So again, I couldn't help but sort of
23 reflect on, you know, heading to this hearing and yet
24 seeing the future as demonstrated by those particular
25 components that were being -- that are probably by now

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1 probably already assembled and perhaps ready to be put
2 into service.

3 But the idea that somehow nuclear
4 currently supplies -- the term 20 percent or the
5 quantity 20 percent is frequently used -- its share of
6 total generating capacity is shrinking as time goes
7 along as every wind generator that is erected goes
8 into operation, as every photovoltaic panel that is
9 put into operation goes into operation or goes into
10 service, it expands renewables share. And by
11 implication, is making nuclear less important. And
12 showing the viability of renewables. This isn't pie
13 in the sky.

14 You know when California decided to adopt
15 the Million Solar Roof Program people kind of waved
16 their arms and said oh, that's not viable. They're
17 doing it. Even in a situation where their overall
18 economy is in dire straits, they are still going ahead
19 with this.

20 Look overseas, Germany, phasing out its
21 nuclear capacity in favor of northern latitude even --
22 PV and wind.

23 So the -- and I think it is instructive
24 that the environmental report of the Applicant
25 acknowledges that if you just took wind in isolation,

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1 it might not be enough to supply base load capacity.

2 But when you start talking about
3 alternatives in combination, even the Applicant says
4 that when you group these together, it is conceivable
5 -- their words -- "it is conceivable that a mix of
6 alternatives might be cost effective and may also
7 provide for a better environmental solution."

8 So it is within the realm of possibility.
9 It's the default position that is really, I think,
10 impeding any kind of meaningful discussion in the
11 context of the environmental report.

12 And, again, we've got a good site-
13 specific, municipal-specific example to look at as far
14 as San Antonio.

15 JUDGE GIBSON: Okay, we'll get that in a
16 minute.

17 MR. EYE: All right. Okay.

18 JUDGE GIBSON: It sounds, you know, you've
19 give us a lot of information. But it sounds to me
20 like most of what you gave us was factual reasons for
21 why these alternatives are viable and should be
22 considered.

23 In terms of legal authority that would
24 contradict in any way the Clinton decision, do you
25 have any of that?

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1 MR. EYE: 42 USC 2133 (d).

2 JUDGE GIBSON: Okay.

3 MR. EYE: And the case -- well, I'll give
4 you the citation for it and then I'll find it.

5 JUDGE GIBSON: You can give us the cite in
6 a minute. That's fine.

7 MR. EYE: I'd be happy to.

8 JUDGE GIBSON: I don't want to, you know,
9 put you on the spot. I'm sure you can find it for us
10 later.

11 MR. EYE: Right.

12 JUDGE GIBSON: Okay. While he is looking
13 for that, one of the things that the Petitioners have
14 sought is to have a comparison of nuclear plants with
15 wind and solar plants in terms of mortality and
16 morbidity. And you have resisted making that
17 comparison and have cited the Bellefonte decision in
18 support of it.

19 What is it about the Bellefonte decision
20 that you feel mandates us to reject this contention
21 with respect to mortality and morbidity?

22 MR. FRANTZ: Essentially the same argument
23 was raised by the Petitioners. In that case, the
24 Board rejected it on the grounds that there was no
25 legal requirement to have such a side-by-side

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1 comparison of mortality and accidents. Obviously
2 that's another Licensing Board decision. It's
3 persuasive but it's not controlling on this Board.

4 But more importantly, even if you would
5 have a side-by-side comparison, there is no indication
6 that nuclear would fare poorly on that. For example,
7 we do look in detail at accidents in Chapter 7 of our
8 environmental report. We show that the environmental
9 impacts of accidents is small. The smallest and
10 lowest category of impacts.

11 So, therefore, even if we did a side-by-
12 side comparison of nuclear with alternatives, nuclear
13 would be equally preferable to any alternative they
14 could come up with.

15 JUDGE GIBSON: So you could probably do
16 that data? You just didn't do it?

17 MR. FRANTZ: Yes. And other Boards have
18 ruled -- I think the Commission has ruled the Boards
19 are not here to fly speck the environmental reports.

20 JUDGE GIBSON: No.

21 MR. FRANTZ: You know, there's a lot of
22 ways you can write these things. But as long as the
23 results don't change, there is not reason for the
24 Board to force a rewriting of our environmental
25 report.

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1 JUDGE GIBSON: -- Do you -- is it your
2 assessment of the Bellefonte decision that that was
3 based on -- the rejection of that contention was based
4 on the fact that it is inherently inadmissible? Or
5 because of the poor draftsmanship by the Petitioners
6 in that case?

7 MR. FRANTZ: I think there is a little bit
8 of both. It was definitely poor draftsmanship and
9 lack of support. But also I think the fact that there
10 is no legal requirement to have a side-by-side
11 comparison on this issue.

12 JUDGE GIBSON: Okay.

13 MR. FRANTZ: I also would respond to
14 something that the Petitioners had raised, they have
15 raised a lot of new factual statements, none of it
16 appear in their Petition to Intervene. And we already
17 have one motion to strike their reply that has new
18 information.

19 The same arguments apply to a lot of
20 statements by Counsel just recently. Again, if he has
21 facts to support his contention, he should have had
22 that initially. He doesn't have that in his initial
23 Petition to Intervene.

24 He does refer to the report by Dr.
25 Makhijani but if you look at that report, there is

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1 essentially no mention of alternatives for producing
2 baseload power.

3 The only think he even comes close to
4 mentioning is solar plus use of molten salt to store
5 energy. But even there he doesn't contend that that
6 is economically viable.

7 And, in fact, if you look at the
8 contention itself on page 56, it shows that the use of
9 solar power in conjunction with molten salt has twice
10 the cost of producing electricity for nuclear power.

11 JUDGE GIBSON: Right. And we'll get into
12 the specific alternatives. But I want to go to the
13 staff now and see if they have an opinion about the
14 mortality and morbidity --

15 MR. BIGGINS: Certainly.

16 JUDGE GIBSON: -- comparing nuclear with
17 some of these alternative energies or renewable, I
18 guess, energy sources. And whether or not, in the
19 staff's estimation, that is an inherently inadmissible
20 contention or whether the Bellefonte decision rejected
21 that contention simply because of poor draftsmanship.
22 And if you don't know, it's okay.

23 MR. BIGGINS: Well, no, Judge, I think I
24 would agree. It may have been a little bit of both.
25 And so if the contention in this case were better

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1 drafted or better-supported; you know, this Board
2 could determine that such an analysis would be
3 necessary.

4 But there is a hurdle you have to get over
5 before you even reach that. Whether you are looking
6 at mortality and morbidity as a basis for comparing
7 alternatives or any other basis for that matter, that
8 detailed analysis does not have to be done until you
9 can reach the conclusion that the suggested
10 alternative would meet the purpose and need of this
11 proposed action.

12 And --

13 JUDGE GIBSON: Would you say that again?
14 That sentence? I'm sorry.

15 MR. BIGGINS: Certainly. A detailed
16 analysis is not necessary until the suggested
17 alternative could meet the purpose and need of the
18 proposed action.

19 If it cannot meeting the purpose and need
20 of the proposed action, it can be dismissed without a
21 detailed analysis. And I believe an examination of
22 mortality and morbidity would be part -- or could be
23 part of that detailed analysis.

24 So to the extent that the Petitioners say
25 this detailed analysis needs to be done or this

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1 analysis of morbidity and mortality needs to be done,
2 they fail to get over that initial hurdle of showing
3 that any of these alternatives that they want to be
4 compared on that basis would even meet the purpose and
5 need here.

6 JUDGE GIBSON: So you are saying
7 essentially they are putting the cart before the
8 horse? You've got to establish first of all that that
9 is a viable alternative before you would then need to
10 go to the detail of analyzing mortality and morbidity?

11 MR. BIGGINS: I believe that is what NEPA
12 requires.

13 JUDGE GIBSON: Okay.

14 MR. BIGGINS: Yes.

15 JUDGE GIBSON: Okay, that is what you are
16 saying. Okay.

17 On page 106 and 107 of the Applicant's
18 answer, the Applicant notes that catastrophic
19 accidents are addressed generically in the
20 regulations. And cite to Table B1 of Appendix B to 10
21 CFR Part 51. That's essentially the argument you are
22 making, right?

23 MR. FRANTZ: It's a little bit more
24 complex than that.

25 JUDGE GIBSON: Okay. Well, what I want to

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1 get to and you can amplify on this but let me just
2 make sure you understand what my question is.

3 I'm trying to figure out if your argument
4 is that this contention is an impermissible attack on
5 those regulations or are you merely saying that they
6 have poorly drafted their contention and so it cannot
7 be admitted on that basis?

8 MR. FRANTZ: We are not saying that this
9 is an attack on the regulation.

10 JUDGE GIBSON: Okay.

11 MR. FRANTZ: What we're saying is that the
12 Commission for License Renewal has generically
13 determined that the risks of severe accidents -- the
14 impacts of severe accidents are small. And what we've
15 calculated for our plant is even less than what was
16 assumed for license renewal. And, therefore, we
17 believe our impacts are also small.

18 We're reasoning it as support and not as
19 a legal argument. It's more of a factual support.

20 JUDGE GIBSON: Thank you for that
21 clarification. I appreciate that.

22 I take it the staff views it the same way?
23 That this is not something that one cannot draft a
24 contention to challenge? This is not forbidden by the
25 regs?

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1 MR. BIGGINS:--As the license renewal GEIS,
2 to the extent that environmental issues have been
3 analyzed and reviewed before NEPA and CQ regulations
4 encourage an agency to use that prior analysis. But
5 the staff would not argue that that analysis
6 specifically would constitute an attack on a rule or
7 a regulation in this case in this contention.

8 So we would say that the Applicants can
9 use it and rely on it. But they are going to have to
10 show how it is applicable to their application.

11 And to the extent that a Petitioner
12 disagrees with the use of that information or the
13 conclusions relating to this particular application,
14 we would not consider that an attack on the rule.

15 JUDGE GIBSON: Okay. Thank you.

16 Okay, with that context, the only homework
17 -- why don't we take a break for lunch for an hour.
18 The only homework we've got, I think, is if you can
19 find that cite for us, that would be great.

20 MR. EYE: Okay.

21 JUDGE GIBSON: And if you could give that
22 to us when we reconvene. And is an hour going to be
23 okay for everybody?

24 PARTICIPANT: Yes.

25 JUDGE GIBSON: Okay. Great. All right.

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1 We will reconvene ~~in an hour~~

2 (Whereupon, the foregoing
3 matter went off the record at
4 12:17 p.m. to be reconvened in
5 the afternoon.)
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A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

1:19 p.m.

1
2
3 JUDGE GIBSON: Let's go back on the
4 record. Continuing with contention 23, the Applicant
5 says that it has addressed biomass in sections
6 9.2.2.3.5 of the Environmental Report. Could you
7 please described for us, counsel for the Petitioners
8 what you deem to be inadequate about the Applicant's
9 analysis of biomass?

10 MR. EYE: Excuse me. Both the
11 availability of it as a baseload and the extent to
12 which it could be used. I think Applicant contends it
13 on both sides that it is not a practical fuel to count
14 on for their generation purposes. And according to
15 the information that we have generated, the biomass --
16 we are not suggesting it could replace necessarily
17 other baseload capacity by itself but certainly as a
18 component.

19 Our contention here is that we are not
20 going to replace nuclear with one particular
21 technology. It is going to have to be a number of
22 different alternatives that are all working toward the
23 objective replacing their proposed larger baseload
24 unit.

25 So our criticism of their plan really goes

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1 to the relative short, relatively limited capacity
2 that they claim that it would represent. And that if
3 carried out further, it is that the same sort of lack
4 of a side-by-side cost comparison, for example,
5 between biomass and nuclear needs to be done to
6 determine really whether it is a viable alternative.

7 But it is in general the assumption that
8 it is not necessarily a viable means by which to make
9 a contribution to their baseload needs.

10 JUDGE GIBSON: And two questions I have.
11 First of all, is biomass dependent upon having some
12 kind of a storage device liked we talked about
13 earlier?

14 MR. EYE: It is not per se dependent upon
15 storage. To the extent that biomass is a boiler fuel,
16 then it would not necessarily need a means by which to
17 store the energy that it either generates or that it
18 depends on as a fuel.

19 JUDGE GIBSON: As we would with wind.

20 MR. EYE: Correct.

21 JUDGE GIBSON: Okay. Now, and what sort
22 of carbon emissions does biomass have?

23 MR. EYE: It depends on the fuel. There
24 are some.

25 JUDGE GIBSON: Irrespective of whether

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1 there ~~are going to be~~ more than there are with
2 nuclear, I assume?

3 MR. EYE: Presumably. But again, without
4 quantifying the total UFC.

5 JUDGE GIBSON: Right.

6 MR. EYE: I think that is the
7 qualification that needs to be done to get a good
8 comparison with biomass or any other CO₂ emitting.
9 There are some. And again, some of this is going to
10 be dependent upon how efficient these units run and
11 whatever carbon capture methods might be used to
12 minimize those emissions.

13 JUDGE GIBSON: Okay. And carbon
14 sequestration would be, again, something that people
15 are in the process of trying to develop but have not
16 been successful in putting in off-the-shelf technology
17 that you could use on a cost-effective basis right
18 now.

19 MR. EYE: Not at this point.

20 JUDGE GIBSON: Okay.

21 MR. EYE: Your Honor, one other aspect of
22 this is is that there is an offset in terms of the use
23 of biomass because, offset of carbon emissions because
24 the plant material that is used is also a carbon
25 absorber or a CO₂ absorber. So there is an offset in

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1 terms -of-that when-you burn the biomass but at the
2 same time you are growing plants out there to supply
3 the fuel. So there is a carbon sink opportunity in
4 terms of the biomass growth, materials themselves.

5 JUDGE GIBSON: Okay, now in the scenario
6 that you are trying to put forth here, you are
7 suggesting that a combination of these renewable
8 energy resources needs to be undertaken as an
9 alternative. What percentage of that mix of fuels is
10 biomass in your proposal? And if you don't have a
11 specific number, at least give me a range.

12 MR. EYE: Yes, I have to look at -- my
13 memory is that it is something less than 20 percent.

14 JUDGE GIBSON: Okay.

15 MR. EYE: Subject to check, if I can.

16 JUDGE GIBSON: Sure.

17 MR. EYE: Your Honor, I don't know that we
18 did a specific quantification other than to put it in
19 the mix of other renewables. The less than 20 percent
20 may have been another reference --

21 JUDGE GIBSON: Okay.

22 MR. EYE: -- that I remember seeing in
23 another document.

24 JUDGE GIBSON: Fair enough. I just was
25 wondering what percentage.

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1 MR. EYE: -- If I find it, I will --

2 JUDGE GIBSON: Right.

3 MR. EYE: -- I will tell you.

4 JUDGE GIBSON: Okay. Now, next,
5 geothermals. The Applicant says that it did not
6 address geothermal because it is infeasible in light
7 of the absence of potential sources in this area. Are
8 you aware of any viable sources of geothermal energy
9 in this area?

10 MR. EYE: My understanding is that there
11 are many geothermal resources scattered throughout
12 Texas.

13 JUDGE GIBSON: Well, there certainly are
14 in Texas but Texas, as you probably know, is a rather
15 large state. So, in this area, what is the closest
16 one to here that you are aware of?

17 MR. EYE: Can I speak with my --

18 JUDGE GIBSON: Sure. And I bet the NRC
19 will not lodge an objection to your doing so.

20 MR. BIGGINS: We will not, Judge.

21 MR. EYE: Your Honor, it basically
22 corresponds with the Lignite coalbelt, which is
23 primarily between here and Austin. It is an arc that
24 extends, like I said, between here and Austin but then
25 also goes north of Austin toward Dallas. So, it is

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1 not, I am not going to tell you it is around the block
2 but it is not that far off.

3 JUDGE GIBSON: Okay. All right, now, you
4 all concluded that there was none within this area.
5 You have heard what they have alleged to be geothermal
6 sources. Could you please provide us with your
7 perspective on this?

8 MR. FRANTZ: Yes. And also, I would like
9 to address biomass, too. With respect to geothermal -

10 -
11 JUDGE GIBSON: Okay, you can address
12 biomass, too, but let's start with geothermal. Okay?

13 MR. FRANTZ: We will start with geothermal
14 first. We have not alleged that there is no
15 geothermal in Texas. What we have alleged is that
16 there is no shallow geothermal in Texas and it is the
17 shallow geothermal which is really used currently for
18 commercial geothermal plants elsewhere in the country.
19 There currently is no commercial geothermal in Texas
20 for this very reason. All the geothermal sources are
21 deep in the ground and it is not currently
22 commercially viable to develop that source.

23 With respect to biomass, they have simply
24 mischaracterized our Environmental Report. Contrary
25 to their statements, we never rejected biomass on the

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1 grounds of it can't produce baseload power or it is
2 availability in the state. In fact, we assumed that
3 it can produce baseload power. We assumed that it was
4 fully available to supply all the needed baseload
5 power that we have for South Texas.

6 We rejected biomass on the grounds of its
7 environmental impacts. It wasn't environmentally
8 preferable to nuclear, given the gaseous emissions
9 from the plant and also the huge land demands that
10 would be needed feed a biomass facility.

11 JUDGE GIBSON: Okay. Do you understand
12 that their concern is that geothermal resources exist
13 in Texas but are not available as a commercial energy
14 source because they are at such a depth that it would
15 not be possible to tap them in a commercially viable
16 way?

17 MR. EYE: I understand what they are
18 saying.

19 JUDGE GIBSON: Do you dispute that?

20 MR. EYE: Say again?

21 JUDGE GIBSON: Do you dispute that?

22 MR. EYE: Well yes, to the extent that
23 geothermal is come into contact with anytime, well
24 many times when oil and gas wells are drilled. And to
25 the extent that it can be tapped at that point, then

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1 it doesn't seem--like the depth would make much
2 difference in terms of its commercial availability.
3 So yes, we would dispute that there is a lack of
4 geothermal capacity at a depth that would make it
5 commercially viable. Yes, we would dispute that.

6 At least the State Energy Conservation
7 Office has undertaken a review of geothermal capacity
8 and they found that there is an abundance of
9 geothermal in the State of Texas. And yes, it is at
10 varying depths. I don't know that you can say
11 otherwise. It depends on the location of where it is
12 tapped.

13 But on the other hand, depth in and of
14 itself might make it incrementally more expensive just
15 in terms of how far one has to drill down but I don't
16 know that that would make it by itself cost
17 prohibitive.

18 JUDGE GIBSON: Are you aware of any
19 geothermal energy being commercially generated in the
20 State of Texas, as of right now?

21 MR. EYE: Could you give me just a second?

22 JUDGE GIBSON: Sure.

23 MR. EYE: Currently, we don't know of any
24 that are in commercial operation. The geothermal
25 applications have primarily been on smaller scale for

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1 heat pumps and other auxiliary applications, Your
2 Honor.

3 JUDGE GIBSON: Okay, thank you. In your -
4 - on page 108 of the Applicant's answer, they pointed
5 out what they believe to be a couple of errors in your
6 Petition. I would like to try to get the record
7 clarified because I didn't see anything in your reply
8 about this.

9 Did you mean the Texas Bureau of Economic
10 Geology instead of the Texas Bureau of Geology?

11 MR. EYE: Yes.

12 JUDGE GIBSON: Okay. Is the webpage that
13 you cite sponsored by the Good Company Associates or
14 by the Texas Bureau of Economic Geology?

15 MR. EYE: I believe it is the Good Company
16 Associates is the reference.

17 JUDGE GIBSON: Is the Good Company
18 Associates an authoritative source of expert
19 information about geothermal energy in Texas?

20 MR. EYE: One moment. Your Honor, two
21 responses on that. One, as I understand it, the Texas
22 Bureau of Economic Geology does rely on it. And it is
23 acknowledged that the Good Company is a trade group
24 that represents geothermal interests.

25 JUDGE GIBSON: Okay.

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1 MR. EYE: Now, I don't know that that
2 renders it necessarily unreliable.

3 JUDGE GIBSON: Fair enough. Thank you.

4 Next, the Applicant's answer asserts that
5 it has no legal obligation to provide a side-by-side
6 comparison of quantified costs between nuclear and
7 alternatives. Can you provide us with any legal
8 authority for why the Applicant must provide a side-
9 by-side comparison?

10 MR. EYE: Practicable alternatives should
11 be considered in the course of NEPA is one legal
12 authority. And these are practicable to the extent
13 that they fall into that category. Then they have got
14 a legal obligation to do a comparison. The form of
15 the comparison side-by-side or some other narrative
16 kind of comparison, it is -- we are looking for
17 function rather than form here, Your honor. I don't
18 want to constrain the analysis by some sort of graphic
19 limit.

20 JUDGE GIBSON: Okay.

21 MR. EYE: But is more taking into account
22 these alternatives that are available in making the
23 comparison accordingly.

24 JUDGE GIBSON: Well, if a side-by-side
25 comparison is not required, the Applicant has

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1- essentially said that they did provide the basic
2 information to you in 9.2 and 10.4.2 of the
3 Environmental Report.

4 Now, what is inadequate about the cost
5 information that they provided in those two provisions
6 of the Environmental Report?

7 MR. EYE: As I recall, I don't remember.
8 May I have just a moment to look at that, Your Honor?

9 JUDGE GIBSON: Sure. Sure, that is fine.

10 MR. EYE: Could you give us the citation?

11 JUDGE GIBSON: 9.2 and 10.4.2.

12 MR. EYE: Your Honor?

13 JUDGE GIBSON: Yes?

14 MR. EYE: I think where we see the
15 deficiency is that there is no cost of nuclear that is
16 pegged to compare it to or to compare these others to.

17 So, that is the gap.

18 JUDGE GIBSON: So they did provide you
19 with the cost information for the other sources but
20 they didn't provide you with a nuclear and so you
21 can't really compare them together. Is that what you
22 are saying?

23 MR. EYE: Yes.

24 JUDGE GIBSON: Could you -- the
25 petitioners were unable to find that information. Did

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1 --you provide it?-- And if so, could you please let us
2 know where it is so that they can see where it is?

3 MR. FRANTZ: Yes.

4 JUDGE GIBSON: Thank you.

5 MR. FRANTZ: The environmental report,
6 Section 10.4.2, which I believe you cited, --

7 JUDGE GIBSON: Yes.

8 MR. FRANTZ: -- has information on the
9 construction cost, which is 10.4.2.1. It has
10 information on operating costs, which is section
11 10.4.2.2. And all of that then is summarized in Table
12 10.4-2, where we provide both the construction costs
13 and operating costs, including a levelized cost of
14 electricity for nuclear.

15 JUDGE GIBSON: Okay.

16 MR. EYE: Your --

17 JUDGE GIBSON: Hold on just a minute.
18 Now, that is their explanation of where the
19 information is. Do you see where that is?

20 MR. EYE: I see that.

21 JUDGE GIBSON: Okay. Now, do you find
22 that to be inadequate to provide you with information
23 about the costs?

24 MR. EYE: We need all in costs.

25 JUDGE GIBSON: All in costs?

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1 MR. EYE: All costs related to
2 construction costs and operating costs. But does that
3 include financing, debt service, and we still, I think
4 that some of the costs that aren't totally quantified
5 here had to deal with the back end fuel cycle, for
6 instance, that are not part of this. Because they
7 don't know them.

8 So, in that regard, we really have no idea
9 how much head room they have really got on some of
10 their costs. But the construction costs that they
11 roll in here is 5.4 billion dollars, which I think
12 based upon industry estimates, generally, would be
13 pretty low.

14 And they estimate 517 million for
15 decommissioning one reactor which presumably they
16 would get some economies of scale by decommissioning,
17 too but exactly how much isn't specified.

18 But back in fuel cycle costs, whether they
19 have to get a Part 72 license, none of those costs are
20 quantified.

21 JUDGE GIBSON: Well, with respect to the
22 Part 72 license, I think we have already plowed that
23 ground. And I think the fact that they didn't include
24 it can at least be understood in the context of our
25 previous discussion about Part 72. Whether Part 72 is

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1 an issue before us or not is another matter. But the
2 point is I think their failure to address that at
3 least is understandable in the context of our previous
4 discussion about it.

5 Let me ask the Applicant if they could
6 address the other things he talked about, insofar as
7 whether they are included in those costs and if they
8 are not, why not.

9 MR. FRANTZ: I believe they are included
10 in the costs. Obviously, we do know the
11 decommissioning costs, for example. That is part of
12 what we have to provide under the NRC regulations.
13 And in fact, the decommissioning costs are actually
14 provided on page 10.4-7. We estimate those to be 517
15 million dollars. So we definitely have accounted for
16 decommissioning costs, for example.

17 Let me check with my client on the costs
18 of interest. I believe that is also included here but
19 I want to confirm that.

20 JUDGE GIBSON: Fine.

21 MR. FRANTZ: We understand that it does
22 include costs of money during construction.

23 JUDGE GIBSON: Okay. Thank you very much.

24 Now, just to sort of close the loop here,
25 when the staff receives an application, it does a

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1 completeness review. One of the things it looks at is
2 whether the cost information is included as required
3 by the rules. Has that kind of determination been
4 made?

5 MR. BIGGINS: Judge, that determination
6 was made at the time that we docketed the application.
7 And we believe that they submitted the information
8 necessary for docketing and we did docket the
9 application. So, yes.

10 JUDGE GIBSON: Okay. And the petitioners
11 expressed some concern that perhaps all of that
12 information was not provided. Applicant has provided
13 some additional information about what it says, if it
14 is not totally clear to the Petitioner. Is there any
15 doubt in NRC staff's mind that the Applicant has not
16 provided all of the information that was needed with
17 respect to cost?

18 MR. BIGGINS: I don't believe there is any
19 missing information. We did ask some requests for
20 additional information, if I remember correctly.

21 However, I would also note that some of
22 the information was proprietary at the time and was
23 not publicly available.

24 JUDGE GIBSON: Okay. Recognizing it
25 wasn't at the time, has that information been provided

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1 = to the Petitioners or made available to them in this
2 proceeding?

3 MR. BIGGINS: They did submit a SUNSI
4 access request, which was denied.

5 JUDGE GIBSON: So and is that with respect
6 to cost data, cost information?

7 MR. BIGGINS: I believe --

8 JUDGE GIBSON: That they weren't provided
9 with the cost information?

10 MR. BIGGINS: The original SUNSI request
11 submitted by the Petitioners, yes.

12 JUDGE GIBSON: Okay.

13 MR. BIGGINS: That was not a part of this
14 proceeding. So, I don't believe it is in the record
15 of this proceeding.

16 JUDGE GIBSON: Okay. But there has just
17 been a discussion -- that's okay, if you --

18 MR. BIGGINS: No, go ahead, Judge.

19 JUDGE GIBSON: There has just been a
20 discussion here about cost information. The Applicant
21 seemed to have been quite forthcoming about what was
22 there. I am just trying to understand if there was
23 some reason why if there was something material about
24 this cost information, that the Petitioners were not
25 provided with it.

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1 MR. BIGGINS: Okay, I believe it may have
2 been some details about construction costs.

3 JUDGE GIBSON: Okay.

4 MR. BIGGINS: And in addition to that, I
5 believe through other avenues some of that may have
6 become public --

7 JUDGE GIBSON: Okay.

8 MR. BIGGINS: -- since the filing of the
9 application.

10 And so I don't know to what extent that
11 was available at the time the Petition was filed but
12 there is some information obviously available in the
13 application upon which they can reference and rely in
14 forming petitions or contentions.

15 So there is some information available and
16 there were some details that were held proprietary.

17 JUDGE GIBSON: Okay. Now, I don't think
18 counsel is aware of the details of this information
19 that may have been proprietary and was not provided
20 that the Petitioners may not have had access to.

21 To the extent that it has any material
22 bearing on this, could you please let us know whether
23 or not the information they have is essentially they
24 would need to form a contention or if there is
25 something that is missing that they would need in

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1 - order to be able to do that?

2 MR. FRANTZ: Yes. We provided two sets of
3 cost information. We provided information on cost in
4 Part I of our application, which deals with our
5 financial qualifications. That is the information
6 that is proprietary and has been withheld from public
7 disclosure under Section 2.3.9.0.

8 With respect to the environmental
9 analysis, and that is what the Petitioners are
10 contesting here, we have provided our cost data in the
11 Environmental Report. That is not proprietary. That
12 is publicly available. And they had that at the time
13 they formulated their contentions. So they had
14 everything that they needed from an environmental
15 standpoint to formulate their contentions on this
16 issue.

17 JUDGE GIBSON: Okay. And --

18 MR. BIGGINS: Judge, I would like to
19 clarify for the record, you made the statement that I
20 may not be aware of the information that was held
21 proprietary. And I am aware of it because I did
22 review the SUNSI request itself.

23 JUDGE GIBSON: Okay. Well, it appeared
24 from your answer that you weren't certain of the
25 details and I thought the Applicant would be able to

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1 tell us what those details were.

2 MR. BIGGINS: The uncertainty is to what
3 extent the Petitioners may believe they need the
4 information. And the SUNSI request was actually
5 denied because they did not show a need for it.

6 So, that was the uncertainty or the
7 hesitation in my answer.

8 JUDGE GIBSON: Okay, fair enough.

9 So, it is your belief, and I take it the
10 Applicant's belief as well, that the Petitioners have
11 had access to all of the information, cost information
12 that they need in order to formulate their contention.
13 And the information they requested that you denied
14 that you have asked to be kept as proprietary is not
15 anything that could have any material bearing on this
16 contention that has to do with comparative cost.

17 Is that a fair assessment?

18 MR. BIGGINS: That is correct.

19 JUDGE GIBSON: Fair assessment?

20 MR. FRANTZ: That is correct.

21 JUDGE GIBSON: Okay. Now, you are welcome
22 to respond. I just wanted to be sure that we
23 understood what we are talking about here.

24 MR. EYE: Thank you, Your Honor. I
25 appreciate that clarification.

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1 We would point out that in one of the
2 attachments that we offered in support of this
3 particular contention was a report prepared by
4 Clarence Johnson and his summary of levelized busbar
5 costs at page 30, calls out the total cost of the
6 nuclear plants at somewhere between 26 and 28 billion,
7 which is obviously a good deal more. And these are
8 the BUSBAR costs of course.

9 JUDGE GIBSON: The what costs?

10 MR. EYE: That is everything in order to -
11 - that is the total amount of costs attributable to
12 generating the electricity at the nuclear plant.

13 JUDGE GIBSON: Well that is fine. But I
14 am just saying you used an acronym and I don't think
15 our court reporter could pick what in the world you
16 said. Okay?

17 MR. EYE: Right. Actually, it is one
18 word, busbar, B-U-S-B-A-R.

19 JUDGE GIBSON: Okay, thank you.

20 MR. EYE: So in terms of a comparison, we
21 had enough data from the Applicant to come up with
22 what they projected their costs to be. But using
23 other resources and information, the sources that we
24 projected were a good deal higher under the cost
25 scenarios that were taken into account.

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1 And once again, I think that this is a
2 situation where the Applicant makes assumptions about
3 costs that we think are optimistic in terms of both
4 construction costs and likely operation costs as well,
5 that once compared to that which we have developed,
6 are a great deal different and obviously a great deal
7 lower.

8 The point of course, being that if you
9 assume that the cost of nuclear power will be
10 considerably more than what has been projected by the
11 Applicant, other sources of generation become more
12 competitive, including, for example, the geothermal
13 that might be at a deeper depth that would cost
14 incrementally more to tap, for instance.

15 JUDGE GIBSON: Okay. Before we get into
16 levelized electricity, which we will get to in a
17 second, I would like for you to respond to the point
18 that he just made; which was that it appeared to him
19 that the numbers in this Johnson letter were different
20 than the numbers that you have in the environmental
21 report.

22 MR. FRANTZ: Those numbers are different.
23 I might point out that the contention itself really
24 refers to capital costs.

25 JUDGE GIBSON: Yes, and we will get to

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1 that in a minute. But I just want to understand what
2 is the reason why the numbers are different? I want
3 to make sure we understand that.

4 MR. FRANTZ: Mr. Johnson uses very
5 different assumptions regarding the initial costs.
6 Basically what he does is rather than analyzing a cost
7 for an ABWR which we are building, he just takes off
8 from the cost estimate based upon Florida Power and
9 Light's estimates for an AP1000, --

10 JUDGE GIBSON: Okay.

11 MR. FRANTZ: -- escalates those using
12 different assumptions on interest rates. And I think
13 that accounts for the larger portions of this cost
14 differential.

15 JUDGE GIBSON: Okay, fair enough. Thank
16 you. I just --

17 MR. BIGGINS: Judge, I would like to make
18 an additional clarifying point.

19 JUDGE GIBSON: Okay.

20 MR. BIGGINS: You in your question had
21 asked if they had submitted all of the financial
22 information that they needed to submit. I just want
23 to be very clear that the staff has not completed its
24 analysis, either safety or environmental at this
25 stage.

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1 So I cannot definitively say that we have
2 every piece of financial information. That was my
3 point with the RAIs that we necessarily would say they
4 have submitted everything we need to complete our
5 analysis. Again, referencing the docketing of the
6 application, I point out that they submitted the
7 information we felt was sufficient for docketing a
8 complete application.

9 JUDGE GIBSON: Basically the completeness
10 review that was conducted.

11 MR. BIGGINS: Yes.

12 JUDGE GIBSON: Okay. Fair enough. Fair
13 enough. I realize that there may be additional
14 information. It always happens in the course of
15 things. But okay, thank you for that qualification.

16 MR. EYE: Your Honor, is it fair to ask
17 what specifically counsel is referring to as far as
18 that which they are still analyzing? Because I think
19 it may have some bearing on, among other things, our
20 Contention 1. But I think it also goes to the process
21 itself. I mean, to the extent that the staff hasn't
22 completed its analysis, I don't know that it should be
23 anticipated that the Petitioners can do any better
24 than the staff does.

25 And in terms of the sequence of events, it

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1 would seem that once the staff has completed its
2 analysis, then we go forward with whatever the
3 Petitioners can do and so forth. Again, and I mean,
4 I think it is noteworthy.

5 And I appreciate counsel's candor about
6 that because there is kind of a supposition as we sit
7 here today that we are at a stage where all the
8 material information has been gathered, analyzed,
9 internally by staff, and that they are ready to
10 present it and either defend or criticize it. And
11 that is obviously not the case.

12 We know that there are a lot of RAIs that
13 are outstanding that probably fall in that category as
14 well. And I don't know whether other than the RAIs
15 that are outstanding, is there other information or
16 are there other inquiries that are being made by the
17 staff before it can say, yes, it has gathered all the
18 information it needs, analyze it and they are ready to
19 go forward in a comprehensive and complete way.

20 JUDGE GIBSON: Okay. I'll let counsel for
21 the NRC answer that in a second.

22 Before you answer the questions, I want to
23 just ask you to sort of bookmark this in terms of
24 there is sort of filling in the gaps material that is
25 not going to have any material bearing on anything.

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1 It is just a matter of making sure it is all there.
2 And new information that would be significant that
3 might give rise to the possibility that a new
4 contention might be filed in this case.

5 So could you sort of try to explain this
6 process, where you all are? You all have more things
7 to do I assume now that you have gotten the
8 Environmental Report and the Safety Report from the
9 Applicant. You all still have work to do on your end.
10 So, when you answer the question you have work to do
11 with respect to every facility in the country, whether
12 it is about to get a license or has already gotten
13 one, that it is a continuous review process.

14 I think the point here is though, and I
15 think what the Petitioner is interested in is could
16 you please explain where we are in this process for
17 purposes of the possibility that new information might
18 arise that might give rise a new contention.

19 MR. BIGGINS: Yes, certainly, Judge.

20 JUDGE GIBSON: Okay.

21 MR. BIGGINS: The nutshell version is
22 essentially that the staff's analysis cannot be
23 completed instantaneously upon the filing of an
24 application. And so there is some time before the
25 staff issues its two, essentially primary documents of

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1 review that EIS, the draft EIS and the Safety
2 Evaluation Report.

3 And the commission in its policies and
4 regulations has set out a process under part II
5 specifically and Part 52 as well that contentions are
6 to be raised primarily on the Application, not on the
7 staff's analysis to begin with. And only after those
8 staff documents are issued could a contention be
9 submitted based on new information in the staff's
10 analysis, either in the Safety Evaluation or in the
11 Environmental Impact Statement.

12 And so to the extent that the initial
13 contention period is delineated by the commission as
14 60 days from the date of docketing the application,
15 the commission also in 2.309 of 10 C.F.R. provides for
16 the eventuality that new information may become
17 available and new contentions can be raised under the
18 late filed contention requirements.

19 So, the contentions at this point, or the
20 requirement that any petitioner or potential
21 petitioner file contentions in relationship to the
22 Applicant's materials versus the staff's materials
23 does not essentially deprive a petitioner of the
24 process allowed under the Administrative Procedure Act
25 or the Atomic Energy Act, since they will have the

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1 ability to file contentions later under new
2 information.

3 JUDGE GIBSON: Okay.

4 MR. EYE: Thank you.

5 JUDGE GIBSON: So that is where we are in
6 the process. And to the extent that these other
7 things come up, you will be afforded an opportunity to
8 contest them at that point in time, if they do arise.

9 MR. EYE: I appreciate the clarification.
10 Thank you.

11 JUDGE GIBSON: Let's talk about levelized
12 costs of electricity because that came up earlier and
13 I think that may be important. So could you please
14 describe for us what the levelized cost of electricity
15 means and what impact it has for our analysis?

16 MR. FRANTZ: Levelized cost of electricity
17 is basically the cost of providing electricity from
18 the project. It includes the capital costs and those
19 are then treated through an economic analysis so that
20 you distribute the cost over time. It includes
21 escalation and interest rate factors and inflation
22 factors that you have to take into account. And
23 basically distributing the construction costs over the
24 lifetime of the plant. It also includes the cost of
25 generating power, the fuel costs. It includes other

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1 - costs such as the cost of decommissioning, which again
2 are spread out over time. And finally, it includes
3 costs such as the fuel disposal cost we must pay to
4 the U.S. Government to take our spent fuel. Those are
5 fixed costs.

6 JUDGE GIBSON: And it is your position
7 that it is the levelized cost of electricity and not
8 the capital costs of the facility that should be taken
9 into account in conducting this comparison of the
10 nuclear option versus these other options. Is that a
11 fair assessment?

12 MR. FRANTZ: That is correct. Every
13 project has differences in capital costs and operating
14 costs and it really isn't fair to just take one
15 component and doing a cost comparison. You need to
16 look at all of the factors and then generate the
17 levelized cost of energy or electricity.

18 JUDGE GIBSON: Okay. Now, you have heard
19 the position of the Applicant about why levelized cost
20 and not capital cost should be the basis for making
21 this comparison. Do you disagree with that? And if
22 so, why?

23 MR. EYE: Because capital costs represent
24 a major expenditure of resources. And it is not
25 reasonable to factor those in.

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1 JUDGE GIBSON: It is not reasonable to
2 factor the non-capital costs into this?

3 MR. EYE: No.

4 JUDGE GIBSON: I'm sorry. I don't
5 understand what you are saying. I'm sorry.

6 MR. EYE: All costs --

7 JUDGE GIBSON: Will you start over?

8 MR. EYE: Excuse me.

9 JUDGE GIBSON: Okay, thank you. I want to
10 understand why it is your position that the basis for
11 comparison should be capital costs and not levelized
12 costs.

13 MR. EYE: It should be both.

14 JUDGE GIBSON: It should be both. Okay,
15 I didn't understand you to say that.

16 MR. EYE: Right, it should be both.

17 JUDGE GIBSON: Okay. Why should it be
18 both instead of just levelized costs?

19 MR. EYE: Because excluding capital costs
20 excludes a very large expenditure of resources, for
21 whatever plant it is. Whether it is a nuclear plant,
22 a coal plant, gas-fired, wind or whatever. Why not
23 compare the full costs?

24 I mean, it just seems like a reasonable
25 comparative analysis to do to compare all costs.

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1 JUDGE GIBSON:- Okay.

2 MR. EYE: So you are comparing apples to
3 apples.

4 MR. FRANTZ: Our levelized cost of
5 electricity does include the capital cost, by
6 definition.

7 JUDGE GIBSON: That is what I understood
8 him to say, that the capital costs are factored into
9 this levelized cost, as well as the other matters.

10 So, doesn't the levelized cost form a
11 valid basis for making comparison in your estimation?

12 MR. EYE: It does. And I misunderstood
13 your question, --

14 JUDGE GIBSON: Okay.

15 MR. EYE: -- Your Honor.

16 JUDGE GIBSON: Okay.

17 MR. EYE: We do project levelized costs --

18 JUDGE GIBSON: Okay.

19 MR. EYE: -- and they are in Mr. Johnson's
20 report.

21 JUDGE GIBSON: Okay.

22 MR. EYE: We do project those and I think
23 that is a fair comparison to make, levelized costs.

24 JUDGE GIBSON: Okay.

25 MR. EYE: It ought to be made --

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1 JUDGE GIBSON: Okay, good.

2 MR. EYE: -- on that basis, yes.

3 JUDGE GIBSON: Then I think we are in
4 agreement on that and I am glad. Okay.

5 MR. EYE: Now, the inputs to those costs
6 are obviously where we have some difference of views.

7 JUDGE GIBSON: Fair enough. Now, I want
8 one last thing to go to and that is the Midland
9 decision.

10 Counsel for the Applicant has suggested
11 that there is no need for a comparison of the economic
12 costs of alternatives unless the alternatives are
13 environmentally preferable. And it cites the Midland
14 decision and some other cases that have followed that.

15 Do you have a view about that? Do you
16 believe that is an incorrect analysis? Do you
17 disagree with it? Do you think their interpretation
18 of the case is incorrect? What is your view?

19 MR. EYE: The premise is all about
20 environmental preferences or environmentally
21 preferable.

22 JUDGE GIBSON: Right.

23 MR. EYE: And we believe that the
24 environmentally preferable alternative here is non-
25 nuclear. And because renewables for example are

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1 environmentally preferably, then those costs should be
2 compared.

3 JUDGE GIBSON: Okay.

4 MR. EYE: So if the premise is you only
5 compare these alternatives if they are environmentally
6 preferable, we meet that test, based upon, among other
7 things, environmental costs that are related to
8 nuclear power, if for no other reason than the UFC
9 that is associated with it.

10 So for example, wind has no comparable
11 environmental impact to the Uranium Fuel Cycle and
12 therefore, the costs ought to be compared. As I
13 understood that, the premise is if they could
14 demonstrate for example when it is environmentally not
15 preferable, then there would be no need to compare the
16 costs.

17 JUDGE GIBSON: Right.

18 MR. EYE: And I think that we have made
19 the case persuasively in our papers that on
20 environmental grounds, including public health
21 consequences, wind is quite preferable, for instance.

22 JUDGE GIBSON: Okay.

23 MR. EYE: Likewise is solar and other
24 renewables.

25 JUDGE GIBSON: Okay.

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1 MR. FRANTZ: We --

2 JUDGE GIBSON: Could you please respond to
3 this question of what is environmentally preferable
4 under the Midland decision?

5 MR. FRANTZ: I'm not sure that we disagree
6 on the Midland decision. I think where we disagree is
7 what alternatives are capable of producing baseload
8 power. And it is only those that we need a more
9 detailed comparison with respect to the Midland
10 decision on them because we have shown that wind
11 itself is not capable of producing baseload power.
12 That ends the story right there.

13 You only get to even consider the Midland
14 decision if you have a commercially viable alternative
15 for providing baseload power. In our case, we have
16 several of those alternatives. We have coal, we have
17 natural gas. We have combinations involving wind and
18 solar and fossil fuel facilities. And for each of
19 those, we look and do the comparison and show that
20 none of those alternatives is environmentally
21 preferable and therefore we don't need to go to the
22 next step and actually do the cost comparison for
23 those alternatives.

24 JUDGE GIBSON: Fair enough. So
25 essentially it all has to do with, I think, a

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1 disagreement between the two of you about whether or
2 not a combination of these renewable sources could
3 create a significant enough contribution you could
4 call it baseload or not. And it is your assessment
5 they can't and it is the Petitioner's assessment that
6 it could.

7 MR. FRANTZ: That is not quite correct.

8 JUDGE GIBSON: Okay.

9 MR. FRANTZ: We do believe that wind and
10 solar, if you combine that with say a natural gas
11 plant so that the natural gas plant is operating when
12 the sun is not shining or the wind is not blowing so
13 that the together, in combination, you can produce
14 baseload power. We think that is a possibility for
15 producing baseload power.

16 But what we have also shown is that from
17 an environmental standpoint, that combination is not
18 environmentally preferable.

19 JUDGE GIBSON: Okay. Because no matter
20 what, in your estimation, you have to combine those
21 renewables with something else, whether it is coal or
22 natural gas or fuel oil. You have got to have
23 something else. You can't just do it with renewables.

24 MR. FRANTZ: That is correct.

25 JUDGE GIBSON: And I understand

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1 Petitioners to be saying yes, you could do it with
2 just renewables, which I know you don't agree with.
3 And I know that they don't agree with you. But I just
4 want to make sure that I understand where we are.

5 MR. FRANTZ: I believe that is a correct
6 summary.

7 JUDGE GIBSON: Okay, thank you very much.

8 JUDGE ARNOLD: I needed an opportunity to
9 demonstrate my ignorance here. I am going back a few
10 steps trying to understand why we are even talking
11 about this.

12 Certainly, the cost of the plant is
13 relevant to the decision the Commission has to make
14 here but I look at Contention 23 and it is an
15 environmental contention regarding the adequacy of the
16 alternatives evaluation. And looking at 10 C.F.R.
17 51.45, the Environmental Report, where it talks about
18 the alternatives, it is very brief. It just says
19 discussion of alternatives shall be sufficiently
20 complete to aide the commission in developing and
21 exploring pursuant to Section of NEPA appropriate
22 alternatives. And then the last sentence, "To the
23 extent practical, the environmental impacts of the
24 proposal and alternatives should be presented in
25 comparative form; which to me is saying it is really

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1 - looking for a comparison of environmental impacts.
2 And I am not sure exactly how cost is an environmental
3 impact.

4 Now, from the discussion over the last few
5 minutes, evidently there is some case law having to do
6 with the environmental impact statement. But this is
7 the environmental report, which really I think is
8 governed by 10 C.F.R. 51.45. So, I guess I will start
9 here and ask how is that an environmental report or is
10 this just looking at what is going to have to be in
11 the environmental impact statement.

12 MR. EYE: I think that what you began
13 with, Judge Arnold, is important, in terms of looking
14 at costs. And that is one of the reasons why these
15 costs comparisons get done because in the case of
16 Petitioners, we are trying to show that these costs
17 are excessive compared to renewables and alternatives.

18 The second thing that I think is important
19 is it does call at NEPA. And in terms of
20 practicability, NEPA requires comparative analyses.

21 The third aspect of this that I think gets
22 a little bit less defined or well defined is exactly
23 how one goes about accounting for these costs. For
24 example, there is the whole idea of accounting for
25 externalities. For example, something we talked about

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1 this morning. How does one really account for the
2 impact of the monetized impact of environmental
3 justice? These costs are very difficult to quantify.

4 I think that economists are proud of the
5 fact that they can monetize anything and I suppose
6 that is arguable. But nevertheless, there is, I
7 think, an anticipation in the regulations you cited
8 that there be an attempt to fully account for costs
9 that can be quantified. And why? Because there is
10 practicability requirement of NEPA. And if something
11 is not practicable, then it falls outside the scope of
12 that which must be analyzed and compared.

13 And so I think that is the basis, the
14 legal basis for why these cost comparisons get made.

15 JUDGE ARNOLD: Okay but isn't it the staff
16 and the environmental impact statement that have to
17 satisfy NEPA and the environmental report is really
18 just input to the staff so that they can do that?

19 MR. EYE: As I understand the
20 environmental report, it attempts to anticipate that
21 which would be called for under NEPA and answer the
22 questions that would be otherwise required in an
23 environmental impact statement.

24 JUDGE ARNOLD: Okay, thank you.
25 Applicant.

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1 MR. FRANTZ: Okay, very quickly. I think
2 your basic premise is right. This is an environmental
3 report or an environmental impact statement, depending
4 upon what document you look at. And the primary
5 purpose is to discuss the environmental impacts.

6 With respect to alternatives, we will do
7 that, obviously. And if there are no environmentally
8 preferable alternatives, that really cuts off the
9 discussion right there under Midland and other cases.

10 But let's assume that there is an
11 alternative that is capable of producing baseload
12 power and that is environmentally preferable. A
13 hypothetical alternative. We don't have one here but
14 let's assume there is one. In that case, we could
15 still justify our project based upon other factors.
16 For example, cost.

17 So, if we could show, for example, our
18 nuclear power plant was 50 percent less expensive than
19 this hypothetical alternative, then it would still be
20 reasonable under NEPA for us to choose the nuclear
21 power plant as the alternative, even though it is not
22 environmentally preferable.

23 JUDGE ARNOLD: Under NEPA, if there were
24 an environmentally preferable alternative and it was
25 at a lower cost, would you be somehow bound to give up

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1 your plans for nuclear and go in that other direction?

2 MR. FRANTZ: Not necessarily. It becomes
3 more difficult in that case but there may be other
4 reasons to justify the nuclear power plant.

5 For example, many companies, utilities
6 especially like to have a diverse source of generating
7 power. So, in case there is disruption of one source,
8 they have other sources. So there may be other
9 factors that could be used to justify the selection.
10 Obviously, the environmental impacts and the economic
11 costs are two very major factors.

12 JUDGE ARNOLD: Okay. Are there any
13 circumstances the Commission would just say, well,
14 there is a better alternative according to your
15 analysis, so we are not going to grant you your
16 license, basically upon NEPA considerations?

17 MR. FRANTZ: That is theoretically
18 possible.

19 JUDGE ARNOLD: Theoretically. Staff, sir?

20 MR. BIGGINS: Yes, Judge. Just to give
21 you the background perspective, in order for the staff
22 to prepare its environmental report, pardon me,
23 prepare its environmental impact statement, if we did
24 not have an environmental report to rely on, we would
25 be doing a tremendously greater amount of work

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1 ourselves.

2 And so I believe the Commission's intent
3 in Part 51 was to place the majority of that burden on
4 the Applicants to provide most of the information
5 necessary for drafting an environmental impact
6 statement on the Applicant, where they have to submit
7 an environmental report with their application.

8 So, the staff relies, in that sense, on
9 the environmental report, largely in drafting the
10 environmental impact statement, as well as other
11 resources and references, though. So, the
12 environmental report should contain the vast majority
13 of the information necessary for the staff to draft
14 its environmental impact statement.

15 In looking at this contention
16 specifically, where the Petitioners are suggesting
17 other alternative means of generating electricity,
18 under NEPA and under the Part 51 regulations, as well
19 as case law within the NRC, the alternatives to
20 generating electricity have to meet the purpose and
21 need of the proposed action in order to merit a
22 detailed discussion the environmental impact
23 statement, to determined whether or not they would be
24 environmentally preferable and only if we determined
25 that an alternative to the proposed action were

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1 environmentally preferably would we then get into the
2 higher level of analysis to look at benefit and cost
3 and make a determination then whether the benefit or
4 cost could effect that determination of whether an
5 alternative is environmentally preferable in our
6 decision-making process.

7 And so from the beginning, essentially,
8 the information needs to be contained in the
9 environmental report so that the staff can reference
10 it in drafting the environmental impact statement.
11 But again, that environmental report would not need to
12 contain information about alternatives that could not
13 meet the purpose and need of the proposed action,
14 including the cost and benefit analysis.

15 JUDGE ARNOLD: Okay, thank you.

16 JUDGE GIBSON: Okay, I think we will take
17 a ten minute break at this point. And when we
18 convene, we will take up Contention 24.

19 (Whereupon, the foregoing proceeding went
20 off the record at 2:18 p.m. and resumed
21 at 2:29 p.m.)

22 JUDGE GIBSON: Okay, we are back on the
23 record. I believe we completed Contention 23. I
24 would like to turn our attention to Contention 24.

25 If I understand correctly, Contention 24

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1 asserts that the applicant should have addressed the
2 future availability of reactor fuel. Is that a fair
3 assessment?

4 MR. EYE: Yes, sir.

5 JUDGE GIBSON: Okay, thank you. Now,
6 Counsel for the Applicant has asserted in its answer
7 that you are incorrect and that it did address what
8 was required to be addressed in Section 10.2.2 of the
9 Environmental Report and that, to the extent that you
10 have challenged the cost of uranium or the possibility
11 that the source of uranium used for fuel at Units 3
12 and 4 will come from a foreign source, you are simply
13 asserting something that is not material to this
14 proceeding. And I don't believe there was anything in
15 your reply on this subject. Is that correct?

16 MR. EYE: Yes.

17 JUDGE GIBSON: Okay. So, what difference
18 does it make whether Units 3 and 4 are fueled with
19 uranium that is mined in Russia or mined in Wyoming?

20 MR. EYE: It goes to the practicability
21 and again, a comparison in terms of availability of
22 fuel over time. Uranium mined in Wyoming is not
23 happening presently and the irony here is of course
24 part of the authority that we cite for this comes from
25 the Comanche Peak combined operating license

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1 application that acknowledges that domestic sources of
2 uranium are essentially nonexistent because economic
3 factors have driven that overseas or at least out of
4 our country.

5 And is it practicable then to depend upon
6 a fuel source that is not domestic? Part of this is
7 the practicability. Part of it is also related, as we
8 note, is related to cost. To the extent that STP
9 relies on a fuel source over which there is little or
10 no domestic control and is subject, therefore, to the
11 vagaries and whims, if you will, of international
12 markets, it potentially increases the cost of their
13 fuel, which ripples through to the increased cost of
14 the project generally. Bu the point of our contention
15 is that there is no acknowledgment by the Applicant of
16 the trend in terms of increased cost of uranium nor
17 that there is a dependable source, other than that
18 which they would obtain overseas.

19 So it goes really back to the NEPA
20 considerations of practicability. Is this a
21 practicable alternative, when the source of fuel
22 itself is problematic?

23 JUDGE GIBSON: Okay. Before the applicant
24 responds, I just want to suggest that you might want
25 to check the docket for the Atomic Safety and

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1 Licensing Board panel. And I think you will find
2 several in situ uranium mines that are located in
3 Wyoming and Nebraska that are actually, my
4 understanding is, are actually as of right now
5 producing uranium in the United States.

6 So, I think that, you know, that part of
7 your assumption, I think, may be incorrect. Now, I
8 appreciate the fact that you are saying, I assume you
9 would be saying even if there were domestic sources,
10 they are not sufficient and foreign sources are not
11 reliable. But I just did want to make sure you
12 understood that I do think there is actually some
13 domestic mining going on.

14 MR. EYE: Thank you, Your Honor.

15 JUDGE GIBSON: Okay, would you like to
16 respond to the issue of the practicability and cost?

17 MR. MATTHEWS: Yes, Your Honor.

18 JUDGE GIBSON: Thank you.

19 MR. MATTHEWS: You raise an interesting
20 issue because the availability of resources in the
21 United States is an assumption of cost. And so to the
22 extent Petitioners argue that cost is going to be
23 high, it almost has a circular effect. When prices of
24 uranium are higher, we in fact do have adequate
25 domestic supply. So, the domestic supply in fact has

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1 been coming online. There are additional applications
2 pending right now before the Agency that one would
3 find on the docket as well for expansion of existing
4 facilities and for new facilities to produce domestic
5 uranium.

6 But I think more importantly, it is
7 incumbent upon the petitioners to offer more than mere
8 speculation as to the practicability of using foreign
9 uranium sources. The application, or I'm sorry, the
10 Environmental Report in Section 10.2.2 references
11 World Nuclear Association studies, which estimate that
12 there are four million metric tons of uranium
13 available. The resource commitment here for these
14 units to operate for 60 years is just 17,000 metric
15 tons. There is a worldwide uranium market, an active
16 market that is available. There are very substantial
17 supplies of uranium in countries that are known allies
18 of the United States, such as Canada and Australia and
19 the petitioners haven't pointed to any facts to
20 suggest that there is any issue concerning the
21 availability of the foreign uranium to be used in this
22 facility.

23 And the Commission has been clear, and I
24 cite to the Fan Steel case it is reference in our
25 brief in footnote 399, C.L.I. 03-13, that contentions

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1 are not admissible based upon bare assertions and mere
2 speculation.

3 JUDGE GIBSON: Thank you.

4 MR. EYE: Your Honor, may I, briefly?

5 JUDGE GIBSON: Yes, you can. Go ahead.
6 Go ahead, I will ask my question again later.

7 MR. EYE: Like any kind of economic
8 forecast, there are a lot of variables that can be
9 taken into account to predict that which will happen
10 in the future. But we don't really need that in
11 particular, inasmuch as we note, at least spot
12 contract uranium costs have gone through the ceiling
13 in the last few years and they have increased four-
14 fold. And that is not taken into account anywhere in
15 the Environmental Report or anywhere else, as far as
16 we know, by the Applicant.

17 And there is no prospect -- and this is
18 with supplies coming online, as they note. Even with
19 that additional supply, it has not tamped down price
20 or cost, rather, as one might otherwise anticipate.
21 Instead, it is going up.

22 So, the assumption that the Applicant is
23 making that somehow there is a stable supply and
24 therefore a stable price is somewhat contradicted by
25 the recent history of spot contract prices of uranium

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1 which as we note, have gone from \$20.04 to \$88 and
2 change as of a couple of years ago.

3 JUDGE GIBSON: Okay. With respect to
4 cost, in Table 10.4-2, the Applicant asserts that it
5 addressed the cost of fuel and in that it basically
6 demonstrated that the cost of fuel is a very minor
7 part of the total cost of the facility. You know, we
8 talked about these levelized cost with all the other
9 things, the capital cost and other things. That this
10 is actually a very small part of that total cost and
11 that you would have to have a pretty major swing in
12 that cost to have a material difference in terms of
13 what the cost of this facility is.

14 Now, do you have anything that would
15 contradict that, other than what you just talked
16 about, the spot market of uranium?

17 MR. EYE: Well, no, other than I am not
18 sure where their break point is as far as how high the
19 price needs to go before they consider it to be
20 significant. And I don't believe that they actually
21 quantify the range of where they think the uranium
22 prices would be to still make use of uranium fuel a
23 reasonable alternative.

24 JUDGE GIBSON: Okay. Can you -- is there
25 is a break point or is it such a small factor that it

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1 doesn't matter? I know you want to say it would never
2 matter.

3 MR. MATTHEWS: Your Honor, I am highly
4 confident that it is such a small factor that it
5 doesn't matter but I can't point you to a specific
6 source for that.

7 JUDGE GIBSON: Okay.

8 MR. MATTHEWS: I would also, I would point
9 out however, that the price of uranium is only a
10 portion of the cost of nuclear fuel. A much greater
11 portion of the cost of nuclear fuel is enrichment and
12 in fuel fabrication. So even a multiple increase in
13 cost in uranium doesn't have a multiplying effect, in
14 terms of the cost of nuclear fuel as a finished
15 project. It will impact a percentage of the total
16 cost.

17 JUDGE GIBSON: To just complete the record
18 in that regard, recognizing that there are foreign
19 sources of uranium ore, are there foreign sources of
20 uranium ore processing and fuel fabrication as well?

21 MR. MATTHEWS: There are.

22 JUDGE GIBSON: Okay.

23 MR. MATTHEWS: There is a worldwide market
24 at each point in the nuclear fuel cycle in uranium
25 hexafluoride conversion, in fuel fabrication, in

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1 enrichment services and in uranium production.

2 JUDGE GIBSON: So at some point it gets
3 delivered to you but it may be delivered to you from
4 Taiwan or something like that. Right?

5 MR. MATTHEWS: I have seen utilities that
6 their fuel supply organizations have contracts where
7 they have got concentrates coming from all over the
8 world. They have services coming from different
9 places, U.S., non-U.S.

10 JUDGE GIBSON: Okay, thank you.

11 JUDGE CHARBENEAU: Can I ask a --

12 JUDGE GIBSON: Yes, please.

13 JUDGE CHARBENEAU: Can you just give a
14 relative magnitude estimate of the relative cost of
15 uranium as yellow cake to you finally get the pellets
16 of the fuel? Is the cost of uranium ore and yellow
17 cake at that level ten percent or 40 percent -- just
18 a rough --

19 MR. MATTHEWS: It is definitely in that
20 range.

21 JUDGE CHARBENEAU: Okay.

22 MR. MATTHEWS: I am fairly confident it is
23 less than 40 and it is more than ten. But off the top
24 of my head, I think it is in the 15 to 20 percent
25 range but as the price of uranium ore goes up, the

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1 percentage, its share of the total percentage cost
2 goes up. And Petitioners haven't spoken about it. We
3 don't have anything in the record but the current
4 splat price of uranium has backed off. It several
5 months ago was in the \$45 range. I think I saw some
6 trade press in the last week it was about \$50 or \$52
7 a pound. But depending upon where that is would
8 impact that.

9 JUDGE CHARBENEAU: Do you have any -- if
10 you were to plot a line graph of the cost of yellow
11 cake from 1975 to present, do you have any idea what
12 it would look like?

13 MR. MATTHEWS: I think I do but it would
14 be pretty jagged.

15 JUDGE CHARBENEAU: It would be quite. And
16 the times that we thought it was going to go one way,
17 it went another.

18 MR. MATTHEWS: It was relatively low for
19 a long period of time. It ramped up on the late 1990s
20 and then really escalated in the first part of this
21 decade and it has now come down somewhat.

22 MR. EYE: Your Honor?

23 JUDGE GIBSON: Yes?

24 MR. EYE: Just one last point on this. It
25 must come as good news to uranium fuel vendors that

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1 their customers don't really care very much about what
2 the costs are.

3 JUDGE GIBSON: Yes, I was just wondering
4 if that was going to show up in a letter to somebody.

5 MR. EYE: I am no economist and I sure
6 don't play one on TV but that is the relative
7 indifference about this aspect of the cost of
8 operation, I think is something that needs to be
9 addressed.

10 And we grant that in the total picture of
11 operational costs, it is relatively low. But just to
12 point out, when does a fuel cost zero? Sunlight is a
13 fuel is zero. So, if you want to start to comparing
14 costs, past, present, and future, uranium fuel just
15 really isn't competitive in that regard.

16 JUDGE GIBSON: Okay. Well, like I said,
17 I think they have basically made the point that it is
18 a relatively small portion of this total levelized
19 cost that we talked about earlier and for that reason,
20 their position is that it is just nonmaterial. So I
21 appreciate the fact that you believe it is. So, I
22 just want to make sure that we understand each other's
23 positions here.

24 MR. EYE: We do.

25 JUDGE GIBSON: Good. Let's turn to --

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1 MR. MATTHEWS: Your Honor?

2 JUDGE GIBSON: Yes?

3 MR. MATTHEWS: Can I correct the record on
4 one small issue? I just wanted to point out that the
5 Petitioners have misquoted the Comanche Peak
6 Environmental Report, which at page 10.2-4 states that
7 "Sufficient uranium resources exist in the United
8 States."

9 Petitioners have implied that the Comanche
10 Peak Environmental Report said that insufficient
11 resources in the United States exist and the report
12 actually says that sufficient uranium resources do
13 exist.

14 JUDGE GIBSON: Okay.

15 MR. EYE: No, I cited the Comanche Peak
16 for the fact that the uranium market currently favors
17 utilizing foreign source uranium, rather than
18 domestic. It is the economic factors that have driven
19 it overseas. It is not the presence or absence of the
20 uranium. It is that economic factors make it more
21 viable to obtain it overseas. And that is why I cited
22 the COL from Comanche Peak.

23 JUDGE GIBSON: Okay. I think we are
24 talking past each other. Let's go to Contention 25.

25 You have addressed the issue of financial

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1 assurance necessary for decommissioning of Units 3 and
2 4 in this contention. Is that correct?

3 MR. EYE: That is correct, Your Honor.

4 JUDGE GIBSON: And in particular, you have
5 asserted that the Applicant should have selected a
6 prepayment alternative. Correct?

7 MR. EYE: That is correct.

8 JUDGE GIBSON: Okay. Just to make sure we
9 understand this, counsel for the Applicant, you have
10 indicated that because you will be operating Units 3
11 and 4 as merchant plants that you do not qualify for
12 the decommissioning option of an external sinking
13 fund. Is that correct?

14 MR. MATTHEWS: Your Honor, I would need to
15 clarify. First off, with respect to the ownership
16 share of CPS, --

17 JUDGE GIBSON: Yes.

18 MR. MATTHEWS: -- City Public Service of
19 San Antonio, for their portion of the plant and for
20 CPS's proportionate share of the decommissioning
21 liability, they do in fact collect the cost of
22 decommissioning or will collect the cost of
23 decommissioning from rate payers through cost of
24 service regulation. And so therefore, they do qualify
25 for the external sinking fund method and plan to use

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1 that method. So we are really only addressing the
2 decommissioning assurance plans provided by NINA, the
3 50 percent of the plant to be owned by the two NINA
4 entities that would be operated on a merchant basis.

5 JUDGE GIBSON: Okay.

6 MR. MATTHEWS: And I would say our
7 position is that NINA qualifies by using or taking
8 advantage of the Texas statute --

9 JUDGE GIBSON: Right. I appreciate that.

10 MR. MATTHEWS: -- using the external
11 sinking fund method as an alternative that the staff
12 can approve as being equivalent under (e)(1)(VI),
13 50.75.

14 JUDGE GIBSON: And this is the one offered
15 by the Texas Public Utility Commission.

16 MR. MATTHEWS: Yes.

17 JUDGE GIBSON: Right. Okay but I am just
18 talking about purely under the -- if that did not
19 exist, under the NRC regs, you would not qualify for
20 the external sinking fund, okay, if it weren't for the
21 State of Texas alternative proposal. Correct?

22 MR. MATTHEWS: That is correct, Your
23 Honor.

24 JUDGE GIBSON: Okay. So what you are
25 planning to do is avail yourself of this program that

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1 the Texas Public Utility Commission has instituted.
2 And that enables you to pay into a trust fund during
3 the life of your license from the NRC. And at the end
4 of that, if there is inadequate monies for that trust
5 fund to pay for the full decommissioning costs, then
6 will the rate payers of the great state of Texas be
7 paying the difference?

8 MR. MATTHEWS: Yes. If at any point, the
9 way the legislation is written, is if any point that
10 there is a shortfall, then the rate payers would and
11 that if the NINA owners were unable to meet their
12 obligation. And the NINA owners will clearly have
13 this obligation as the licensee --

14 JUDGE GIBSON: Right.

15 MR. MATTHEWS: -- to pay for
16 decommissioning. But if at any point they were unable
17 to meet that obligation, then the rate payers would
18 step in.

19 JUDGE GIBSON: Okay. But provided NINA
20 had adequate funds, rate payers would not be in the
21 picture.

22 MR. MATTHEWS: They would never pay a
23 dime. And that is kind of the distinction of why if
24 one looks at the literal terms of the external sinking
25 fund method, it contemplates that the actual dollars

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1. to be contributed every year come from rate payers.

2 The premise of the rule is you get to use
3 the external sinking fund method if rate payers are
4 there to stand behind the obligation to make up any
5 shortfall. But the terms of the external sinking fund
6 method the way it is written actually plans for the
7 dollars to also actually be coming from rate payers.

8 Under the Texas statute, the dollars will
9 come from NINA, --

10 JUDGE GIBSON: Right.

11 MR. MATTHEWS: -- not from rate payers, on
12 an annual basis. And the rate payers are only needing
13 that, the sort of the regulatory premise of the
14 external sinking fund method, which is if there is a
15 shortfall, you will be able to go back to rate payers.

16 JUDGE GIBSON: Okay. I was intrigued when
17 I read about this. Are there other states that have
18 done the same thing that Texas has done or is it
19 unique in that regard?

20 MR. MATTHEWS: We have been encouraging
21 some other states to do it, You Honor.

22 JUDGE GIBSON: I'll be you have. But I am
23 just curious if Texas is the only state that has
24 created this opportunity for an external sinking fund
25 alternative to the one that the NRC offers only to

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1 certain types of utilities.

2 MR. MATTHEWS: Right. And understand that
3 it is not an alternative. What it is is it is a
4 mechanism that allows a licensee to meet the NRC's
5 rules and satisfy the NRC.

6 JUDGE GIBSON: Fair enough. Fair enough.
7 Okay.

8 MR. MATTHEWS: And it does so with
9 hopefully not ever costing rate payers a dime.

10 JUDGE GIBSON: Right. But Texas is the
11 only state that has done this to this point in time?

12 MR. MATTHEWS: It's the only one that I am
13 aware of, Your Honor.

14 JUDGE GIBSON: Okay. Now, Counsel for
15 Petitioners, it is my understanding that it is your
16 view that the Applicant cannot first avail itself of
17 this Texas trust fund method of establishing an
18 external sinking fund but, instead, that it has to
19 independently qualify first for the federal external
20 sinking fund method. Is that correct?

21 MR. EYE: Yes.

22 JUDGE GIBSON: Okay. Okay, now let me ask
23 you this question, Applicant counsel, if we were to
24 accept Petitioner's argument that you would first have
25 to qualify for the external sinking fund method, is

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1- there every, are there ever any circumstances under
2 which an unregulated utility operating a merchant
3 plant could qualify for the external sinking fund
4 option?

5 MR. MATTHEWS: I don't believe so,
6 although it could qualify for an equivalent.

7 JUDGE GIBSON: I realize there is this
8 equivalent Texas has created, but I am talking about -

9 -
10 MR. MATTHEWS: No, without using the
11 statute, a merchant generator under 50.75(e)(1)(V),
12 could enter into a power purchase agreement with a
13 counter party that did have cost of service rate
14 regulation, where that counter party agreed to take
15 its percentage and, relying upon that method, a
16 merchant generator I believe could end up qualifying
17 to accumulate funds in a trust fund over time.

18 JUDGE GIBSON: Is that the way that you
19 would indirectly pass, have rate payers pay for it,
20 rather than directly, by entering into this agreement
21 with somebody that had that status?

22 MR. MATTHEWS: That is correct. And rate
23 payers would be indirectly paying -- rate payers would
24 ultimately be paying the decommissioning cost and be
25 responsible for it. Therefore, you would be able to

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1 use the (e)(1)(V) method. And that merchant
2 generator, that power generation company is the
3 terminology used in the statute, the Texas statute,
4 would never, in my view, would never avail itself of
5 this Texas statute. There would be no point for it to
6 subject itself to PUCP jurisdiction.

7 JUDGE GIBSON: Okay. Did the Texas
8 statute post-date this NRC rule?

9 MR. MATTHEWS: Yes and it was written with
10 the rule in mind.

11 JUDGE GIBSON: Okay. Okay, thank you.

12 You have heard an explanation of the sort
13 of two methods that an unregulated utility operating
14 a merchant plant could end up qualifying for this
15 external sinking fund provision. One, through
16 entering into this contract with an entity that had
17 that status and secondly, through this Texas statute,
18 which is unique among the states.

19 Do you have any legal authority for the
20 proposition that before the utility could meeting this
21 requirement, that they would first have to meet the
22 requirement for the federal external sinking fund
23 under this regulation?

24 MR. EYE: Other than what we have cited in
25 the contention itself.

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1 JUDGE GIBSON: Okay. Fair enough. I just
2 wondered if you had anything else.

3 MR. EYE: Your Honor, one other point
4 though --

5 JUDGE GIBSON: Yes.

6 MR. EYE: -- I think that should be made
7 in this regard. On June 19th of this year, the NRC
8 announced that it had contacted 18 nuclear power
9 plants for the purposes of clarifying how those
10 particular licensees will address the recent economic
11 downturns, effects on their funds to decommission
12 reactors in the future. To the extent that the trust
13 fund that is at issue here is affected by market
14 conditions, it throws some degree of uncertainty into
15 that fund's status and adequacy.

16 I am not sure, based upon this
17 announcement by the NRC on June 19th of this year, how
18 precisely they went about selecting these 18 plants.
19 I mean, it doesn't explain the methods from which they
20 used to draw these to the attention for these
21 decommissioning fund purposes.

22 But to the extent that the trust fund is
23 tied somehow to market conditions, then there is this
24 possibility or a greater probability that rate payers
25 will ultimately be asked to step in and fund

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1 decommissioning.

2 Which raises one other point and that is,
3 as noted by Your Honor, this is a unique kind of
4 funding arrangement in the United States, subject to
5 a majority vote at any one moment, I suppose, by the
6 Texas House and Senate, to repeal. And at that point,
7 then the Applicant would be in a situation of casting
8 about for a partner under the first scenario that you
9 outlined, to take advantage of their rate base
10 ratemaking methods to fund their decommissioning
11 costs.

12 There is no assurance, one, that they
13 could find such a willing partner. And the other
14 aspect of this is as these decommissioning costs begin
15 to loom larger, there will be, I presume, pressure on
16 the body politic to reexamine whether and how these
17 costs will be funded. So, this throws uncertainty
18 into the ultimate amount of money that will be
19 available. And I think that the fact that the NRC has
20 now, itself, begun an analysis to determine whether
21 the relative lack of funds that might result from the
22 economic downturn is significant. It does indicate an
23 awareness that heretofore, I think had been an
24 assumption that these funds would always be available,
25 tied to market conditions or not.

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1 And we did not try to discern precisely
2 how much of the trust fund in question here is tied to
3 market conditions. But I am presuming that the trust
4 fund represents an amalgam of investments and so
5 forth, a part of which there are assumptions about
6 growth and, at the end of the operational life if the
7 plant, would represent a fund of money. Those
8 underlying assumptions, at least in the case of 18
9 plants selected by the NRC, are somewhat in doubt.

10 So while there is this safety net that is
11 provided under the Texas statute, we are not a
12 sanguine about the availability of that as a definite,
13 given that it is again, one majority vote away,
14 presuming a governor would sign that legislation, from
15 not being available anymore. And then they are out
16 trying to fund a partner to help fund these costs.
17 And that, I think, raises other kinds of questions
18 about whether or not that could be done.

19 JUDGE GIBSON: Well, I will let the NRC
20 staff answer in a second about the June 19 letter and
21 the implications it might have, if any, for this
22 proceeding.

23 But let me just, you know, just as a legal
24 matter, it would seem to me that a change of the law
25 because of the change of political considerations,

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1 political parties in Texas, is just as, I guess,
2 likely or unlikely as the change in the makeup of the
3 Nuclear Regulatory Commission and the five
4 commissioners who sit there.

5 MR. EYE: I don't disagree.

6 JUDGE GIBSON: And it seems to me that you
7 can't -- we would never get anything accomplished if
8 we assumed that all these rules were going to change,
9 assume the Texas laws were going to change, too. I
10 think we really, as I think you said earlier, have to
11 play the hand you are dealt, to carry your metaphor a
12 little further, to play the cards you are dealt. And
13 I think those are ones we have to deal with.

14 MR. EYE: I agree.

15 JUDGE GIBSON: But let's see what the
16 staff has to say, if anything about the June 19 letter
17 and its implications for this contention, if any.

18 MR. BIGGINS: Thank you, Judge. And in
19 addition to that, I have a few points to make on the
20 discussions that have already occurred.

21 The letters have no implication because
22 the rules are very clear that the decommissioning
23 funding assurance, as provided by the rule is
24 reasonable assurance consists of a series of steps.
25 And part of that is the update every two years of the

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1 status of the decommissioning funding that is provided
2 to the Commission. Markets go up and the markets go
3 down. There is no dispute about that. And that is
4 the reason why a decommissioning funding is monitored
5 by the NRC through the life of the plant, to ensure
6 that at the time of decommissioning, there is
7 reasonable assurance that funds will be available to
8 decommission.

9 I would point out that this entire issue
10 is outside the scope of what has to be determined for
11 a combined operating license to be issued. The method
12 does not even have to be specified in a combined
13 license application. It only has to be specified
14 later and the commission has specifically held that
15 the reasonable assurance that they make for finding
16 that decommissioning funding exists consists of a
17 series of steps. So that reasonable assurance and
18 that series of steps, some of which occur after
19 license issuance, does not have to be reached in order
20 to issue the license. And I would cite to the Indian
21 Point decision, C.L.I. 01-19, also 54 NRC 109, where
22 the Commission stated that we remain confident that
23 our generic formula for, the generic formula they are
24 referring to is the formula for decommissioning costs,
25 along with our end-of-license requirements will result

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1. in the reasonable assurance of adequate
2 decommissioning funding.

3 The COL Application needs to contain the
4 estimated cost and the certification that a method
5 under 50.75(e) will be used. The language in the rule
6 does not require the Applicant to specify the method.
7 So this Board does not have to determine whether a
8 specific method is appropriate in order to make a
9 decision on this application. And it is also
10 unnecessary for issuance of the license itself.

11 So, to the extent that the majority of the
12 arguments made today by counsel reflect that one
13 method is more appropriate than another or they can or
14 can't rely on the Texas statute, all of that is
15 outside of the scope of the decision that the Board
16 has to make for this COL.

17 JUDGE GIBSON: Okay. Okay, thank you.

18 You want to say something else?

19 MR. MATTHEWS: Well, I just wanted to
20 offer so that perhaps the Board and the Petitioners
21 understand, the way the Texas statute works, a power
22 generation company that opts into this PUCT
23 jurisdiction and oversight of the decommissioning
24 funds solves the very problem the Petitioners fear.
25 Because every three years under the statute, the power

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1 - generation company has to go into the PUCT with an
2 update of its decommissioning cost estimate. And it
3 then has to, basically, follow the same process that
4 is followed today for the existing operation reactor
5 units in Texas. Say well, here is what my balance is
6 in my trust fund, based upon recent market
7 performance. Here is what my updated cost estimate is
8 and, based upon projected earnings, now this is the
9 annual amount of additional deposits that I need to
10 make.

11 So, if the market performs very well over
12 three years and the decommissioning trust funds double
13 in value, then the delta will go down and the annual
14 contributions maybe might be originally set at three
15 million dollars a year, that because of increased
16 balances, maybe it goes down to now we only need to
17 put 2.5 million dollars a year.

18 Conversely if, due to market performance,
19 the asset values drop, now suddenly, you have fewer
20 years left to make up the difference, I have got to
21 take that annual contribution amount and increase it.
22 And that is subject to continuing PUCT oversight so
23 that the PUCT under this program is telling the power
24 generation company how much money it has to put in the
25 fund every year. And it addresses the very problem

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1 -- petitioners fear.

2 JUDGE GIBSON: Thank you.

3 MR. EYE: One further point, Your Honor,
4 and I was reminded of this by one of my colleagues.
5 And that is, that there has been a commitment for some
6 number of years to deal with the uranium mining site
7 at Panna Marie, Texas that has been in need of cleanup
8 for many years. And that is something that the state
9 had an obligation to fund and clean up and it never
10 happened. And again, I am not suggesting that that
11 assures that this commitment won't be followed through
12 on but it is an example where commitments to do things
13 related to the uranium fuel cycle just didn't get
14 done, didn't get funded the way they were supposed to.
15 And I think it is indicative of the uncertainties that
16 inure to this process not only because it is
17 controversial, but it extends over a very long period
18 of time and counts on funding methods and streams that
19 may be interrupted. And I want to make sure that the
20 record reflected that.

21 JUDGE GIBSON: Okay, thank you.

22 Okay, if we could turn to Contention 26.
23 Counsel for Petitioners, you have asserted that the
24 Applicant failed to justify the need for Units 3 and
25 4 and specifically you assert that the grid served by

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1 CPS Energy has enough power already, even to the point
2 of shutting down one or more gas-fired plants and
3 that the Applicant did not adequately address this.
4 Is that a fair characterization of what you are
5 asserting?

6 MR. EYE: It is, yes, sir.

7 JUDGE GIBSON: All right. The Applicant
8 argues, in reply, that you have focused erroneously on
9 the grid that CPS serves directly its immediate area
10 and that instead, you should have focused on ERCOT,
11 the Electric Reliability Council of Texas grid.

12 So first of all, and I know you filed this
13 in your reply, that you assert that CPS as a Municipal
14 Utility Applicant must establish its own separate need
15 for power in its specific service area and assert that
16 ERCOT can only be a region of interest for NINA.
17 Correct? The larger partner.

18 Now, I understand that you have cited your
19 expert and there is factual support for that. But
20 what I want to know is do you have any legal authority
21 for the proposition that the grid should be the
22 subject of our concern is the immediate area served by
23 CPS and not the ERCOT grid that the applicants have
24 used in their analysis.

25 MR. EYE: In the Applicant's environmental

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1 report, there is ambiguity as to precisely what the
2 status of CPS is in this regard. It really advances
3 the idea that it simultaneously can be both a
4 municipal supplier and a merchant power plant. And to
5 the extent that it does so, then if you think of it as
6 a merchant power plant, then it gets to think in terms
7 of the larger ERCOT service territory. If it is a
8 municipal supplier, then it has got to focus on its
9 own more close in needs.

10 It is our contention that CPS has an
11 obligation first to its municipal supplier because
12 that is what it is there for. Its obligation as a
13 municipal supplier takes primacy over its other status
14 as a merchant power plant.

15 It seems to us that CPS has to make a
16 decision here about what it is. Is it a merchant
17 power supplier or is it a municipal power supplier?
18 And as we understand the legal requirements under the
19 Commission rules, if in fact it is classified as a
20 merchant power plant, then it need not deal with
21 things like demand side management, which we contend
22 if it is serious about meeting its supply needs in its
23 municipal area, that DSM would play a very important
24 role. And of course, Dr. Makhijani details that in
25 his report. And if on the other hand it calls itself

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1 - a merchant power supplier, then it gets the benefit of
2 escaping those DSM kinds of requirements.

3 So to us, the CPS is really obligated to
4 call itself one or the other and function as one or
5 the other. Because if it is going to be a merchant
6 power plant, then it is thrown into the ERCOT mix
7 generally and is out there competing. Its customers
8 will be subject to, essentially be siphoned off by
9 other utility companies. And so on the other hand, if
10 there is going to be a municipal power supplier, then
11 they get the benefit of a dedicated rate area or
12 service territory, rather, and they don't have to
13 worry about other utilities coming in and competing
14 for their customers. So, they shouldn't get to have
15 the benefits of being a merchant power plant, while at
16 the same time having the obligations as a municipal
17 power supplier.

18 So, if they are a municipal power -- as
19 a municipal power supplier, in any event, they should
20 be, there should be a requirement that they roll in
21 demand side management. And in fact, CPS is doing
22 that. They have made investments in demand side
23 management. And according to our analyses, between
24 their demand side management and aggressive
25 application of renewables, and in particular solar,

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1 there can be an adequate reserve margin that they
2 would not need to add any nuclear capacity whatsoever
3 to meet their service territory needs.

4 But it is this ambiguity about what they
5 are, whether they are a merchant power supplier or a
6 municipal power supplier that confuses this. And in
7 some respects, they are acting as if they are a
8 municipal power supplier because on the ground they
9 are applying DSM. But on the other hand, for purposes
10 of this application, they are acting more like a
11 merchant power supplier and that, I think, raises some
12 questions that ought to be clarified in the context of
13 this adjudication and would also dictate just exactly
14 how much analysis needs to be done in the context of
15 this application of demand side management as related
16 to CPS.

17 JUDGE GIBSON: Okay.

18 MR. EYE: And as noted, in the application
19 itself, they characterize themselves as a municipal
20 power supplier but there seems to be the following
21 assumption that even though they are a municipal power
22 supplier, because they intend to sell into ERCOT, in
23 that regard, they are a merchant power supplier and
24 that relieves them of the need to do DSM analysis in
25 the context of the Application.

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1 JUDGE GIBSON: Counsel for the Applicant,
2 the assertion here is that you are trying to have you
3 cake and eat it, too. That it is helpful you call
4 yourself a municipal utility but in fact you are not
5 really. You are not really fish nor fowl. There have
6 been several things that have been raised here. I
7 would like to know the extent to which there is legal
8 authority that makes this clear and then you are
9 welcome to address the specific things that counsel
10 for Petitioner raised.

11 MR. BURDICK: Thank you, Your Honor. If
12 I could offer just one clarification. For the record,
13 the two Owner Operators or Owner Applicants for this
14 project are 50-50, they share in the project 50-50
15 percent, just to make that clear on the record.

16 I believe the Petitioners misunderstand
17 why we chose ERCOT as the region of interest here. We
18 didn't choose it because we are trying to claim that
19 CPS Energy is a merchant generator. We chose it for
20 very logical reasons. We have these two entities that
21 are the Owner Applicants for this project. The one is
22 NINA, which is a merchant generator and will sell
23 power in the ERCOT region and the other is the City
24 Public Service Board of San Antonio or CPS Energy,
25 which is a municipal utility. They have a service

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1- area that is in Bexar County close to San Antonio,
2 which covers pretty much that entire county and some
3 portions of the surrounding counties. That entire
4 service area falls within the ERCOT region.

5 So, NEPA requires the need for power
6 analysis and we provided that. And when we determined
7 what we should look at for the need for power, that
8 was the most logical approach to choose for this
9 entire project, the entire ERCOT region which would
10 bound the need for power for both of these applicants.

11 There are other reasons as well that it
12 makes sense to use ERCOT. As Petitioners have
13 acknowledged, CPS Energy is a municipal utility but is
14 able to sell excess capacity on the wholesale market.
15 And they first have an obligation to provide power for
16 their service area but they are able to do that. And
17 therefore, it does make more sense to use an ERCOT
18 area for this need for power evaluation.

19 Also, just the geography and the nature of
20 the ERCOT region also makes this a logical choice.
21 The ERCOT region covers most of the state of Texas and
22 is pretty much electrically isolated for the most part
23 from any other grid. So, it is a very logical choice.
24 Hopefully there is no legal prohibition to what we
25 have done here. In fact, Commission case law has

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1 instructed the need for power evaluations should be
2 accepted if they are reasonable. And we believe this
3 is a very reasonable approach with these two
4 applicants here.

5 JUDGE GIBSON: Why is this not merits that
6 you say this is reasonable and they say the local San
7 Antonio Bexar County service area is reasonable?

8 MR. BURDICK: Your Honor, I believe there
9 are no facts in dispute here. This is a legal
10 question as to whether or not the ERCOT region was an
11 acceptable region of interest. There is no factual
12 question here.

13 And I would point out here as well as we
14 do in our answer, that in the initial Petition for
15 Contention 26, there is absolutely no mention of our
16 need for power analysis, which is quite extensive and
17 found in the Environmental Report Chapter Eight. They
18 don't challenge it. They don't discuss it. They
19 don't even discuss the region of interest. They don't
20 challenge that on their Petition. They cite to the
21 report by Dr. Makhijani but also in there, he does not
22 identify the need for power evaluation used by STP at
23 all in any manner.

24 And they had an obligation to challenge
25 our analysis here and that obligation is found in 10

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1 C.F.R. Section 2.309(f)(1)(6), which states that it
2 requires the Petitioner to include references to the
3 specific portions of the application that the
4 Petitioner disputes and the supporting reasons for
5 each dispute. By not even acknowledging our need for
6 power analysis in any manner, they have failed to
7 demonstrate that genuine dispute and for that reason
8 alone, this contention can be rejected.

9 MR. EYE: Your Honor?

10 JUDGE GIBSON: Yes?

11 MR. EYE: You asked for our legal support
12 and I overlooked my citation in that regard. And it
13 is a case, it is Northeast Environmental Coalition, et
14 al against NRC and that is at 582 F2d 87, specifically
15 at 96 and 97, which says that there is the need for
16 power is a predicate to issuing the license.

17 As to whether the need for power analysis
18 has been done, Dr. Makhijani does take that on. He
19 addresses it quite directly in his report and, I
20 think, establishes clearly that CPS can meet its needs
21 for power without adding this nuclear capacity. So,
22 I think that that is, we may have a difference of
23 opinion about the substance of it. But he did in fact
24 take that need for power question on.

25 JUDGE GIBSON: On the issue of having your

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1 : cake and eating it, too argument; with respect to the
2 natural gas plant or plants that have been shut down,
3 could you please describe where in the useful life
4 those plants were --

5 MR. BURDICK: Sure, Your Honor.

6 JUDGE GIBSON: -- and the circumstances
7 that gave rise to shutting them down rather than
8 trying to refurbish them or whatever?

9 MR. BURDICK: In the Petition, they
10 identify this newspaper article which identifies
11 various plants. The only one this identified in this
12 article is the Tuttle Power Plant that is owned by one
13 of the Applicants for STP Units 3 and 4 and that is
14 owned by CPS energy.

15 These units are being shut down and they
16 are being shut down because they are old. There are
17 three units. Unit 1 came online in 1954, Unit 3 in
18 1961, and Unit 4 in 1963. And there is the Unit 2 but
19 that has been shut down for some time already.

20 So they are being shut down because they
21 are old. They are less efficient. These units have
22 experienced forced outages that now would require
23 significant capital costs to recover from those. And
24 plus because of their age, they would have to be
25 upgraded substantially to bring them back into

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1 service.. So there is really no question on those
2 plants. They are being shut down. They are not
3 operating now and they are not going to operate again.

4 And I think it is important to note that
5 the decisions in this proceeding don't affect that
6 decision at all. That is going to happen anyway or it
7 has already happened. And I would point out as well
8 that that actually increases the need for power and I
9 think supports the need for power by these Applicants.

10 JUDGE GIBSON: Right. I appreciate that.
11 I just wanted to be sure that we understood why they
12 were being shut down.

13 MR. BURDICK: Yes.

14 JUDGE GIBSON: Counsel for Petitioners,
15 one last thing before we move on. You have raised the
16 question of stimulus funding in this contention. And
17 I am curious what stimulus funding source would effect
18 either the need for power or the ability to make those
19 power demands.

20 MR. EYE: Stimulus funding, Your Honor, as
21 we understand it, will be applied to tamp down demand,
22 weatherization and other means by which to use
23 electricity more efficiently. So that is essentially
24 the underlying premise for that is that as those funds
25 get rolled into individual buildings and so forth, the

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1 demand for power should decline.

2 As power use is declining generally in the
3 service territories we note, there was a reduction
4 between 2001 and 2006 of nearly 10 million kilowatt
5 hours. That decline, that trend line is beginning to
6 flatten out. And --

7 JUDGE GIBSON: Are you talking about in
8 this service area?

9 MR. EYE: The CPS.

10 JUDGE GIBSON: The CPS service area, okay.

11 MR. EYE: Yes, sir. And that is a trend
12 that we foresee will continue, as more efficiency is
13 deployed and in fact in the last two years, according
14 to our data, electric demand has been reduced by 16
15 percent. So the old the assumption that demand is
16 going to go up at a minimum of three percent per year
17 essentially forever, I think is called seriously into
18 question. And projected out, even if the rate of
19 decline is lessened, it is still declining, which
20 throws into question this whole need for power.

21 And it is the Petitioner's contention that
22 the Applicant has taken a contrary view in terms of
23 what the projected need for power will be and has not
24 taken into account the recent trends of a reduced
25 demand for power.

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1 So we have; I mean, we have a clearer
2 conflict here in terms of how we see projections or a
3 need for power present and future.

4 JUDGE GIBSON: Okay. Please respond but
5 in particular, in your response, if you are aware of
6 any information about the stimulus program that might
7 impact demand side management, we would appreciate
8 that. Thank you.

9 MR. BURDICK: Your Honor, I am not aware
10 of anything that is going to impact the need for power
11 here. And I think that was our response and the
12 answer is that they haven't shown how the stimulus
13 package will have any impact on the need for power in
14 a CPS energy region or the ERCOT region, more
15 importantly.

16 Additionally, the petitioners here have
17 been referencing this decrease in electricity use.
18 And I believe there is a very important
19 misunderstanding here. They are referring to this
20 slide presentation that they included in their
21 Petition but I think there is a misunderstanding as to
22 what that is really talking about. This slide says
23 that, it refers to a Senate Bill 5, which encouraged
24 public entities like CPS to reduce electric use. And
25 then it says in the past two years, electric use was

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1 down by 16 percent... This is not referring to the
2 electric use in the CPS energy region. It is
3 referring to electric use by CPS as an entity. So by
4 turning off more light switches that the company
5 itself has produced its own electric demand, not that
6 the service areas reduce electric demand.

7 And just to provide a little bit of
8 perspective, this slide talks about how, and I believe
9 that counsel for the Petitioner has just mentioned
10 this, a reduction from 13 million kilowatt hours in
11 2001 to 9.8 million kilowatt hours by 2006. So, we
12 are talking about 10 million kilowatt hours. Well, in
13 the CPS Energy area, we are talking about 25 billion
14 kilowatt hours.

15 So, this does not support that there is a
16 decreased demand in the CPS energy region or ERCOT, it
17 just shows that CPS Energy is the most able as a
18 company to conserve additional power that they
19 themselves have used.

20 And one other point, Your Honor. You
21 asked for some legal citation as far as the region of
22 interest. We also note that we are consistent with
23 the guidance in the Environmental Standard Review
24 Plan. In particular on page 8.1-5 of that Plan, it
25 allows in identifying the appropriate region to

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1 -- consider the Applicant's major power purchases or
2 sales with neighboring utility companies. And I think
3 we are consistent with that. And we believe our
4 selection of this region's interest is consistent with
5 the NRC's guidance.

6 JUDGE GIBSON: Thank you.

7 Counsel for the NRC staff, I would be
8 particularly interested -- I know you have something
9 you want to say here. I would be particularly
10 interested in the NRC staff's view about what is the
11 appropriate region of interest.

12 MS. BIELECKI: Well, recently the
13 Commission stated in its denial of NEI's Petition for
14 Rulemaking, the cite is 68 Federal Register 55905,
15 that the need for power is equated with the benefits
16 of the proposed action. Here, the proposed action is
17 for Units 3 and 4 and it will be providing energy for
18 the entire ERCOT area. Therefore, it seems reasonable
19 that they would assess the need for power based on
20 that area.

21 The Petitioners have not pointed to any
22 legal authority to suggest that the need for power
23 should be assessed on an individual owner basis.
24 Here, the power will be provided to the entire region.
25 Therefore, they have assessed need for power for that

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1 region.

2 JUDGE GIBSON: Okay, thank you.

3 MR. EYE: Your Honor, first of all, it is
4 my understanding that the City of San Antonio or CPS
5 has not actually done all the approvals that are
6 necessary to actually commit to going forward with
7 their portion of this project. And to the extent that
8 they are uncertain about it, is partly because there
9 is a need for power question. Do they really need
10 this capacity in order to meet their needs?

11 It is my understanding that they have made
12 a commitment to 770 megawatts of energy efficiency,
13 which would effectively come close to replacing that
14 which they would be getting from Units 3 and 4.

15 The view of the commission staff is that
16 it is okay to essentially take the broader ERCOT
17 region and consider it. But again, we are back to
18 this question about what is CPS? Is it going to be
19 primarily a power supplier for its municipal customers
20 or is it going to be rolled into this bigger picture
21 of ERCOT? And in terms of the rank order of its
22 responsibilities and priorities, its first priority is
23 to its municipal customers. And so that is why we
24 think that the need for power consideration of its
25 primary customer base has to be considered first,

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1 before it gets down to the point where you can justify
2 selling excess capacity into ERCOT. And on the excess
3 capacity question, if they have excess capacity, that
4 is capacity that is paid for in the first instance by
5 their rate payers. And if demand drops off outside of
6 their municipal rate service territory, then they are
7 still stuck with their excess capacity.

8 And so the need for power question as it
9 relates to CPS individually is a very important piece
10 of this. Do they need the power to meet their primary
11 needs? Our contention, based upon Dr. Makhijani's
12 analysis is no. So, you never really get to the
13 question about the need for power to supply ERCOT, if
14 you can't justify meeting the supply needs of their
15 primary customer base. And if their primary customer
16 base is supplied with adequate, as pointed out by Dr.
17 Makhijani, then having excess capacity that is
18 problematic in terms of whether it gets sold outside
19 of their service territory or not, depending upon
20 market conditions and demand, that question should not
21 be reached. It should be primarily their immediate
22 service territory in and around San Antonio.

23 JUDGE GIBSON: Counsel for the NRC staff,
24 in the NEI matter that the Commission recently
25 addressed, what was the -- was there a municipal

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1 utility involved in that matter?

2 MS. BIELECKI: Not that I am aware of. It
3 was a Petition for Rulemaking questioning whether or
4 not the NRC should continue to consider alternative
5 energy sources and need for power.

6 JUDGE GIBSON: Okay. Thank you. Thank
7 you. I appreciate it. Okay, I think we will take a
8 break and we will reconvene in ten minutes.

9 (Whereupon, the foregoing proceeding went
10 off the record at 3:32 p.m. and resumed
11 at 3:45 p.m.)

12 JUDGE GIBSON: We are back on the record.
13 If we could turn to Contention number 27.

14 Counsel for Petitioners, through
15 Contention 27, you are challenging the construction of
16 Units 3 and 4 insofar as those construction activities
17 may cause environmental problems. Is that correct?

18 MR. EYE: In general, yes, sir.

19 JUDGE GIBSON: Now the applicant, in its
20 answer, has catalogued the areas in the environmental
21 report where it maintains that measures will be taken
22 that the Applicant deems to be adequate to protect the
23 environment against harm. And what I would like to do
24 is sort of go through those one at a time and then you
25 can tell me precisely what you believe is wrong with

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1 what the Applicant has indicated it will do in its
2 environment report. Is that okay?

3 MR. EYE: Yes, sir.

4 JUDGE GIBSON: Okay. Let's start with
5 construction de-watering and disturbance of local
6 surface water bodies. The Applicant maintains that
7 this concern is addressed sufficiently in Sections
8 3.D(S), 4.2, and 4.6 of the Environment Report. What
9 do you believe to be wrong with what the Applicant has
10 indicated it will do with respect to construction de-
11 watering and disturbance of local surface water
12 bodies?

13 MR. EYE: Your Honor, specifically in the
14 Applicant's Environmental Report, it cites the de-
15 watering effects on the aquifer and on local wells.
16 And in the response then, they say that local drinking
17 water wells are deeper and, therefore, it would be
18 unaffected. But it is still in their environmental
19 report, they acknowledge that they are going to be de-
20 watering the aquifer and local wells.

21 So, even though they have cited that the
22 drinking water wells are evidently something other
23 than what they are acknowledging that they are going
24 to de-water, it is still not clear precisely what
25 wells are going to be de-watered and to the extent to

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1 which the aquifer would be de-watered. I mean, I know
2 that they are acknowledging the drinking water wells,
3 but they also acknowledge that there are evidently
4 other wells.

5 JUDGE GIBSON: Sure. Let's see if we are
6 talking about just simply a matter of confusion
7 arising from imprecise use of terms or if we are
8 talking about something else. Would you please
9 respond to this one specific point?

10 MR. MATTHEWS: Yes, Your Honor. I think
11 the reference here is to the de-watering wells
12 themselves.

13 JUDGE GIBSON: Okay.

14 MR. MATTHEWS: These are the wells that
15 you are going to use to de-water the area. If we look
16 to Section 4.2.1.2, which discusses the ground water
17 de-watering, the plan is to build a slurry wall. And
18 a slurry wall is described in that section of the
19 Environmental Report. And then to de-water within
20 that slurry wall. So you essentially will have, where
21 the excavation is taking place, the creation of sort
22 of a swimming pool effect where you would use these
23 slurry walls to isolate the ground water that is
24 outside of the excavation site so that then you can
25 de-water the area within the excavation site and

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1 minimize the impact on the ground water. The ground
2 water in the shallow aquifer that is impacted. It is
3 not even clear that it will be impacted because they
4 will be outside these slurry walls. The de-watering
5 wells will be located and take place inside the
6 excavation area that is meant to be de-watered.

7 JUDGE CHARBENEAU: Do you know what the
8 depth is to the underlying aquitard?

9 MR. MATTHEWS: The depth of the --

10 JUDGE CHARBENEAU: There has got to be
11 something between the shallow aquifer system and the
12 deeper aquifer system. Or it is just called a clay
13 layer. You might have it written down as a clay
14 layer.

15 MR. MATTHEWS: About 150 feet.

16 JUDGE CHARBENEAU: So you are going to
17 have a slurry wall go down to 150 feet?

18 MR. MATTHEWS: It says a depth of
19 approximately 125 feet below grade.

20 JUDGE CHARBENEAU: Is the depth of the
21 slurry wall?

22 MR. MATTHEWS: Yes.

23 JUDGE CHARBENEAU: That is a pretty good
24 size slurry wall.

25 MR. MATTHEWS: I'm sorry. It is discussed

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1 in Section 4.2.1.2 of the Environmental Report. And
2 perimeter de-watering would be required to a depth of
3 at least 35 feet with de-watering wells for the deeper
4 portion of the excavations located in the lower unit
5 of the shallow portion of the Chicot aquifer to a
6 depth of approximately 95 feet below grade. A slurry
7 wall will be installed around the entire excavation to
8 a depth of approximately 125 feet below grade.

9 JUDGE CHARBENEAU: Okay.

10 MR. MATTHEWS: So, I think --

11 JUDGE CHARBENEAU: And so you are --

12 MR. MATTHEWS: -- we are misspeaking in
13 that the area, in this area the Environmental Report
14 describes the aquifer in most areas being 35 feet but
15 in some areas 95 feet and the slurry wall going down
16 125 feet.

17 JUDGE CHARBENEAU: Okay. And so the
18 slurry wall ties in to the underlying play and you are
19 de-watering the area that is within the slurry wall.

20 MR. MATTHEWS: As best as I can
21 understand. The way it was described to me was the
22 shallow aquifer would be outside of the slurry wall.

23 JUDGE CHARBENEAU: Okay. And the wells,
24 they assume a well point or a system of wells,
25 collected wells, those are the wells that are being

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1 -referred to. There are no other wells with any uses
2 in that area.

3 MR. MATTHEWS: Correct. The wells that
4 are going to be de-watering are the wells to de-water
5 the excavation area. There is no description of other
6 wells that are going to end up being.

7 JUDGE CHARBENEAU: And the last question
8 is I think you had mentioned, someone with the
9 Applicants had mentioned earlier, the closest user of
10 the shallow aquifer is a distance of roughly -- the
11 closest user of the shallow aquifer to the plant is
12 roughly at what distance?

13 MR. MATTHEWS: I believe that the user is
14 a well to the deep aquifer and that is at about one
15 mile.

16 JUDGE CHARBENEAU: Okay. And for area --

17 MR. MATTHEWS: And that is for cattle.

18 JUDGE CHARBENEAU: -- I thought there was
19 some livestock or something.

20 MR. MATTHEWS: That is for cattle and then
21 there is a well for drinking water three miles away.

22 JUDGE GIBSON: So I take it then that
23 there is no user of the shallow aquifer at all, other
24 than to keep the ground from caving in.

25 MR. MATTHEWS: I just wanted to confirm

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1 the well that is one mile away that is used for cattle
2 is a well to the deep aquifer.

3 JUDGE CHARBENEAU: That is also the deep
4 aquifer.

5 MR. MATTHEWS: Yes.

6 JUDGE CHARBENEAU: Okay.

7 JUDGE GIBSON: And so you are not aware of
8 any users of that shallow aquifer, other than to keep
9 the ground from caving in. And everyone uses it for
10 that reason.

11 MR. MATTHEWS: No.

12 JUDGE GIBSON: Okay.

13 JUDGE CHARBENEAU: The Petitioners
14 mentioned water quality impacts associated with
15 construction de-watering. What would those be?

16 MR. EYE: Primarily, Your Honor, I think
17 that would be related to the storm water pollution
18 runoff and I presume that in fact one of the open
19 items in contention one that cited was an SWPP permit,
20 a Storm Water Pollution Permit, that is in process, I
21 believe, of being obtained. And I believe that
22 because that permit is not yet in hand, there is a
23 concern that runoff from the construction area would
24 have an adverse impact on the water quality of the
25 Colorado.

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1 JUDGE CHARBENEAU: Is this runoff that
2 from the discharge from the de-watering wells?

3 MR. EYE: Well, I think that would be part
4 of it but it is also just the general construction
5 site runoff that would occur in the absence of
6 mitigated measures.

7 JUDGE CHARBENEAU: Okay, this is from
8 construction and not from de-watering.

9 MR. EYE: Correct. But my understanding
10 is that de-watering is part of the construction
11 process.

12 JUDGE CHARBENEAU: Well, yes. But de-
13 watering, you generate a lot of water. And I was
14 wondering if you were talking about the water from the
15 de-watering versus the water from rainfall falling on
16 the construction site.

17 MR. EYE: We differentiate between the
18 two. And I believe that the latter is what we would
19 be referring to in terms of the water quality issue.

20 JUDGE CHARBENEAU: Okay, well, what I had
21 seen was the comment that ground water quality impacts
22 are associated with construction de-watering. And I
23 wasn't sure what that tie-in was.

24 MR. EYE: Well, --

25 JUDGE CHARBENEAU: With construction, I

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1 can understand it but not with construction de-
2 watering.

3 I've got some more but none on that
4 section.

5 JUDGE GIBSON: Okay, we will go to the
6 next one. I just want to be sure.

7 Okay, let's look at impacts on the
8 Colorado River. The Applicant maintains that it
9 addresses this concern sufficiently in Sections 4.2
10 and 4.3 of the Environmental Report. What do you deem
11 to be wrong with that?

12 MR. EYE: Your Honor, it is our contention
13 that there is no attempt to determine the extent of
14 the impacts on life in the Colorado including fish,
15 invertebrates and so forth that would result from
16 construction activities.

17 JUDGE CHARBENEAU: I thought there was a
18 lengthy discussion of that. Let me ask the
19 Applicants. Wasn't there? I thought I had read a
20 discussion of water quality impacts on the river
21 associated with construction, I thought in --

22 MR. MATTHEWS: I thought the discussion
23 was about ways that the water, surface water issues
24 were going to be mitigated so that there would be no
25 impact on the Colorado River. I want to refer to

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1 Section 4.3.2.2 of the Environmental Report, which
2 characterizes the impacts on the Colorado River as
3 small. It indicates that there is no significant
4 sedimentation or runoff into the Colorado River that
5 is expected.

6 JUDGE CHARBENEAU: Okay well let's go
7 back, to Petitioners, then. What are the impacts on
8 the river? Is it sedimentation that you are most
9 focused on in terms of river impacts?

10 MR. EYE: Mostly. And I think that that
11 is the primary consideration.

12 JUDGE CHARBENEAU: And the sedimentation
13 is coming from sediment from the construction
14 activity?

15 MR. EYE: Correct. It is a result of
16 disturbance of soil on the site and then runoff
17 impacts into the river.

18 JUDGE CHARBENEAU: And does that assume
19 any steps to help control runoff or not?

20 MR. EYE: Well again, Your Honor, we
21 assume that they are going to be following through
22 with their obligations under the Clean Water Act to
23 get a Storm Water Pollution Permit. But that is one
24 of the outstanding items. So, if their Storm Water
25 Pollution Permit is in hand and the mitigated measures

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1 are deployed and effective, then it would presumably
2 mitigate those concerns. But since one of the open
3 items is the Storm Water Pollution permit, we didn't
4 assume that they would have it.

5 JUDGE CHARBENEAU: Would you normally be
6 using silt fences and things like that, when you are
7 doing construction at these locations?

8 MR. MATTHEWS: Yes, Your Honor. And there
9 is a description of that in the Environmental Report,
10 a more detailed descriptions in 3.9(s). And a Storm
11 Water Pollution Prevention Plan will be required as
12 part of the permitting process and that is discussed
13 in the Environmental Report in order to mitigate these
14 effects.

15 And let me just add with respect to the
16 Colorado River, looking at Section 4.3.2.2, I did
17 misspeak. There is an impact on the Colorado River
18 from dredging, from anticipated dredging activities
19 and there is a discussion of the impact on the river
20 from that.

21 JUDGE CHARBENEAU: That is what I thought.

22 MR. MATTHEWS: And I would also point out
23 that from a storm water perspective, the storm water
24 mitigation measure is going to be taking place at the
25 construction site. In fact, there will be an

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1 incentive to be particularly aggressive with respect
2 to storm water management, in order to assure that
3 there aren't impacts on Units 1 and 2, which are
4 closest to the construction site. The Colorado River
5 is two miles away.

6 So, by the time -- I think that that is a
7 reason there wouldn't be an expectation there would be
8 any significant impact on the Colorado River at all
9 from the construction activities themselves.

10 JUDGE CHARBENEAU: And this may be too
11 early to have done so but has there been any design of
12 a storm water management system for the construction
13 period?

14 MR. MATTHEWS: And this is discussed in
15 the Environmental Report but there are plans for storm
16 water basins --

17 JUDGE CHARBENEAU: Okay, there is a
18 intention --

19 MR. MATTHEWS: -- and construction storm
20 water basins for the de-watering, the water that comes
21 from the de-watering activity from excavation and from
22 storm water during construction to go into those storm
23 water basins. And there is some design work underway
24 but in the Environmental Report, there is discussion
25 of the plan to have storm water basins.

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1 JUDGE CHARBENEAU: Okay, so there is
2 intention. I don't remember the topography. Is there
3 a significant area of gradient run on to this site and
4 would there be any berms put in to control that? The
5 answer is no. Okay.

6 MR. MATTHEWS: No, I don't believe so.

7 JUDGE CHARBENEAU: Okay. Thank you very
8 much.

9 JUDGE GIBSON: Let's turn to air emissions
10 and fugitive dust. The Applicant maintains that this
11 concern is addressed sufficiently in 3.9(s), 4.4, and
12 4.6 of the Environmental Report. What do you maintain
13 is wrong about that with respect to air emissions and
14 fugitive dust?

15 MR. EYE: Your Honor, in reviewing this,
16 it was our understanding that the mitigation that
17 would be used was to mitigate noise. To the extent
18 that the applicant is committed to taking measures,
19 including watering and so forth to hold down
20 construction-related dust, fugitive dust; then you
21 know, then our contention is related, I think is more
22 limited to -- I'm sorry. I misspoke.

23 To the extent that that is addressed, that
24 the fugitive dust question is addressed and it is
25 effective, then I don't know that we have a particular

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1 issue now that they have made their commitment in fact
2 to take measures to mitigate fugitive dust. So, I
3 don't know that that part of the contention would be
4 viable.

5 JUDGE GIBSON: Okay. And air emissions,
6 were those the air emissions you were concerned with
7 or dust, were airborne particulates or was there
8 something else?

9 MR. EYE: Primarily, I think, except for
10 the CO₂ impacts of course, which we have already
11 talked about earlier.

12 JUDGE GIBSON: We have already talked
13 about that.

14 MR. EYE: Greenhouse gas impacts.

15 JUDGE GIBSON: Okay, thank you.

16 MR. MATTHEWS: Your Honor?

17 JUDGE GIBSON: Yes?

18 MR. MATTHEWS: Just so the record is
19 clear, there is a record for the Board to,
20 Environmental Report 3.9.S.2.2, which does describe
21 that air quality protection procedures "will describe"
22 techniques to minimize fugitive dust and that watering
23 is "typically required." And that is the commitment
24 I believe that the Petitioners are referring to.

25 JUDGE GIBSON: Okay, right.

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1 Let's turn to radiation protection for
2 construction workers. Now, I want to make sure that
3 we understand the concern of the Petitioners in this
4 regard. Is your concern that construction workers
5 will be exposed to radiation from Units 1 and 2 while
6 they are working on 3 and 4? Or, is your concern that
7 they are going to be exposed to sources of radiation
8 from Units 3 and 4 before they go online with respect
9 to loading fuel or something like that?

10 I really don't understand what your
11 concern is. Maybe it is with both. I don't know but
12 I didn't understand what your concern was.

13 MR. EYE: Your Honor, I think primarily we
14 are concerned about radiation impacts from the
15 operations of Units 1 and 2. By the time fuel is
16 loaded, if it ever is loaded in Units 3 and 4,
17 presumably the construction workers would have been
18 cleared off the site and they would be ready to go to
19 critical state. And so presumably, the construction
20 process would be wrapped up at that point.

21 So, we are not concerned about Units 3 and
22 4, it is Units 1 and 2.

23 JUDGE GIBSON: Okay

24 MR. EYE: And the proximity of the
25 construction workers to Units 1 and 2 gives rise to a

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1 concern that there would be some assurance that they
2 not receive higher than permitted doses. And if so,
3 that there be some sort of ongoing monitoring and, if
4 need be, some medical attention be devoted or be
5 contamination facilities be available for them, if
6 that would be necessary. We didn't understand that
7 that was necessarily part of the Applicant's
8 intentions to provide the construction workers with
9 that sort of facility onsite or really anywhere else.
10 And that was the underlying premise of that part of
11 the contention.

12 JUDGE GIBSON: Okay. Now, my
13 understanding from the Applicant's answer is that they
14 believe they sufficiently addressed this in 4.5 of the
15 Environmental Report but in addition to that, they
16 assert that to the extent that you are claiming that
17 workers, constructions workers in unrestricted areas
18 would need to wear some kind of protective gear, that
19 that is not required by the regulations and,
20 therefore, it would essentially be prohibited by those
21 rules. Do you have any response to that?

22 MR. EYE: To be as protective as possible
23 of those workers working in proximity to the Units 1
24 and 2. Nobody is going to necessarily plan an
25 accidental release. I mean, that is the nature of an

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1 accident. It is not planned. We are concerned that
2 these workers have adequate protection.

3 Now, to the extent that protective gear is
4 required, I think that is more in the nature of some
5 sort of chronic release that might be going on that
6 would be necessary to maintain plant operations, a
7 greater release than what would otherwise be planned.
8 It is really more the concern that there could be an
9 accidental release and these workers unnecessarily
10 exposed is the underlying premise for that part of the
11 contention.

12 MR. MATTHEWS: Your Honor, I believe the
13 Applicant's position is that no radiation protection
14 measures are going to be required because the analysis
15 in Section 4.5 shows that the projected doses to
16 workers would be less than the doses that are
17 permitted for members of the public in unrestricted
18 areas.

19 JUDGE GIBSON: Okay.

20 MR. MATTHEWS: And the Petitioners don't
21 point to any flaw in that analysis or provide any
22 evidence or suggestion as to an anticipated dose to
23 workers that contradicts that analysis.

24 JUDGE GIBSON: Okay.

25 MR. EYE: Your Honor, just one point. I

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1 mean, it is acknowledged that there will be a dose
2 received by those workers onsite. And to that extent,
3 it doesn't seem like it would be asking too much to
4 have that monitored in some means, if only to assure
5 that they are not receiving a dose that is higher than
6 what would be anticipated. And the reality is they
7 are going to be exposed to a higher radiation field
8 onsite than if they were working down the road at
9 another construction project and that is the reason
10 for that contention is to take a very conservative
11 approach to worker protection.

12 JUDGE ARNOLD: I do have one question.
13 Around Units 1 and 2, is there standard monitoring of
14 radiation in the area?

15 MR. MATTHEWS: Yes, Your Honor.

16 JUDGE ARNOLD: And would the dose readings
17 in that monitoring bound the doses received by
18 workers?

19 MR. MATTHEWS: Yes, Your Honor.

20 JUDGE ARNOLD: So you in fact have
21 monitoring of the workers in that you upper bound it?

22 MR. MATTHEWS: Yes, Your Honor.

23 JUDGE ARNOLD: Thank you.

24 MR. MATTHEWS: And Your Honor, I would
25 also point out that the emergency plan provides in the

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1 event of an accident that the workers would be
2 evacuated.

3 JUDGE GIBSON: Okay, I know you all
4 thought we would never get here but I believe we are
5 getting ready to start on Contention 28.

6 Counsel for Petitioners, in Contention 28,
7 I believe you are claiming that Units 3 and 4 will
8 impact whooping cranes, whose wintering habitat is 35
9 miles southwest of the site and that the applicant has
10 made an adequate provision for this in the
11 Environmental Report. Is that a fair characterization
12 of your contention?

13 MR. EYE: Yes.

14 JUDGE GIBSON: Let's turn first to the
15 critical habitat issue. Are you aware of anything
16 about Units 3 and 4 that will destroy or in any way
17 disturb critical habitat for the whooping cranes?

18 MR. EYE: Certainly during the
19 construction process, there will be at least some
20 disturbance of the general environment to the point
21 where I mean, it stands to reason that species as
22 sensitive to movement and noise and so forth as these
23 birds would be, would have some impact. I think that
24 one of the things that we are concerned about and the
25 site itself is somewhat remote with lowlands and

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1 wetlands, and flood plain in the area that certainly
2 supports a number of different kinds of species. The
3 whooping crane was really just selected as
4 representative of the impacts or would be one of the
5 species that would be representative of the impacts.

6 The site around or the area around the
7 plant itself is sufficiently isolated that it is
8 certainly very likely that not only the whooping crane
9 but presumably other species would be using it on a
10 regular basis for its own habitat.

11 But actual direct incursion into critical
12 habitat other than just the increase in background
13 radiation which would be anticipated, I don't know of
14 any direct impact into the critical habitat, other
15 than the background radiation.

16 JUDGE GIBSON: And we can get into
17 radiation releases in a little while. I just want to
18 know whether the critical habitat has been effected.

19 MR. EYE: Well except the migratory
20 patterns.

21 JUDGE GIBSON: And we will get into that
22 in minute, too, but I am just talking about the
23 habitat.

24 MR. EYE: Exactly.

25 JUDGE GIBSON: Okay. Are you aware of

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1 whether whooping cranes have ever been observed on the
2 site where Units 3 and 4 are located?

3 MR. EYE: On the sites itself, no. In the
4 vicinity, yes.

5 JUDGE GIBSON: Applicants, are you all
6 aware of whether there has ever been a whooping crane
7 sighting on your site?

8 MR. MATTHEWS: No, there never has been
9 and we are not aware of any whooping cranes being
10 sighted in the vicinity. And we haven't seen any
11 evidence that whooping cranes have ever been signed in
12 the vicinity.

13 JUDGE GIBSON: Okay.

14 MR. MATTHEWS: Now, I would like to
15 clarify as well that the Environmental Report
16 conservatively acknowledges that as close as 35 miles,
17 there is an area where whooping cranes had been
18 observed forging. It is not actually even a nesting
19 area or their winter residence per se, which is much
20 further away, I think --

21 JUDGE GIBSON: Is that Aransas Pass?

22 MR. MATTHEWS: -- 66 miles or something
23 like that.

24 MS. BIELECKI: Is that Aransas Pass? How
25 far is Aransas Pass from here?

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1 MR. MATTHEWS: Roughly 67 miles.

2 JUDGE GIBSON: Sixty-seven miles to
3 Aransas pass but the 35 miles is actually where as far
4 north as they have been seen forging. Fair enough?

5 MR. MATTHEWS: The outer bounds of where
6 they have been seen forging, yes.

7 JUDGE GIBSON: Okay, thank you. Okay.
8 Thank you for that clarification.

9 Let's talk about the flight path. Are you
10 aware of the migratory flight path for these whooping
11 cranes? Does it actually go over where Units 3 and 4
12 are?

13 MR. EYE: It is in the -- you know,
14 whether it goes directly over or close to the
15 boundaries, I am not sure. I am not sure that you can
16 map the migratory pattern with that sort of precision
17 but its migratory fly ways are in that area.

18 JUDGE GIBSON: But in terms of actual data
19 sightings, you are not aware of them actually having
20 gone over where Units 3 and 4 are?

21 MR. EYE: We are not.

22 JUDGE GIBSON: Okay, thank you.

23 Now, you want to talk about the migratory
24 flight path? Yes.

25 MR. MATTHEWS: I would just simply ask the

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1 Board to take note that it is incumbent upon the
2 petitioners to present evidence that there would be
3 migratory flight path --

4 JUDGE GIBSON: Right.

5 MR. MATTHEWS: -- near the site or in the
6 vicinity of the site. The Applicants are not aware of
7 one. In general, our understanding is that the
8 whooping cranes normally fly north from their
9 wintering habitat and that would not bring them
10 logically anywhere close to the site.

11 JUDGE GIBSON: Okay, thank you.

12 Okay. Now, are you aware of anything
13 about the construction or the operation of Units 3 and
14 4 that will impede the migratory flight path in any
15 way of these whooping cranes?

16 MR. EYE: Other than the noise, fugitive
17 dust that would tend to disturb the flight pattern
18 during operation. I mean, the whooping cranes don't
19 know they are in an area of higher background
20 radiation, obviously, but that would still be an
21 impact to them even though they would not be aware of
22 it.

23 JUDGE GIBSON: And we will get to the
24 radioactive release issue in a minute. But I am just
25 talking about their migratory flight path. Are you

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1 aware of anything about that that is going to impede
2 it.

3 MR. EYE: Not other than what we have
4 already said, Your Honor.

5 JUDGE GIBSON: Okay, thank you.

6 Now, the NRC staff suggests -- Well, first
7 of all, my understanding is that the NRC staff was not
8 able to obtain copies of one or more of the reports of
9 this employee of U.S. Fish and Wildlife Service who
10 did two reports, one dated April 7, 2009 and one dated
11 March 14, 2007.

12 Let me just ask first of all, have you all
13 seen copies of those reports or are you still waiting
14 on --

15 MS. BIELECKI: One report there was a link
16 that the Petitioners provided. The other report it
17 was just a date and we thought maybe it would be on
18 the same web page as the other link and it was not.

19 JUDGE GIBSON: And you haven't been able
20 to find it and you haven't seen it?

21 MS. BIELECKI: No. We found one, it
22 looked like an email that was forwarded to another
23 person that looked like it was from Tom Stehn. But
24 and it said this is what I did on this date and it
25 appears to be an aerial report but I am not sure if

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1 that is in fact what the petitioners were referring
2 to.

3 JUDGE GIBSON: Okay. Okay, do you know
4 which one you found and which one you don't have? One
5 is dated April 7, 2009 and one is dated March 14,
6 2007.

7 MS. BIELECKI: The March 14th is the one
8 that was the forwarded email, which I am not sure if
9 that was. The April one, we were able to find. That
10 is the one they provided a link for.

11 JUDGE GIBSON: Okay. And the April 7,
12 2009?

13 MS. BIELECKI: That is the one they
14 provided a link for that we found.

15 JUDGE GIBSON: So you have that link.

16 MS. BIELECKI: Yes. Just the March 14th -

17 -

18 JUDGE GIBSON: You have since seen an
19 email that may or may not be the report but does bear
20 the same date.

21 MS. BIELECKI: Yes. Yes, and it was on
22 the ccbirding website.

23 JUDGE GIBSON: ccbirding?

24 MS. BIELECKI: Dot com, yes.

25 JUDGE GIBSON: Okay.

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1 MR. EYE: - As I understand it --

2 JUDGE GIBSON: Let's just make sure we are
3 talking about the same thing. Okay?

4 MR. EYE: Right. As I understand it, Your
5 Honor, as I recall, the latter report referenced the
6 earlier one.

7 JUDGE GIBSON: Okay.

8 MR. EYE: And so that is really the origin
9 of that information is the report the staff was able
10 to find this year, April 7, 2009, referenced the
11 earlier report.

12 JUDGE GIBSON: And is the earlier report
13 this email that is on this ccbirding?

14 MR. EYE: I believe it is. I think it is
15 the one on that particular website.

16 JUDGE GIBSON: Okay. Now do I understand
17 correctly that it is your position, NRC staff, that
18 these reports from the employee of the U.S. Fish and
19 Wildlife Service do not support the position of the
20 Petitioners in this case?

21 MS. BIELECKI: Well, our position is that
22 neither of the reports indicate conclusively that
23 whooping cranes are in fact in this area and that
24 there are impacts on them. The Petitioners'
25 contention is that they failed to assess impacts on

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1 this species. And our position is that neither of
2 these reports indicate that there are in fact impacts
3 and that they are in this area.

4 JUDGE GIBSON: Okay. You are saying that
5 the U.S. Fish and Wildlife Service employee's reports
6 do not support the proposition that there is anything
7 about Units 3 and 4 that are going to impact the
8 whooping cranes.

9 MS. BIELECKI: Right.

10 JUDGE GIBSON: And that is the extent of
11 what you are saying.

12 MS. BIELECKI: Right.

13 JUDGE GIBSON: Correct?

14 MS. BIELECKI: Right.

15 JUDGE GIBSON: Okay. Okay, now, what is
16 it about the reports from the U.S. Fish and Wildlife
17 Service employee that you deem to be important for
18 purposes of this contention?

19 MR. EYE: These species are in trouble or
20 this species is in trouble. They have a higher than
21 expected mortality rate and it is our contention that
22 any kind of disturbance in their ecosystem will have
23 a further adverse effect and aggravate their already
24 precarious state.

25 JUDGE GIBSON: I would be willing to

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1 anticipate that just about anybody would be willing to
2 stipulate that whopping cranes are a delicate species
3 in danger and I think they have been listed that way.
4 But is there anything else about that report that --

5 MR. EYE: Other than --

6 JUDGE GIBSON: -- you have cited it for?

7 MR. EYE: Other than what we have cited, -

8 -

9 JUDGE GIBSON: Okay.

10 MR. EYE: -- no.

11 JUDGE GIBSON: Well again, I don't -- I
12 suspect that we could probably even take judicial
13 notice of that. I don't think -- whopping cranes have
14 been a pretty fragile species for a long time.

15 MR. EYE: Correct.

16 JUDGE GIBSON: So, I am sure that is the
17 case. Okay.

18 Now, let's talk about emissions and
19 discharges of pollutants from Units 3 and 4. You
20 claim that those are going to adversely affect
21 whopping cranes. What is it about that that you
22 believe is going to adversely affect them?

23 MR. EYE: Like increases in background
24 radiation generally, Your Honor, on whatever species.
25 Here, it tends to be focused on the whopping crane, of

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1 course. But any species that has an increased
2 radiation exposure has an increased risk of radiation-
3 related disease or genetic defects. And this goes
4 back to the policy statement that the NRC has adhered
5 to for 30 years or thereabouts.

6 And to the extent that the whooping crane
7 is exposed to a higher background radiation, it
8 increases its chance for radiation-related disease or
9 genetic defects. And that is the admission and
10 discharge of radiation.

11 And to the extent that it feeds on, that
12 it is part of the food chain and there is a
13 bioaccumulation and bioconcentration that aggravates
14 that exposure, the whooping crane is placed in further
15 endangered status because of that increased background
16 radiation and the bioconcentration and
17 bioaccumulation.

18 JUDGE GIBSON: Okay. With respect to
19 radiation exposure, the Applicant has used herons as
20 a surrogate species for whooping cranes in evaluating
21 radiation exposures. Do you consider that to be
22 improper? And if so, why?

23 MR. EYE: I don't think it is inherently
24 improper, no. I don't think that it is -- No, I do
25 not believe that it is inherently improper.

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1 JUDGE GIBSON: Okay. The NRC staff has
2 noted that the Commission specifically directed the
3 staff not to develop separate radiation protection
4 regulations for individual plant and animal species.
5 And so it opposed your suggestion that the Applicant
6 should consider impacts on the whooping cranes and any
7 other endangered or threatened species in the area.
8 Do you have a problem with that?

9 MR. EYE: Well, only to the extent that it
10 conflicts with the Atomic Energy Act, 2133(d).

11 JUDGE GIBSON: You also cited a San
12 Antonio Express article about viruses in whooping
13 cranes. Was that merely to show that they are even
14 more fragile than we thought or was that to show that
15 there is some connection between radiation and viruses
16 in whooping cranes?

17 MR. EYE: No, it was to show that this is
18 an additional stressor on the species.

19 JUDGE GIBSON: Okay. Fair enough.

20 I have just, I guess two more points that
21 I want to raise and then you all will have your
22 opportunity to make whatever concluding statements you
23 would like to make to address issues that we have not
24 been able to address to your satisfaction to this
25 point.

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1 First of all, counsel for Petitioners, at
2 the conclusion of its answer, made clear that it
3 believes this proceeding is governed by subpart (l)
4 and not subpart (g). You did not seek a subpart (g)
5 hearing. Did you?

6 MR. EYE: We asked for a hearing
7 consistent with I forget the citation at this point,
8 but it is in our original petition.

9 JUDGE GIBSON: Okay.

10 MR. EYE: That is the hearing we sought.

11 JUDGE GIBSON: Okay. Well, if any of your
12 contentions are admissible, you will get a proceeding
13 under subpart (l). I just want to be sure that you
14 are not expecting one under subpart (g), which would
15 be a different kind of proceeding.

16 MR. EYE: That is correct, Your Honor.

17 JUDGE GIBSON: Okay, great. Okay.

18 Last, on Contentions 9 and 12 through 16,
19 you have a rather, for lack of a better word, cryptic
20 reference to the expert report and don't really say
21 much more than that about the specific concerns of
22 your contention.

23 Any reason for doing that? Did you
24 consider that to be adequate?

25 MR. EYE: Well, in the interests of

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1 brevity, I mean, we are already running into a volume
2 of contentions and arguments related thereto that
3 seemed for us to begin to repeat that which Dr. Ross
4 and others were already addressing seemed redundant.

5 JUDGE GIBSON: Okay, that's fine. Do you
6 have anything else?

7 JUDGE CHARBENEAU: Just a follow-up
8 question on that. Was Dr. Ross provided any
9 information on how to frame a contention?

10 MR. EYE: Well, I think we spoke to her
11 generally about how to approach the problems, the
12 issues that she was looking at. And she went to the
13 Environmental Report and cited the sections that she
14 called out in her report and addressed them in that
15 manner.

16 JUDGE CHARBENEAU: Okay.

17 JUDGE GIBSON: Okay, would you like to
18 start any concluding statement?

19 MR. FRANTZ: Yes, I think we have
20 addressed the substantive issues very well. I would
21 just urge the Board as they consider these contentions
22 to go back and look at the original contentions as
23 specified in their Petition to Intervene. We have
24 heard a lot of testimony over the last two days from
25 counsel for Petitioners. A lot of that was either not

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1 in the initial petition, either in terms of the
2 substance of the statements or in fact to change the
3 contentions, quite dramatically, in some cases.

4 And so, we would urge the Board, rather
5 than trying to move through these sifting sands that
6 the Petitioners have put forward, to go back to what
7 they have actually put in writing and look at that and
8 judge the admissibility of their written contention,
9 rather than looking at all of these changes that have
10 made in their contention and to look at all the new
11 information they have supplied over the last two days
12 that was not in the initial Petition to intervene.

13 JUDGE GIBSON: Thank you. NRC staff?

14 MS. KIRKWOOD: Sara Kirkwood for the NRC
15 staff. Your Honor, the only thing the staff would
16 like to note is that it did not spend a lot of time
17 over the last two days rehashing what was in its
18 answer but it is still does view ultimately the
19 admissibility of these contentions has to be judged
20 against 10 C.F.R. 2.309 and not any other standard
21 that may have been discussed today, including any new
22 view of the Atomic Energy Act, creating some
23 independent test that would allow us to trump our NRC
24 regulations. And we haven't spent much time talking
25 about that.

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1 But if the Board was considering that, we
2 would like an opportunity to brief the meaning of
3 Section 103 and Section 182 of the Atomic Energy Act.

4 JUDGE GIBSON: Thank you.

5 MR. EYE: Thank you, Your Honor. In
6 particular, Contention 1 is very troubling to us
7 because it requires the Petitioner to deal with a
8 moving target. And really this is the Petitioner's
9 only chance to deal with the body, the main body of
10 issues that this Application raises.

11 And to the extent that the list of
12 incomplete items, un-obtained permits and licenses, it
13 presents issues that are unresolved and yet we are
14 supposed to come in here and deal with them as if they
15 are resolved, assuming that they will be resolved, I
16 think prejudices the Petitioners and I think
17 undermines their capacity to engage in this process in
18 a way that is completely meaningful. And I think we
19 have articulated that or attempted to articulate it
20 through that contention and through other contentions
21 as has been appropriate throughout the last couple of
22 days.

23 So, we are very concerned that also now we
24 understand that the staff is in the process of still
25 reviewing additional information. We now that there

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1 are scores of RAIs that have yet to be responded to.
2 And this further prejudices the Petitioners.
3 Petitioners have limited resources, limited access to
4 resources. And the idea that we might be back here
5 again with new contentions, based upon RAIs that have
6 not yet been completed, puts Petitioners at a distinct
7 disadvantage and we believe that this proceeding
8 should not have been commenced unless and until there
9 is was a completion of the RAIs and whatever other
10 information that was necessary to obtain, to get to
11 the status where they could actually use their
12 operating license. And we specified that list in
13 Contention 1.

14 I think that we, you know, I don't want to
15 spend a lot of time on these other contentions because
16 I think we covered them adequately through the papers
17 and through the arguments in the last couple of days
18 but I would urge the Commission to look carefully at
19 whether or not there is really a need for the power
20 that is going to be generated by these two units.

21 We seriously question whether there is an
22 actual need for this baseload generating power to meet
23 the needs of the service territories, whether it is
24 the more attenuated CPS or the broader ERCOT. In
25 either event, given trend lines on use, given other

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1 generating capacity that is coming online, even as we
2 speak, through wind and solar, through aggressive uses
3 of efficiency and demand side management, there is a
4 serious question as to whether these units are
5 actually needed.

6 And that, to the extent of the case that
7 we cited from the Seabrook proceeding that says that
8 the need for power is a necessary predicate to obtain
9 a license, we would ask this panel to look at that
10 particular aspect very carefully. And we are sure
11 that you will look at everything carefully, but that
12 we think needs a fair amount of attention.

13 Water. Water quantity. I don't think it
14 is resolved through these hearings at all whether
15 there is adequate water to operate all four of these
16 units over the long haul. And if there is adequate
17 water to operate these four units, whether its adverse
18 effect downstream has been adequately analyzed and
19 determined whether it is justified to deny downstream
20 users, whether they be flora, fauna, or human, from
21 the benefits of the water that would be otherwise used
22 by these four units.

23 So, water quantity issues, particularly in
24 light of climate change and protracted drought
25 conditions that we project, at least based upon some

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1 climate models are likely to happen, become even more
2 acute matters for this particular adjudication.

3 There is no doubt that taking on the
4 question about global warming and climate change is
5 difficult. But nevertheless, to go forward with this
6 project is making a bet that adequate water resources
7 will be available. And based upon the empirical data
8 related to climate change, global warming, we think
9 that that is an unwise and imprudent decision to make
10 to go forward with these units, given the likely
11 shortage of surface water.

12 The question about dealing with
13 radioactive waste is generic. We recognize that but
14 the reason that we raised it in this particular
15 proceeding was prompted by the Applicant's own
16 designation in its papers of an intention, or at least
17 an intention as required to establish an onsite dry
18 cask facility. And that prompted our contention that
19 they needed to deal with that in a very specific way,
20 if that is what they are intending to do. And again,
21 we cited to the site layout drawing that calls out for
22 a dry cask storage facility but nowhere is it
23 designated in their drawing. And that is an
24 incomplete item that we believe needs to be resolved
25 before this would go forward to the licensing stage.

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1 I want to incorporate by reference the
2 arguments that we made earlier and I will close by
3 simply saying that while there is a clear difference
4 of opinion amongst the participants in this proceeding
5 about the role of the Atomic Energy Act and the health
6 and safety aspects in subpart (d) of 2133 that we have
7 cited numerous times and whether it is in play at all
8 in this proceeding, we think that that act of Congress
9 can be interpreted to err on the side of protecting
10 the public's interest by minimizing radiation
11 exposures, by minimizing the generation of radioactive
12 waste and by, in many instances, foregoing this
13 project because of its impact on other resources, such
14 as water.

15 So, as you, the panel, and your colleagues
16 in the Agency take these matters under consideration,
17 we urge that you not only consider the body of law
18 that is that which the Agency has developed over the
19 years, but to remember that the overall objective of
20 the Atomic Energy Act is that licenses be issued if
21 they are consistent with the public's health welfare,
22 health and safety, and that that be the backdrop to
23 whatever considerations and deliberations this panel
24 and others likewise constituted undertake.

25 And finally, thank you for the opportunity

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1 to present these arguments and to participate in this.
2 We have done our best to present that which we think
3 is important. In the process, we have learned a great
4 deal and we appreciate the patience of the panel and
5 the other participants in that regard. This is a
6 learning process for everybody, I presume. I mean, we
7 don't presume to have all the answers and I don't
8 think anybody in here has all the answers. And the
9 best that we can do is that which history has taught
10 us and to try to learn from that and to make good
11 decisions based upon that historical experience. And
12 we will certainly do whatever the panel asks us to do
13 as far as providing additional information or
14 arguments that would be useful in your deliberations.

15 JUDGE GIBSON: Thank you, all of you. In
16 behalf of this Board, it has been a very pleasant two
17 days working with good lawyers who have devoted a
18 great deal of time to this. I want to commend all of
19 you for that hard work.

20 And I also want to commend you all for the
21 civility with which you have approached this. I
22 realize there is a great deal of money involved, a
23 great deal of feelings involved about the condition of
24 the environment in Texas. And I realize that while
25 feelings may run strong, it is important that we be

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1 able to conduct ourselves this way. And you all have,
2 I think, set a very good standard for, I hope, future
3 proceedings here as well.

4 So, with that, we will conclude this
5 proceeding and we are adjourned. I thank you all for
6 your time.

7 (Whereupon, at 4:40 p.m., the foregoing
8 proceeding was adjourned.)

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CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory Commission
in the matter of: South Texas Project Unit 3&4

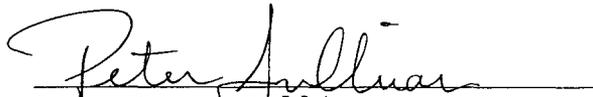
Name of Proceeding: Oral Arguments

Docket Number: 52-012-COL; 52-013-COL

ASLBP No. 09-885-08-COL-BD01

Location: Bay City, Texas

were held as herein appears, and that this is the
original transcript thereof for the file of the United
States Nuclear Regulatory Commission taken by me and,
thereafter reduced to typewriting by me or under the
direction of the court reporting company, and that the
transcript is a true and accurate record of the
foregoing proceedings.


Peter Sullivan
Official Reporter
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