

RAS3689

# Official Transcript of Proceedings

## NUCLEAR REGULATORY COMMISSION

Title: Duke Energy Corporation  
McGuire Nuclear Station, Units 1 & 2  
Catawba Nuclear Station, Units 1 & 2

Docket Number: 50-413-LR, et al.

Location: Charlotte, North Carolina

Date: Tuesday, December 18, 2001

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY and LICENSING BOARD PANEL  
LICENSING RENEWAL

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In the matter of : Docket Nos  
DUKE ENERGY CORPORATION : 50-413-LR  
(McGuire Nuclear Station, : 50-414-LR  
Units 1 & 2, Catawba Nuclear : 50-369-LR  
Station, Units 1 & 2 : 50-370-LR

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Tuesday, December 18, 2001

Charlotte, North Carolina

The above-entitled matter came on for hearing,  
pursuant to notice, at 9:00 a.m.

BEFORE:

THE HONORABLE ANN MARSHALL YOUNG, Chair

THE HONORABLE CHARLES N. KELBER

THE HONORABLE LESTER S. RUBENSTEIN

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17  
18 ALSO PRESENT:

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20  
21  
22  
23  
24  
25  
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P-R-O-C-E-E-D-I-N-G-S

JUDGE YOUNG: It's almost 9:00, so why don't we begin and for the record have everyone introduce themselves.

And Mr. Zeller, if you could sort of put that aside for a minute. I want to make a few statements after we introduce ourselves just to sort of get us started.

I'm Judge Ann Marshall Young. This is Judge Charles Kelber, and Judge Les Rubinstein.

Let's start with Ms. Uttal and have counsel and representatives introduce yourselves, please.

MS. UTTAL: I'm Susan Uttal, counsel for NRC Staff.

JUDGE YOUNG: We've got microphones but don't have them turned on because we thought we could do without them. If we can't, let us know and we will see what we can do about turning them on. If you can't hear me also, please bring that to my attention. Mr. Fernandez?

MR. FERNANDEZ: Antonio Fernandez, counsel for IRC Staff.

MR. REPKA: David Repka, counsel for Duke Energy. And I would like to introduce the rest

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1 of our team. On my left is Robert Gill, who's  
2 licensing project coordinator for Duke Energy.  
3 Behind me are my co-counsel Lisa Vaughn, Anne  
4 Cottingham, and directly behind, Michael Rafkey.

5 JUDGE YOUNG: Then you are Ms. Olson?

6 MS. OLSON: I'm sorry, Mary Olson,  
7 Nuclear Information and Resource Service, and I will  
8 have a brief thing I want to state before we start  
9 in terms of the schedule.

10 JUDGE YOUNG: Okay.

11 MR. ZELLER: I'm Louis Zeller, I'm  
12 with the Blue Ridge Environmental Defense League. I  
13 do have a slight hearing problem so I would ask that  
14 people speak up, especially when directing questions  
15 or comments in my direction, please.

16 JUDGE YOUNG: Okay.

17 MR. MONIAK: I'm Don Moniak with Blue  
18 Ridge Environmental Defense League. I can attest he  
19 does have a slight hearing problem.

20 JUDGE YOUNG: And Mr. Riley -- I'm  
21 Jess Riley associated with NIRS.

22 JUDGE YOUNG: Everyone received our  
23 order issued Friday on the schedule. You may notice  
24 that we have us ending each day at 5:30. We have  
25 been told that for security reasons we cannot go

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1 late. So we're going to have to make a special  
2 effort to stay on schedule.

3 I want to just make a few opening remarks  
4 before we get started. Ms. Olson, what was your  
5 problem with the schedule or issue with the  
6 schedule.

7 MS. OLSON: Very quickly, three  
8 items: Paul Gunter was to be here today, he had a  
9 family emergency. I'm optimistic, he may be here  
10 tomorrow. He's the lead on security contention.  
11 NIRS is also wishing to withdraw five contentions,  
12 that would perhaps make a little more opportunity to  
13 move the security contentions to tomorrow; and I  
14 also like to ask an additional five minutes for  
15 pleading the MOX item because there's procedural  
16 issues that have been raised in the reply and I have  
17 both procedural and substantive things I would like  
18 to speak to today.

19 JUDGE YOUNG: Which of the five that  
20 you're withdrawing?

21 MS. OLSON: 1.14, but not 1.15, I  
22 want to be clear.

23 JUDGE YOUNG: Okay.

24 MS. OLSON: 1.16.

25 MS. YOUNG: Okay.

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1 MS. OLSON: 1.2.1, 1.2.2, and 1.2.3.

2 And I'll just say, we understand that other venues  
3 might be for fruitful and it's not that we believe  
4 these issues don't have merit but we won't labor the  
5 time here.

6 JUDGE YOUNG: Okay. So you're  
7 withdrawing your contentions 1.1.4, 1.1.6, 1.2.1,  
8 1.2.2, and 1.2.3?

9 MS. OLSON: Correct.

10 JUDGE YOUNG: And you would like to  
11 move, let's see, is it 1.1.1 or 2 that's --

12 MS. OLSON: 1.1.2.

13 JUDGE YOUNG: You would like to move  
14 that one to tomorrow?

15 MS. OLSON: Yes.

16 JUDGE YOUNG: I don't see any reason  
17 why we can't do that. Is there any particular one  
18 that you would be ready to do today?

19 MS. OLSON: I'm ready to plead the  
20 MOX today and --

21 JUDGE YOUNG: MOX is your first one,  
22 correct?

23 MS. OLSON: Yes, 1.1.1.

24 JUDGE YOUNG: And then I guess  
25 really that will give us more time tomorrow. Let's

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1 see how we're going today and then if we need to add  
2 another one today, you can let us know which one you  
3 would rather do.

4 Now, seems as though there were some of  
5 yours that were related and it might be that we  
6 could bring others that had any relationship to the  
7 MOX issue in today.

8 So --

9 MS. OLSON: Okay, that's possible  
10 and/or related to security, keep tomorrow and  
11 bring -- anyway, perhaps you look at it and make a  
12 suggestion.

13 JUDGE YOUNG: Okay. And then if  
14 counsel for the Staff or for Duke has any input on  
15 how to approach this, please feel free. Maybe at  
16 lunchtime or right after lunch we can talk about  
17 this again, see what kind of progress we're making  
18 and hear what all parties have to suggest in terms  
19 of which ones to go with today that might be related  
20 to each other.

21 MS. OLSON: Thank you.

22 JUDGE YOUNG: Okay. I would just  
23 like to make a few comments about our oral argument  
24 today and tomorrow. You have the guidance schedule,  
25 we've already -- NIRS has already withdrawn some, so

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1 I hope that this will put us in a position to be  
2 able to get everything done today and tomorrow. We  
3 will try to stick to that as closely as possible so  
4 that the arguments of all parties on all issues can  
5 be covered while we are here.

6 This will demand that we be as organized  
7 as possible in these proceedings. You'll notice  
8 that we've left time for discussion with us for each  
9 contention, but we may also want to ask questions as  
10 you make your argument if we find that that would  
11 help to clarify issues and keep us on track while  
12 still permitting all parties to make arguments in  
13 keeping with our guidance as expressed our various  
14 orders to date.

15 As I said, we have been told that we must  
16 close each day by 5:30 because of new security  
17 measures in the courthouse. As with the counsel  
18 table situation, the key is flexibility and  
19 accommodation of realities including space and time.

20 And please feel free to bring any issues  
21 relating to that to our attention. We appreciate  
22 your being so accommodating.

23 I think recognition of a couple other  
24 factors may also facilitate the efficient use of all  
25 of our time. First, some of the contentions may in

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1       some manner challenge various rules of the  
2       Commission.

3               These rules are part of the law that we as  
4       judges must follow, and this board is not permitted  
5       by law to admit for litigation any challenge to a  
6       Commission rule. We are not the forum for any such  
7       challenges. There may be -- there may also be other  
8       issues for which any remedy may be through another  
9       process than this proceeding or outside the  
10      jurisdiction or authority of the board.

11              Other avenues include filing an  
12      enforcement petition under 10 CFR 2.206, a rule  
13      making petition under section 2.802, or a request to  
14      the Commission under 2.758 to make an exception or  
15      waive a rule based upon special circumstances such  
16      that the rule would not serve the purposes for which  
17      it was adopted.

18              We as a board recognize our responsibility  
19      a serious one, to be fair and balanced in our  
20      rulings based upon our best reading of the law and  
21      rules as applied to the argument you all put forth,  
22      within the bounds of our jurisdiction and the scope  
23      of this proceeding as defined by the Commission in  
24      its order referral order, rules and other guidance  
25      related to them. Our duty involves hearing all

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1 participants in this legal proceeding and  
2 considering all your arguments in our analysis,  
3 ultimately leading to our decisions on the submitted  
4 contentions.

5 This is time for you to be heard, but as  
6 we have said in writing, the most appropriate way to  
7 approach this process is to be concise and  
8 straightforward in your presentations. We have read  
9 your written arguments. Now is the time not just to  
10 repeat them but to address all points raised in  
11 opposition to them so that we can have the benefit  
12 of as full as possible understanding of all of the  
13 issues before us.

14 Another note: We all know that in some  
15 quarters lawyers have a reputation of being  
16 concerned mainly with technicalities of practicing  
17 obfuscation, playing gotcha games with the law; and  
18 in some quarters, petitioners in cases such as this  
19 may have a reputation of attempting to use the  
20 process to hamstring it through delays and such when  
21 they haven't really done their homework. Both  
22 groups are sometimes accused of grandstanding.

23 We are confident, I am confident that none  
24 here are even tempted by such tactics, and they  
25 wouldn't work anyway, and I mention them only to

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1 highlight their opposite; that is, a good faith,  
2 honest, straightforward process of assisting through  
3 zealous but also precise and logical argument on  
4 some difficult issues and achieving the fairest and  
5 most accurate resolution possible under applicable  
6 law of issues of obvious and great importance to all  
7 participants here.

8 Our job is to do this under the rule of  
9 law which provides, among other things, that  
10 disputes be resolved on the basis not of personal  
11 views or prejudice, but of impartial balance,  
12 application of the law, applied equally to all,  
13 without fear or favor.

14 As a judge in Tennessee once remarked, we  
15 have the law so people who disagree don't have to  
16 beat each other up in the streets to resolve their  
17 disputes. But to use the vernacular, it ain't easy.  
18 After all, it always involves disagreement, and  
19 perhaps especially in this field it can be very  
20 complex. It demands sincere effort and involves  
21 hard work, and its best chance of working fairly and  
22 effectively lies in approaching it civilly,  
23 straightforwardly, and not in what another judge I  
24 once know called the old style of trial by ambush.

25 So, we owe you all our impartial attention

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1 and the duty to act in a fair and balanced manner  
2 according to the law. We ask that you help us  
3 fulfill these obligations by making your arguments  
4 as concisely and straightforwardly as possible, by  
5 responding in the same manner to arguments made by  
6 opponents, by delineating where appropriate clearly  
7 why and how this board may or may not have  
8 jurisdiction to act, and what other options may be  
9 appropriate, and by answering, again, concisely,  
10 straightforwardly and clearly our questions as we  
11 proceed to assist us in better understanding the  
12 issues and your positions on them as we spend these  
13 two days together.

14 With that said, we have a few minutes  
15 before your argument on the first contention of  
16 BREDL is scheduled to begin, we can go ahead with  
17 that, but are there any other preliminary matters  
18 that any party wishes to raise at this point?

19 MS. UTTAL: Your Honor, the Staff was  
20 never served with a copy of Exhibit 3 of BREDL's  
21 notation.

22 JUDGE YOUNG: I can tell you're going  
23 to have to speak up. Should we turn on the  
24 microphones?

25 MS. UTTAL: How is this? Is this

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1 better?

2 JUDGE YOUNG: Exhibit 3 is the Lloyd  
3 Dumas article; you did not receive that?

4 MS. UTTAL: I did receive it, I  
5 didn't know what it was.

6 JUDGE YOUNG: Mr. Moniak?

7 MR. MONIAK: I put one in each  
8 package. I don't know what would have happened to  
9 it.

10 JUDGE YOUNG: Which contention?

11 MR. MONIAK: I was never informed  
12 that nobody --

13 MS. UTTAL: I believe it's BREDL's  
14 second contention.

15 MR. MONIAK: It relates to our second  
16 contention, yes.

17 JUDGE YOUNG: Do you have another  
18 copy right here?

19 MR. MONIAK: Yes.

20 JUDGE YOUNG: Why don't you give it  
21 to Ms. Uttal now, and then to the degree --

22 MR. MONIAK: On the same issue, we  
23 didn't receive the NRC's response to our  
24 contentions, hard copy, but we did get the e-mail so  
25 it's sufficient.

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1 JUDGE YOUNG: Okay.

2 MR. MONIAK: I apologize, I thought I  
3 had one in each package.

4 MS. UTTAL: Thank you.

5 JUDGE YOUNG: Any other preliminary  
6 matters we need to take up? Can everyone hear me?

7 Okay. All right. Then let's start with  
8 Duke -- I'm sorry, with BREDL Contention 1, and we  
9 have set aside 10 minutes for your argument on  
10 that -- I'm sorry, yes, 10 minutes, and then 10  
11 minutes for Duke, 10 minutes for the Staff, and then  
12 another 10 minutes for rebuttal. We may be  
13 interrupting you as you go, and I know that what I'm  
14 going to be looking at is the -- are the responses  
15 of Duke and the Staff and asking you to address  
16 those as you go.

17 I know you mentioned that you had the  
18 slides here that you wanted to do on this --

19 MR. ZELLER: Yes, and I do have an  
20 attachment which I have copies of, adequate copies,  
21 so to handle the first contention I will need the  
22 slide projector, absolutely, for the fifth  
23 contention, so we can delay the use of it during the  
24 first round.

25 JUDGE YOUNG: Okay, if you have

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1 documents you want us to look at, why don't you give  
2 those out now.

3 MR. ZELLER: Mr. Moniak is handing  
4 out Attachment 1, which will become evident as I go  
5 through my response to the --

6 JUDGE YOUNG: It's already Exhibit 1?  
7 All right. Then we don't need another one. Anyone  
8 else need another copy of Exhibit 1? This is the  
9 Joseph Mangano article?

10 MR. ZELLER: Correct.

11 JUDGE RUBENSTEIN: Is this the one  
12 that was on the disk that he sent with it?

13 MR. MONIAK: No, I also included it  
14 in the mailing.

15 JUDGE YOUNG: But it is the Mangano?

16 MR. ZELLER: Correct.

17 JUDGE RUBENSTEIN: But the disk you  
18 gave us included the Mangano report?

19 MR. MONIAK: Yes.

20 JUDGE YOUNG: So, now, is -- tell me  
21 your name again.

22 MR. ZELLER: My name is Lou Zeller.

23 JUDGE YOUNG: Mr. Zeller, pardon me.  
24 Mr. Zeller or Mr. Moniak, you're going to make the  
25 argument on the first one?

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1 MR. ZELLER: I will, yes, and Mr.  
2 Moniak will handle Contentions 2, 3 and 4, and I  
3 will handle Contention 5.

4 JUDGE YOUNG: Okay, go ahead.

5 MR. ZELLER: Thank you. First of  
6 all, since I'm first off, let me welcome you to  
7 Charlotte, North Carolina, Queen City of the state  
8 here.

9 I want to respond to the responses which  
10 were submitted by Duke Energy and by the Nuclear  
11 Regulatory Commission to Contention Number 1. Our  
12 contention states that off site radiological impacts  
13 must be analyzed as a Category 2 issue in  
14 environmental report. The Nuclear Regulatory  
15 Commission's response to BREDL's Contention 1 states  
16 that section 2.758 clearly requires the opponent of  
17 an attack on the regulation to show special  
18 circumstances with respect to the subject matter of  
19 the proceedings.

20 Now, we understand that the scope of the  
21 proceeding here is input. We understand that the  
22 scope of the proceeding is limited to discrete  
23 safety and environmental issues. There is credible  
24 new information which has come to light since the  
25 issuance of the generic environmental impact

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1 statement. This new information indicates that the  
2 licensees' analyses radiological health impacts are  
3 deficient and should be addressed as Category 2  
4 issues.

5 The issue here is not a challenge to the  
6 regulations but a selective reading of them by the  
7 licensee. Procedural tactic does not alter that  
8 applicant's burden to review valid new information.  
9 We will show why BREDL Exhibits 1, 2 and 3 should be  
10 included in the Commission's review of Duke's  
11 license renewal application.

12 JUDGE YOUNG: Is there anything that  
13 you are saying that the board can do with regard to  
14 this, however?

15 MR. ZELLER: Yes, we would like to  
16 have the board make a recommendation to the  
17 Commission in these proceedings that a -- that these  
18 documents be considered sofar as we can, are able to  
19 determine the response from both Duke and from NRC  
20 Staff has shunted aside consideration of these  
21 documents on their merits based on a procedural  
22 issue.

23 JUDGE YOUNG: So you're asking that  
24 we recommend to the Commission that they consider  
25 your in effect request for a waiver of the rule?

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1 JUDGE RUBENSTEIN: Is this, you want  
2 us to certify to the Commission that there's new  
3 information regarding health effects?

4 MR. ZELLER: It is our contention  
5 that these matters are material to the license  
6 renewal application. In terms of what the board may  
7 do, I may be less familiar than an attorney would be  
8 in terms of what the rights are and the duties and  
9 obligations of this panel, so I apologize for that.  
10 But we are asking that these three exhibits, the  
11 first one which is before you, be considered on the  
12 merits.

13 JUDGE RUBENSTEIN: Have you  
14 considered petitioning for a rule making yourself?

15 MR. ZELLER: We are petitioning in  
16 other venues, yes, for consideration of certain  
17 issues including, for example, the use of plutonium  
18 fuel in these reactors. Originally we in had  
19 considered -- in fact, we listed them in our  
20 particularities which we submitted before the --

21 JUDGE KELBER: Excuse me, Mr. Zeller.  
22 Let's stick to the radiological effects. Are you  
23 petitioning for a rule making on radiological  
24 effects?

25 MR. ZELLER: We think that the

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1 radiological effects should impact the -- whether  
2 the license is renewed for this particular facility.

3 JUDGE KELBER: Would this apply to  
4 all other plants that seek renewal?

5 MR. ZELLER: Conceivably, it could.

6 JUDGE RUBENSTEIN: Could it apply  
7 also to all the existing plants in current  
8 operation? Would it apply also to current operating  
9 plants, the existing plants?

10 MR. ZELLER: It may.

11 JUDGE KELBER: I suggest that you are  
12 looking at a petition for rule making, which would  
13 be your proper venue. We can't do anything about  
14 it, and we might end up referring this to the  
15 Commission. I should suggest to you, however, that  
16 if you do make such a petition, you should be  
17 prepared for the fact that there's a very sizable  
18 technical community out there that feels somewhat  
19 differently than you do, that in fact, I've been  
20 informed that the chairman of the international  
21 committee on radiological protection now feels that  
22 in fact there is a threshold for radiological  
23 effects. So you may open a door and what comes  
24 through that door may not be what you want.

25 MR. ZELLER: I appreciate that, but

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1 the medical report just, for example, from  
2 Mr. Joseph Mangano, which is published in an  
3 Environmental Epidemiology and Toxicology last year,  
4 is most relevant to the issues on reactor license  
5 extensions at Catawba and McGuire because it shows  
6 that significant increases in mortality and  
7 morbidity in infants, fetuses, and small children  
8 occur after the closure of a nuclear power plant  
9 located in a densely populated area. This is a  
10 perfect analogy to this situation, so it may not  
11 apply to all other reactors in that all reactors are  
12 not located in densely populated areas. Both  
13 Catawba and McGuire are.

14 JUDGE YOUNG: So then you are -- are  
15 you asking that we somehow communicate to the  
16 Commission a request for a waiver of the rule, and  
17 that would be I presume the rule that classifies  
18 off-site radiological impacts as Category 1, and the  
19 other question that I have for you with regard to  
20 that is the levels of radiation that you're talking  
21 about are levels that would be within currently  
22 permitted levels?

23 MR. ZELLER: I'm not sure how these  
24 radiation levels comport with existing or permissible  
25 levels of off-site radiation. But the report by

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1 Mr. Mangano does show that there were increases in,  
2 for example, iodine 131 in milk supplies in the area  
3 around Rancho Seco during the time of the operation  
4 at that nuclear plant which -- operating, that it  
5 went down during a period where there was a shutdown  
6 periodically. It went up again when it resumed  
7 operations and then dropped off after the plant was  
8 closed.

9 So the permissible level of regulations in  
10 fact may be too much, if those levels were  
11 permissible, he does not outline that in his study.  
12 It is a medical study, does not address the permit  
13 issues or the allowable levels of radiation.

14 JUDGE YOUNG: But in any event, you  
15 are not arguing that any of the rules would permit  
16 the argument you're making; you're asking that the  
17 Commission either waive the rule or you're --  
18 another avenue would be as Judge Rubenstein said, a  
19 petition for rule making. So as I said before, it  
20 would be helpful if you would tell us specifically  
21 what you are arguing we should do.

22 MR. ZELLER: I think the -- pardon  
23 me. 10 CFR 51.53 does state that, quote, the  
24 environmental report must contain any new and  
25 significant information regarding the environmental

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1 impacts of license renewal of which the applicant is  
2 aware.

3 Once again, this particular study, just  
4 for argument sake, is over a year old now. It has  
5 the key words by which you can find it, there are  
6 multiple key words which any interested party,  
7 that's how I found it, might find it with a brief  
8 survey through the Internet. If they were  
9 interested in finding it, it could easily be found.  
10 So what I'm saying is it falls under 10 CFR 51.53 C  
11 3.4, which states as I read.

12 JUDGE YOUNG: Well, I want to hear  
13 what your opponents have to say, but if the current  
14 rule classifies it as Category 1 and therefore not  
15 within the scope of what we can address, then -- and  
16 you're saying there's new information, in effect,  
17 what you're asking for is a waiver of that rule that  
18 classifies off-site radiological impacts as Category  
19 1, correct?

20 MR. ZELLER: We believe that it is  
21 Category 2, correct.

22 JUDGE YOUNG: Okay, you've got just a  
23 couple more minutes.

24 MR. MONIAK: Could I -- I would just  
25 like to address one response to that, is that you

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1 can also look at it as Category 2 requires  
2 additional analysis. In the environmental report,  
3 the licensee did analyze all the Category 1 issues,  
4 they reviewed them to see if -- to make sure they  
5 were still valid to McGuire and Catawba, and they  
6 felt there was no additional new information.

7 So we could -- you could also rephrase it  
8 as we're asking for additional analysis of this new  
9 information, because it is new information they  
10 should have been aware of. And perhaps citing the  
11 Category 1 versus Category 2 issue, instead of  
12 citing the rule that says that they have to evaluate  
13 new information, which they did follow but then said  
14 they weren't aware.

15 JUDGE KELBER: Mr. Moniak, supposing  
16 that they were agreeable to pursuing such an  
17 analysis and they then proceeded to include all the  
18 information that expresses a contrary view, and what  
19 would finally come up of course would be again, the  
20 petition for rule making, this time from the other  
21 side, to lessen the restrictions on the off-site  
22 radiological impacts. Are you prepared for that? I  
23 repeat, there is a great deal of information out  
24 there, very well technically founded, that expresses  
25 an opposite view to that which you are proposing

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1 here. Are you prepared for that? Do you want to  
2 follow this?

3 MR. ZELLER: We are. We wish to.  
4 Yes.

5 JUDGE RUBENSTEIN: I would summarize  
6 and, again, repeat what Judge Young said, is there  
7 are four avenues for this. You can request rule  
8 making, you can request a waiver, we can certify it  
9 to the Commission, or you can go 2.206 if it's a  
10 more of a direct reactor safety problem. And if you  
11 have substantive new information, I think the normal  
12 path, because it has such broad applicability would  
13 be to request a rule making. This is a very limited  
14 arena and you have a very broad subject as Judge  
15 Kelber said.

16 MR. ZELLER: I understand, but for  
17 the reasons I stated previously, I think it pertains  
18 particularly to the Catawba and McGuire stations.  
19 So we would like to see --

20 JUDGE RUBENSTEIN: And in particular  
21 to the additional 20 years, you can add that in your  
22 discussions.

23 MR. ZELLER: Pardon? I'm sorry ?

24 JUDGE RUBENSTEIN: And in particular  
25 to the extension of the period from 40 to 60 years?

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1 MR. ZELLER: Well, exactly, yes,  
2 because the additional duration of operation of the  
3 plant will result in that many more mortalities and  
4 morbidities over that period of time.

5 JUDGE RUBENSTEIN: If one accepts  
6 your thesis, and you sort of have to go through rule  
7 making first or some sort of an adjudication on the  
8 material facts to reach that conclusion, and this is  
9 not the arena.

10 JUDGE YOUNG: Or a request for  
11 waiver. Why don't you wrap up right now, and then  
12 we'll go to, I think we had Duke next, and then  
13 you'll have 10 minutes to rebut after we hear the  
14 arguments of Duke and the Staff. Do you have just a  
15 couple of remarks you want to make to wrap up.

16 MR. ZELLER: Yes, I do, I can wrap  
17 up. There is the -- regarding the direct challenge  
18 issue, the licensee at page 77 cited Turkey Point.

19 JUDGE YOUNG: Page 77 of the  
20 response?

21 MR. ZELLER: Page 77 of the  
22 response, that the state of -- that as to the  
23 state -- as to state the scope of the review as  
24 defined on page 12 of this order, the Commission  
25 wrote, the Commission recognizes generic findings

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1 sometimes need revisiting in particular context.  
2 Our rules provide, thus provide a number of  
3 opportunities for individuals to alert the  
4 Commission to new and significant information that  
5 might render a generic finding invalid either with  
6 respect to all nuclear power plants or for one plant  
7 in particular. In the hearing process, for example,  
8 petitioners with new information showing that a  
9 generic rule would not serve its purpose at a  
10 particular plant may seek a waiver of the --

11 JUDGE YOUNG: That's what I was  
12 asking you about. That's what I was asking you  
13 about.

14 MR. ZELLER: Yes.

15 JUDGE YOUNG: That request for waiver  
16 has to go to the Commission. Are you asking -- are  
17 you requesting the Commission to do that through us?  
18 And then I want to hear what Duke and the Staff have  
19 to say about that. What you just read said that the  
20 avenue for addressing what you're talking about is  
21 through a request for a waiver of a rule.

22 MR. ZELLER: We are requesting a  
23 waiver of the rule, yes, that this be considered a  
24 Category 2 issue.

25 JUDGE YOUNG: And you understand that

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1 we don't have the jurisdiction to do that, so you  
2 are asking us to certify that up to the Commission?

3 MR. ZELLER: Yes.

4 JUDGE YOUNG: Okay. Mr. Repka, are  
5 you arguing for Duke.

6 MR. REPKA: Yes, I am. The argument  
7 of Duke Energy on this is basically as set forth in  
8 our papers. Number one, the issue of radiological  
9 effects of license renewal is a Category 1 issue,  
10 it's fully evaluated generic environmental impact  
11 statement as we cited in our papers. The generic  
12 environmental impact statement assessment reflects  
13 the state of the knowledge on radiological health  
14 effects, and as Judge Kelber alluded to, there's a  
15 vast amount of information out there on that topic,  
16 and that is addressed in the GEIS and has been part  
17 of the Commission's determination that this is a  
18 Category 1 issue.

19 JUDGE YOUNG: Are you -- what do you  
20 have to say about their request for a waiver based  
21 on the new information? Because I think we all  
22 understand that it is a Category 1 issue and so  
23 that's not something that we have jurisdiction to  
24 address in this case, but they are asking that we  
25 certify their request for waiver up to the

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1 Commission.

2 MR. REPKA: Two things: The first  
3 thing I would say is that the information presented  
4 here is really generic information. The Mangano  
5 studies and other studies, there's really nothing  
6 there specifically tied to Catawba or McGuire. It's  
7 all generic information. So therefore, the  
8 appropriate avenue is the 2802 rule making petition  
9 as opposed to a site specific waiver under 2.758, so  
10 that's point number one.

11 Point Number 2 is with respect to a  
12 waiver, there's a process point that BREDL has not  
13 followed the process it specifically laid out in the  
14 regulation which is a waiver request must be made  
15 and it must include an affidavit that really  
16 addresses what the special circumstances are. And  
17 without an affidavit, the prima facie case of 2.758  
18 really can't be made. And that's more than just a  
19 process point, that's a substantive point, because  
20 the idea I believe of having an affidavit would be  
21 to require some link to the site specific  
22 application under review. And that's missing here.

23 JUDGE YOUNG: What about, do you  
24 think that the request for waiver needs to be made  
25 directly to the Commission or what is your view on

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1        what I understand to be a request that we certify  
2        the request up to the Commission? What's your view  
3        on our authority to do that?

4                MR. REPKA: The authority of the  
5        board is as outlined in the regulation, 2.758, a  
6        request can be made initially with the board, with  
7        an affidavit to support it, if the board can find a  
8        prima facie case of special circumstances, then the  
9        board must certify that to the Commission to  
10       consider whether or not a waiver should be granted.

11               JUDGE RUBENSTEIN: So your rebuttal  
12       is, A, they have not followed the procedure, and B,  
13       there are no special circumstances in fact.

14               MR. REPKA: That's correct, both of  
15       those points; one, the procedure is there is no  
16       affidavit, and number two, all this information is  
17       generic. It's really appropriate for rule making  
18       under 2.802. Beyond that, there's ample information  
19       in the generic environmental impact statement which  
20       really reflects, I believe, the current state of  
21       knowledge on the issue of radiation health effects,  
22       and there's no basis presented here to say that the  
23       arguments presented by BREDL haven't already been  
24       considered as parts of the generic review.

25               And I think the last thing I would say is

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1 that a reference was made to the Turkey Point  
2 decision. Two things there: One, Turkey Point does  
3 stand for the proposition that there's a process  
4 that must be followed with respect to the Category 1  
5 issues, and that hasn't been done here; but number  
6 two is there was a contention on radiation effects  
7 in Turkey Point that was specifically found to be  
8 inadmissible and we've cited that.

9 Beyond that, I have nothing more to say on  
10 this issue. If the board has questions, I'm happy  
11 to answer.

12 JUDGE RUBENSTEIN: I have none.

13 JUDGE YOUNG: Ms. Uttal? I'm sorry,  
14 Mr. Fernandez?

15 MR. FERNANDEZ: The Staff has nothing  
16 to add unless the board has any questions.

17 JUDGE YOUNG: Let me ask one  
18 question. Let's take BREDL's argument that the  
19 Mangano article would be the equivalent of an  
20 affidavit in effect. What's your response to that?  
21 And Mr. Repka, feel free also. I think that would  
22 be the only thing that could be taken as the  
23 equivalent of an affidavit.

24 MR. FERNANDEZ: Your Honor, what we  
25 would say to that is the purpose of the rule is to

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1 have somebody from the petitioner assert and affirm  
2 under oath what the special circumstances are in  
3 this situation and how those special circumstances  
4 are tied to the substance of the proceeding. The  
5 Mangano study, if one reads it, is a generic study  
6 at a different facility unrelated to this  
7 proceeding. Therefore, if even we went as far as  
8 extending the rule to consider an unrelated article  
9 as an affidavit, it wouldn't even meet the minimum  
10 standards that show a special circumstance and the  
11 relation to the facility -- the facilities that are  
12 at question here.

13 JUDGE YOUNG: But the special  
14 circumstances, help me here, is there any specific  
15 Commission statement that the special circumstances  
16 need to be plant-specific?

17 MR. FERNANDEZ: It's, the language  
18 and the rule as cited by the Staff in our response  
19 to the contentions say that it has to relate to the  
20 substance of the proceeding. Basically, I mean --

21 JUDGE YOUNG: What I'm asking you is  
22 for authority that the term special circumstances  
23 need to be special circumstances that are  
24 plant-specific. Could there ever be special  
25 circumstances that might apply to all plants but are

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1 so special that they would warrant a waiver in a  
2 particular case?

3 MR. FERNANDEZ: I don't know, Your  
4 Honor, I think that we need to go back to the text  
5 of the rule, and the text of the rule specifically  
6 says, with respect to the subject matter of the  
7 proceeding, which would refer you back to the  
8 referral order which establishes the scope of this  
9 proceeding and the rules applicable to this  
10 proceeding.

11 JUDGE YOUNG: Right, but the scope is  
12 sort of a broad issue. The scope is the same for  
13 all plants. So I guess my question again is, could  
14 there ever be special circumstances that would be  
15 related to the scope of our license renewal  
16 proceeding that might apply to other plants but that  
17 could satisfy the special circumstances --

18 MR. FERNANDEZ: I don't think so,  
19 Your Honor, because -- if you look at the subject  
20 matter of a license renewal proceeding, it is the  
21 license renewal of the facility applying for the  
22 renewal of their operating license. Here you have  
23 two discrete entities, Catawba and McGuire. Those  
24 are the subject matter of this proceeding. Not  
25 Rancho Seco, not Cherynobl. Nothing in this report

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1 used as exhibits to support this contention really  
2 identify any link to what we're talking about today.

3 JUDGE YOUNG: Actually, you're  
4 right -- well, I don't know if you said this, but  
5 the rule does say the subject matter of the  
6 particular proceeding.

7 MR. FERNANDEZ: Right.

8 JUDGE YOUNG: So that would subject  
9 that it would be --

10 MR. FERNANDEZ: It's a very discrete  
11 rule. It's a heavy burden on the petitioner  
12 asserting that the waiver should be granted.  
13 Therefore, we don't think that the Mangano study  
14 could suffice as an affidavit to meet the burden  
15 that they have.

16 MR. REPKA: May I add to that  
17 briefly?

18 JUDGE YOUNG: Yes, please.

19 MR. REPKA: I think the answer to  
20 your question, does it have to relate to the  
21 specific plant is really inherent in the rule. It's  
22 also inherently addressed in the Commission's  
23 discussion in Turkey Point of the process for  
24 addressing new information. They talk about the  
25 fact --

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1 JUDGE YOUNG: What page are you  
2 referring to?

3 MR. REPKA: If you look at page 12 of  
4 our response, it's actually page 11 and goes over to  
5 page 12, a block quote from Turkey Point.

6 JUDGE YOUNG: You're going to have to  
7 forgive us here, we got your paginated version  
8 yesterday and meanwhile I had written my notes on  
9 your unpaginated version, so you're talking about  
10 page what of your response?

11 MR. REPKA: Page 11 to 12 of our  
12 response.

13 JUDGE YOUNG: And then that refers to  
14 what page in Turkey Point? Let's see --

15 MR. REPKA: It's the slip opinion at  
16 page 12 of Turkey Point.

17 JUDGE YOUNG: And I've got the  
18 published version.

19 MR. REPKA: We didn't have that.  
20 You're ahead of us. But the quote there talks about  
21 the avenues available for addressing new information  
22 and says the 2.758 is the process available when new  
23 information shows that a generic rule would not  
24 serve its purpose at a particular plant, you seek a  
25 waiver. If it's generic you seek a rule --

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1 JUDGE YOUNG: Excuse me. You are  
2 reading there, I'm still trying to find the page in  
3 Turkey Point.

4 MR. REPKA: Yes, I was reading from  
5 the Turkey Point.

6 JUDGE RUBENSTEIN: Is it under --  
7 which part two, contentions, or later?

8 JUDGE YOUNG: Which section?

9 MR. REPKA: Right before Roman  
10 numeral 5 -- sorry, you're looking --

11 JUDGE RUBENSTEIN: Yes, Turkey Point.

12 MR. REPKA: I don't have the copy of  
13 the decision in front of me.

14 MR. MONIAK: I do. The Turkey Point  
15 one? February 26, 2001, or is that the ASOP? Wait  
16 a minute, I have it. I have it on disk.

17 MR. REPKA: I have the slip opinion  
18 in front of me. If you go to section B, that says  
19 environmental review under part 21, and it looks  
20 like you go -- under part 51, I'm sorry, and you go  
21 about seven paragraphs deep into that section.

22 JUDGE YOUNG: Okay.

23 MR. REPKA: It begins the Commission  
24 recognizes that even generic findings sometimes need  
25 revisiting. And what I was reading from is the

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1 statement that petitioners with new information  
2 showing the generic rule would not serve its purpose  
3 at a particular plant may seek a waiver, and my  
4 point was implicit in the idea is that the special  
5 circumstances showing under 2.758 relates to a  
6 particular plant. If it doesn't, it's a rule making  
7 matter under 2.802.

8 JUDGE YOUNG: Okay. Did you find  
9 that in your copy of Turkey Point?

10 MR. MONIAK: No, I have the order  
11 from the licensing board.

12 JUDGE YOUNG: Okay.

13 MR. MONIAK: I did have it, but I  
14 don't know what I did with it today.

15 JUDGE YOUNG: Let's let Mr. Repka  
16 finish up and then in your rebuttal I want to read  
17 this to you and have you specifically address that.

18 MR. REPKA: The second point I was  
19 going to make is in terms of authorities for that, I  
20 have a case Public Service Company of New Hampshire,  
21 it's a licensing board decision, LPD dash 86 dash  
22 25. It's 24 NRC 141 at page 145. That concludes  
23 that it dismisses an argument on a waiver and says  
24 that the arguments are generic in nature and are not  
25 unique to this SBO proceeding, and therefore,

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1       there's no basis for a waiver.

2                       JUDGE YOUNG: Okay. Anything else?

3                       MR. REPKA: No.

4                       JUDGE YOUNG: Okay. What I would  
5       like for you to address is the last argument that  
6       Mr. Repka made in Turkey Point, I'm just going to  
7       read the whole paragraph that he was referring to.

8                       The Commission recognizes that even  
9       generic findings sometimes need revisiting in  
10      particular contexts. Our rules thus provide a  
11      number of opportunities for individuals to alert the  
12      Commission to new and significant information that  
13      might render a generic finding invalid, either with  
14      respect to all nuclear power plants or for one plant  
15      in particular. In the hearing process, for example,  
16      petitioners with new information showing that a  
17      generic rule would not serve its purpose at a  
18      particular plant may seek a waiver of the rule, see  
19      10 CFR section 27.58, and then it refers also to a  
20      note 3 above.

21                      Petitioners with evidence that a generic  
22      finding is incorrect for all plants may petition the  
23      Commission to initiate a fresh rule making, which  
24      Judge Rubenstein had asked you about before. Such  
25      petitioners may also use the SEIS notice and comment

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1 process to ask the NRC to forego use of the suspect  
2 generic finding and to suspend license renewal  
3 proceedings -- I believe there's already a petition  
4 to the Commission to suspend the proceedings --  
5 pending a rule making or updating of the GEIS. I'm  
6 not sure if the petition to suspend is based on  
7 that, but I would like for you to address the  
8 particular plant argument that Mr. Repka made,  
9 because that pretty much says that you need to show  
10 that there are special circumstances with regard to  
11 a particular plant, and you made some reference to  
12 that before but what in particular are you saying  
13 about that now?

14 MR. ZELLER: Maybe I had not made  
15 myself clear so I will answer that question. We  
16 feel that within existing regulations, that the  
17 burden is on the licensee -- the applicant for  
18 renewal, to include certain analyses in their  
19 submission for the extension of the license.

20 JUDGE YOUNG: The new information?

21 MR. ZELLER: Yes, yes, exactly, new  
22 information.

23 JUDGE YOUNG: But when we get to the  
24 hearing stage, the Commission has said that  
25 individuals with new and significant information can

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1 alert the Commission by either request for a waiver  
2 of the rule with regard to a particular plant, or if  
3 it's generic information, a petition for rule  
4 making. And so this appears to be one of those  
5 areas that the board does not have any authority to  
6 act itself other than to refer up to the Commission  
7 a request for a waiver.

8 MR. ZELLER: I understand.

9 JUDGE YOUNG: So the request for a  
10 waiver would have to be with regard to particular  
11 information about a particular plant, particular new  
12 information relating to a particular plant as I  
13 understood the argument. Did I understand that  
14 correctly, Mr. Repka and Mr. Fernandez?

15 MR. REPKA: That sounds right.

16 JUDGE RUBENSTEIN: Let me expand on  
17 that. In the Turkey Point hearing, they discuss  
18 Ms. Lonan's request for a waiver pursuant to 10 CFR  
19 2.758, that the NRC waive its rule on generic and  
20 environmental impact statement for this proceeding.  
21 She asserts that special circumstances and  
22 significant new information caused the application  
23 of the rule to not serve its intended purpose of  
24 assessing the environmental impacts of the proposed  
25 action on the fragile South Florida environment.

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1 Further, they state, however, that fails  
2 to meet the requirement of 10 CFR 2.758 in either  
3 form or substance. The Commission's waiver rule  
4 requires that a petition seeking the waiver of a  
5 regulation show that special circumstances with  
6 respect to the subject matter of the particular  
7 proceeding are such that the application of the rule  
8 or regulation would not serve the purposes for which  
9 the rule or regulation was adopted.

10 The waiver rule also mandates that the  
11 waiver petition shall be accompanied by an affidavit  
12 that denies the specific aspects or aspects of the  
13 subject matter of the proceeding as to which the  
14 application of the rule or regulation would not  
15 serve the purposes for which the rule and regulation  
16 was adopted and shall set forth with particularity  
17 the special circumstances alleged to justify the  
18 waiver or exception requested.

19 Now, this is confirmatory of what Judge  
20 Young said and as we stand now, you have not met  
21 those requirements to this board.

22 JUDGE YOUNG: And I guess what I was  
23 wanting you to address is, let's say that we -- that  
24 we did take the Mangano article in the place of an  
25 affidavit, because you have not filed an affidavit,

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1 but let's say we did take that. What are the  
2 special circumstances with regard to either the  
3 McGuire or Catawba plants that would warrant us  
4 sending up to the Commission your request for  
5 waiver?

6 MR. ZELLER: The special  
7 circumstances with regard to McGuire and Catawba  
8 have to do with the striking similarities between  
9 the investigation done by Mr. Mangano, and the  
10 physical situation at those reactors operated by  
11 Duke in the Charlotte and Rock Hill areas.

12 JUDGE YOUNG: Because of the  
13 population density?

14 MR. ZELLER: Because of the  
15 population density over the period of the additional  
16 20 year period. There would be additional  
17 population growth only exacerbating the effects  
18 which are outlined in Mangano with regards to fetal  
19 development and morbidity and mortality in children.

20 JUDGE RUBENSTEIN: Has the population  
21 density at the LPZ, the low population zone,  
22 exceeded 25 thousand? Has this changed in part 100?

23 MR. ZELLER: Those situations --  
24 those rules certainly apply to Rancho Seco, yes,  
25 sir.

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1 JUDGE RUBENSTEIN: Has the situation  
2 changed? Do you have demographics to demonstrate  
3 that it will change in the additional 20 years?

4 MR. ZELLER: We could provide that  
5 information, of course, and we would. In fact,  
6 anyone that is familiar with the Charlotte area  
7 knows that it is one of the fastest growing areas  
8 not only in North Carolina but also in South  
9 Carolina. So that data will be very easy to provide  
10 with an inspection of a newspaper, provision of  
11 state population statistics and otherwise.

12 MR. MONIAK: In addition to that is  
13 one of the biggest issues that was raised during the  
14 scoping process for the supplemental environmental  
15 impact statement and it was raised for several years  
16 now, is the development closer and closer to the  
17 reactor site by a subsidiary of the licensee called  
18 Crescent Resources, and they are subdividing land  
19 that was formerly considered to be something part of  
20 the buffer area. So the population is growing in  
21 the immediate area of the reactor at a very high  
22 rate, and there's been concerns raised regarding  
23 evacuation routes and that kind of thing over and  
24 over again.

25 JUDGE RUBENSTEIN: When you say

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1 population growth in the immediate area of the  
2 reactor, talk in terms of the low population zone,  
3 the exclusion zone and the site boundary.

4 MR. MONIAK: I can't talk in those  
5 specifics at this point.

6 JUDGE RUBENSTEIN: That's what the  
7 regulations addressed.

8 MR. ZELLER: We would, though,  
9 because in fact we did look into some of those  
10 issues and address some of them, in fact, in our  
11 particularities, and we could certainly bring that  
12 information on relatively short notice.

13 MR. KELBER: I think it's a little  
14 late now. Have you considered a rule making  
15 petition? Have you waited for this case?

16 MR. ZELLER: I learn a little bit  
17 more every day, I have to admit, that some of the  
18 things that Judge Young pointed out at first in  
19 terms of the regulations being what ambiguous, to be  
20 polite about it, that it is sometimes difficult to  
21 know for a citizen to know which way to turn. We  
22 became involved in this proceeding with full  
23 expectation that we could find some kind of relief  
24 here and in terms of dealing with the information  
25 which has come to light through our investigations

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1 through this process.

2 If we are in the wrong venue, then we  
3 would be pleased to learn that an know where to go,  
4 but as you already have pointed out, that it is  
5 somewhat difficult to know exactly where, and  
6 sometimes it does seem to citizens that I have  
7 talked to that there is nowhere to go. There's  
8 always someplace else.

9 JUDGE YOUNG: I would direct you to  
10 the language that Judge Rubenstein read from the  
11 licensing board's decision in Turkey Point, and  
12 that's found at pages 154 and 155 of the published  
13 version LBP 01-6, and that's 53 NRC at 154 and 155.  
14 And that discusses the requirements for request for  
15 waiver.

16 So just to recount those again, you can  
17 petition for a rule making to the Commission if it's  
18 a generic issue; you can request a waiver of a rule  
19 supported by an affidavit with regard to particular  
20 circumstances at a particular plant, and that's what  
21 is discussed at pages 154 and 155 of 53 NRC.

22 And let's see, what was the other one?

23 JUDGE RUBENSTEIN: 2.206.

24 JUDGE YOUNG: Right, 2.206,  
25 enforcement provision. And as I said, all these

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1 rules and legal principals are part of the law that  
2 we have to follow. So that's why we were asking you  
3 all the questions about what can we do with regard  
4 to this.

5 MR. ZELLER: I understand.

6 JUDGE YOUNG: And we've got a little  
7 more time for discussion of this --

8 JUDGE RUBENSTEIN: I have a question.

9 JUDGE YOUNG: Go ahead.

10 JUDGE RUBENSTEIN: In your original  
11 presentation, I would like you to clarify, you said  
12 something about selected reading of the rule. Do  
13 you have a specific? And then I would like Duke to  
14 respond.

15 MR. ZELLER: Yes, the -- in their  
16 response to our contentions, as I mentioned before,  
17 Duke states that the category issue -- Category 1  
18 issue need not be addressed, and that, quote,  
19 Category 1 environmental issues do not need to be  
20 addressed in specific license for renewal  
21 application. However, we find in the Code of  
22 Federal Regulations the following words: Under 10  
23 CFR 51.53 C 2, that, quote, in addition, applicant  
24 shall discuss in this report the environmental  
25 impacts of alternatives and any other matters

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1 described in 51.45. Further, moreover, under 10 CFR  
2 51.53, the licensee has the duty to investigate and  
3 report on any new information regarding  
4 environmental impacts, including human health  
5 effects. And I would cite in 10 CFR 51.53 C 3.4,  
6 the following: Quote, the environmental report must  
7 contain any new and significant information  
8 regarding the environmental impacts of license  
9 renewal of which the applicant is aware, end quote.

10 JUDGE YOUNG: Let me repeat what I  
11 said before about pages 154 and 155 of 53 NRC. That  
12 was the licensing board's decision in the Turkey  
13 Point case, and what the licensing board said there  
14 was that although the Commission's license renewal  
15 regulations do require that the applicants  
16 environmental report identify any new and  
17 significant information, et cetera, and require the  
18 Staff to consider such information --

19 MR. ZELLER: Right.

20 JUDGE YOUNG: -- that does not  
21 automatically translate into the right of a  
22 petitioner to raise those issues in the context of  
23 adhering. The way a petitioner challenges a  
24 particular area as being Category 1 by raising new  
25 information is through a request for waiver if it's

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1 with respect to a particular plant or a rule making  
2 petition, if it's a generic issue.

3 And we all realize, as I said at the  
4 beginning, this is -- these are complex issues, but  
5 I direct you to that decision because it pretty much  
6 spells out what you have to do.

7 And so I guess the last thing I would ask  
8 is have we made ourselves clear in terms of what the  
9 rules say about what you need to do if you want to  
10 raise new information and if you do understand what  
11 we're saying, since we have a little bit more time,  
12 I want to give you the last opportunity to make any  
13 arguments as to what you want us to do and what  
14 authority you have to cite for whatever you want us  
15 to do.

16 MR. ZELLER: All right. Thank you.  
17 I guess it goes back to the completeness of the  
18 submissions by the licensee. What might be the  
19 panel's authority to ask the licensee to go back and  
20 include new information or to request the submission  
21 of new information in order to allow the Commission  
22 to develop an independent analysis, which is  
23 required under the Code of Federal Regulations in  
24 the analysis under section 51.45 for environmental  
25 reports. We feel that under the current rules, the

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1       licensee must provide that to the Commission  
2       significant information on these and -- of impacts  
3       and alternatives including the no license extension  
4       alternative in its license renewal application.

5               JUDGE YOUNG: Let me interrupt you.  
6       I was asking you what are you saying we can do. I  
7       hear you asking me what can we do.

8               MR. ZELLER: I know, I did.

9               JUDGE YOUNG: And what I read to you  
10       before from the licensing board decision in Turkey  
11       Point, and the Commission has also said this as well  
12       in several places, but that spells out that even  
13       though there may be requirements on a licensee to  
14       identify new information, that the way that a  
15       petitioner addresses such new information is either  
16       through a request to the Commission to waive the  
17       rule based on special circumstances supported by an  
18       affidavit, or by a rule making petition. And so  
19       we're giving you the opportunity to argue to us what  
20       it is that you think we can do, and I haven't really  
21       heard an answer to my question there.

22               MR. ZELLER: Okay. I will answer  
23       that straightforwardly then. What we would request  
24       is that a waiver -- for a waiver.

25               JUDGE YOUNG: And the special

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1 circumstances that you're arguing are the population  
2 growth that are comparable to the things discussed  
3 by Joseph Mangano in his article, is that my --

4 MR. ZELLER: That is precisely  
5 correct. We would also ask that the board may  
6 direct the licensee or the Commission to submit more  
7 complete information so that the Commission may make  
8 a determination as I outlined.

9 MR. KELBER: The Commission can't do  
10 that. We can't tell the Commission what to do.

11 MR. ZELLER: You can't --

12 MR. KELBER: We can try to tell them,  
13 but they will tell us what to do then.

14 JUDGE RUBENSTEIN: Going back to what  
15 Judge Young said to you, is if you want to go the  
16 waiver path, it is a clearly defined path and the  
17 burden is upon you to produce an affidavit and  
18 follow the procedure. Alternatively, if you want a  
19 rule making, you have to petition under the proper  
20 regulation the Commission to offer you a rule  
21 making. And the board's hand is tied beyond that.

22 MR. ZELLER: I understand. And we  
23 would request the waiver and we would go through the  
24 required process.

25 JUDGE RUBENSTEIN: This is not the

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1 request for the waiver as you say it. You have to  
2 go through the proper processes.

3 MR. ZELLER: I understand. I  
4 understand completely. Thank you.

5 JUDGE RUBENSTEIN: And you'll tender  
6 that to us.

7 MR. MONIAK: One thing we would also  
8 like to raise is that focuses on the Exhibit 1,  
9 which is the Mangano report, and Exhibit 2, which is  
10 the Marshal report, which was sponsored by the  
11 Defense Threat Reduction Agency, which is very  
12 recently published, it addresses an entirely  
13 different health effect that isn't addressed in the  
14 generic environmental impact statement, which is the  
15 effect on performance and cognitive ability. And  
16 that's -- so that is new information that was not  
17 even part of it.

18 And secondly, the other issue that comes  
19 up is that if licensees are going to go through this  
20 process of assessing new and significant  
21 information, and in page 5.1 of the Catawba  
22 environmental report, for example, says that the  
23 Staff expects that the applicants will have a  
24 process in place that would result in the  
25 identification of new and significant information

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1 that exists considering Category 1 issues and issues  
2 not listed in appendix B.

3 Now, if the process does not produce new  
4 information and since the GEIS, to say that there's  
5 no new information on the health effects of  
6 radiation one way or the other is quite a stretch.  
7 And why go through the process at all if they are  
8 not going to be serious about it.

9 JUDGE RUBENSTEIN: I think you're  
10 getting into the merits of your affidavit.

11 MR. MONIAK: Yeah, okay.

12 JUDGE RUBENSTEIN: And -- prepare it  
13 properly.

14 MR. MONIAK: Thank you.

15 JUDGE YOUNG: And again, I think it's  
16 worth emphasizing this at this point for future  
17 reference with regard to any other contentions,  
18 where an argument is made that a particular subject  
19 is outside the scope of the license renewal  
20 proceedings, that doesn't mean we're automatically  
21 going to accept that argument, but the Commission  
22 has definitely said that certain things are not  
23 within the scope and there are these other avenues  
24 and that's why I listed them at the beginning to  
25 sort of lay that out, all out on the table, let you

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1 know that our duty is to follow the law. But part  
2 of the law is the rules and what the Commission has  
3 said about new information with regard to how  
4 petitioners can challenge an application based on  
5 new information, is through this request for waiver  
6 or on a generic basis, the rule making petition, or  
7 there's always the 22.06 enforcement petition.

8 Let me just ask if Duke or the Staff has  
9 anything further to say with regard to BREDL  
10 Contention 1 and then we might finish this one early  
11 and move on to the next.

12 MR. REPKA: The only other thing I  
13 would say is Judge Rubenstein indicated he was going  
14 to ask me my response to something earlier. On the  
15 citation to 51 dot 53, C 2, which is a discussion of  
16 alternatives, that's -- my response is that's not  
17 really relevant here because this issue doesn't go  
18 to the discussion of alternatives when no action  
19 scenario in the environmental report, that is  
20 addressed elsewhere in the environmental report, and  
21 then with respect to the citation to new  
22 information, which is 50 dot 53 C --

23 JUDGE YOUNG: 50 or 51?

24 MR. REPKA: 51 dot 53 C, little Roman  
25 4, I would just make the point that that is

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1 discussed, that requirement is fulfilled in Duke's  
2 environmental report in chapter five and the  
3 standard there is not just new information, it's new  
4 and significant information.

5 Beyond that, with respect to the arguments  
6 about population density and other things which  
7 really do go to the merits of a waiver request that  
8 hasn't been made, it's very difficult to respond to  
9 that argument without really having seen the  
10 argument, but beyond that, I would say that the  
11 health effects are what the health effects are and  
12 there's been no showing made that they are sensitive  
13 to population given the fact that the plants meet  
14 the NRC's part 100 citing criteria, which define  
15 such things.

16 JUDGE YOUNG: Let me ask you,  
17 Mr. Repka, and also the Staff counsel if you want to  
18 respond to this: Are there any time limits on when  
19 a request for waiver can be made?

20 MR. REPKA: I'm not aware of that.

21 JUDGE YOUNG: As long as the hearing  
22 is still pending --

23 MR. REPKA: I would think, Judge  
24 Young, that 2.758 petition would be made in  
25 conjunction with a contention, so clearly two things

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1 have to be met: Number one, is the licensing board  
2 still has to have jurisdiction, so has to be made at  
3 that point. So two, if it comes after the time,  
4 initial time for contention, it would be subject to  
5 2.714 rules, rules for late filing contentions.

6 JUDGE YOUNG: Okay. Anything that  
7 you all would like to add? Was all that clear? I  
8 think it's worth emphasizing these various different  
9 routes, different avenues to approach issues that  
10 may not be within the scope of a proceeding because  
11 they may arise with regard to other contentions.  
12 Mr. Moniak.

13 MR. MONIAK: 2.758 D, a party to a  
14 proceeding may, involving initial or renewal  
15 licensing subject, et cetera, I interpret that is  
16 party -- do we have to have standing to submit that  
17 or is it implied in that that you do it at the time  
18 that you submit your petition for hearing?

19 MR. KELBER: Standing.

20 JUDGE YOUNG: Actually, thank you for  
21 raising standing, I meant to do that at the  
22 beginning.

23 Both of the Staff and the licensee have  
24 agreed that both parties have standing, so we -- the  
25 board does need to make a ruling on that, but I

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1 think that you can assume that we will probably  
2 agree with all parties that you do have standing.  
3 But your reference to the term party, party does  
4 have a legal meaning and that is that you're not a  
5 participant anymore, you're a party because you've  
6 been admitted to the proceeding.

7 MR. MONIAK: The NRC Staff argued in  
8 response to our motion to -- or petitions to suspend  
9 the proceeding, based on three issues that was filed  
10 in October to the Commission, that because we didn't  
11 have standing, we could not petition on the process.

12 So I thought we had to wait until we had  
13 standing before we did any petitions on a particular  
14 process anyhow. I wasn't thinking of this at the  
15 time, but I mean based on that response, that's one  
16 of the arguments that has yet to be ruled upon by  
17 the Commission. But that was cited, and I'm not  
18 sure if the licensee cited it either, but they did  
19 say because we do not have standing, it's premature  
20 for us to file anything like this.

21 JUDGE YOUNG: Well, we're going to  
22 take all -- of all of the parties' arguments under  
23 advisement with regard to this. It may be that  
24 there is some case law on the timing of this kind of  
25 request for a waiver. We've heard Duke's arguments.

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1 You're raising a point about timing from the  
2 standpoint of if it was premature when you're not  
3 yet a party, then the use of the party in this  
4 word -- in^Sa^Q!^R^R!! the rule, might indicatou would  
5 have already had to have been declared a party.  
6 We'll take all your arguments under advisement.

7 Anything further on BREDL Contention 1  
8 before we go to 2?

9 MR. ZELLER: Just one final word, I  
10 guess, that underlying all of our contentions and  
11 particularly Contention 1, is our belief that a  
12 20-year extension of the license for Catawba and  
13 McGuire would place another generation of children  
14 at risk from low level radiation exposure.

15 Thank you.

16 JUDGE YOUNG: Okay. Do you want to  
17 take a break before we go to the next? Let's take  
18 five minutes and then come back and start on BREDL  
19 Contention 2. And Mr. Moniak, you're going to argue  
20 that, right?

21 MR. MONIAK: Yes.

22 (Brief recess).

23 THE COURT : Go ahead. Mr. Moniak,  
24 and again, if you can try in your argument to  
25 address the responses.

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1 MR. MONIAK: Yes, I will do that.  
2 Our contention is that Contention 2 of the license  
3 renewal application fails to provide a human  
4 reliability assessment that analyzes the impacts of  
5 work force ages, critical skills retention and  
6 availability, the impacts of advanced technology on  
7 human reliability, and the ability of the future  
8 work force to adequately implement aging programs to  
9 prevent severe accidents and economic accidents and  
10 to mitigate the effects of accidents.

11 The NRC Staff at page 59, there -- 49 of  
12 their response cited that Issue 1 is that  
13 operational history is not -- is addressed through  
14 the regulatory process. I just want to raise this  
15 because this is a generic issue throughout all of  
16 the contentions from here on. The operational  
17 history is cited as a program attribute, and B  
18 point -- page B 2.3 of the license renewal  
19 applications, that's in appendix B, and operational  
20 history is cited as, throughout the license renewal  
21 application, as supporting evidence for the  
22 sufficiency of the aging management program. So  
23 therefore, it only serves to reason that operational  
24 history is pertinent.

25 Issue Number 2 is the adequacy of the

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1 procedures and the deficiency in the program. The  
2 Staff asserted that we have not found fault with the  
3 adequacy of the public procedure, this is correct.  
4 What we're saying is the absence of analysis in a  
5 program to analyze the reliability of people to  
6 perform procedures is a deficiency. The adequacy of  
7 the site of procedure is not in dispute, the fact  
8 that the adequacy is a function of the human  
9 reliability and performance that is in dispute.

10 The third point --

11 MR. KELBER: Excuse me. Would you go  
12 over that again?

13 MR. MONIAK: The adequacy of the  
14 procedure is not in dispute. The fact that adequacy  
15 is a function of human reliability and performance.  
16 And this occurs throughout the license renewal  
17 application. I don't have a statistical analysis of  
18 how many aging management activities are solely  
19 dictated by human reliability functions, but it's  
20 quite a few. I would say the majority.

21 Does that --

22 MR. KELBER: Thank you.

23 MR. MONIAK: The third issue I want  
24 to address is the failure to establish a connection  
25 between the contention and aging management Staff,

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1 the Staff responds at page 45. The scope of the  
2 license renewal application also includes severe  
3 accident mitigation alternatives which BREDL  
4 connected to the contention, or contentions page 16,  
5 and in terms of aging management, we provided  
6 examples of connectivity at 16, 17, 22 and 23. And  
7 I just want to repeat that there was connectivity  
8 established.

9 A fourth issue was that there was  
10 unsupported statements, and I didn't understand this  
11 one because our contentions at page 20 and 21, we  
12 cited the expert opinion of Dr. Richard Meserve,  
13 chairman of the NRC, who, if he's not an expert on  
14 this issue, he's required legislatively by law to be  
15 an expert, and though we disagree with Chairman  
16 Meserve on some things, he is an expert. And  
17 there's no doubt about it, and in a letter to the  
18 Vice President of the United States, there's no  
19 doubt at all that he is being -- expressing his  
20 opinion and not trying to pull one, pull a fast one  
21 I would hope.

22 The biggest issue of course here is scope  
23 and direct challenge issue again, and there's three  
24 parts to this one. One is humans as active systems.  
25 The Staff wrote at page 48, if humans were an

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1 integral part of such systems they would be active  
2 components and not subject to aging management  
3 review. Our response is that aging management  
4 programs and activities, activities implies active,  
5 cannot function without active human component. And  
6 in Appendix B, it's titled aging management programs  
7 and activities. The types of activities identified  
8 in Appendix B, aging management, include onetime  
9 inspections, inspection and examination of present  
10 or extent of aging effects --

11 JUDGE YOUNG: Are you talking about  
12 appendix.

13 MR. MONIAK: License renewal  
14 application. I thought I made that clear, I  
15 apologize. Administrative controls and operating  
16 experience, and that's at the license renewal  
17 application, page B 2.2, and B 2.3. Also had the  
18 issue raised, that the contention did not -- that a  
19 probabilistic risk assessment or human reliability  
20 assessment is not required. Our response is that we  
21 did not specify a need for probabilistic risk  
22 assessment. We're raising the issue of the need for  
23 a reliability assessment that could be qualitative  
24 but should address the availability during the  
25 licensing period, not the current licensing period

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1 and not the current licensing basis. During the  
2 extended operation of the skills and disciplines  
3 necessary to fulfill safety management functions  
4 defined in the license renewal application.  
5 Prioritization of skills is critically, essential,  
6 et cetera, and simply to answer the question in  
7 order to provide assurance that the aging management  
8 programs are going to work. Will the licensee be  
9 able to fulfill an aging management program that is  
10 heavy dependent upon human performance, such as  
11 inspection, engineering, procedure compliance, et  
12 cetera.

13 The primary issue raised is the same as  
14 our last contention, however, it is that it's  
15 outside the scope of license renewal. The Staff  
16 wrote this at page 47 in their response, the  
17 licensee at page 77 impermissibly challenges NRC  
18 regulations, and it's established at 47 and  
19 impermissibly challenges the current licensing  
20 basis, and our response is that it does not  
21 challenge the current licensing basis. It raises  
22 the issue of whether licensee can operate the  
23 proposed aging management program during the 20-year  
24 period of license extension, not during the current  
25 licensing basis.

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1           It's not a challenge to the regulations  
2     because the regulations don't address this at all,  
3     they don't say that it's not required, they don't  
4     say it is required. It doesn't appear to have been  
5     addressed, and so the argument primarily rests on  
6     whether or not humans are part of the safety systems  
7     that have to be analyzed. And that was our  
8     primary -- humans are part of the safety related  
9     systems, and they are cited over and over and over  
10    again, and the trend in this country is one in which  
11    there's a harsh -- they call it a war for talent.

12                   JUDGE YOUNG:    A pardon?

13                   MR. MONIAK:    A war for talent.

14    There's a war for talent in this country in  
15    government agencies, private industry, academic,  
16    because whereas 30 years ago there was fewer  
17    technical fields for a person to go into, today  
18    there's far more. There's biotechnology, and  
19    there's a lot of reasons why people don't -- people  
20    have perceived the nuclear field as being a dead end  
21    as well. And the current trend by all measurements  
22    is one in which there's difficulty in obtaining  
23    expertise.

24                   And the current trend also is one in  
25    which, since September 11th, there are very many

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1 people raising the issue and whether it's right or  
2 wrong is not for me to say, that we can't be  
3 teaching foreign nationals our secrets. And this  
4 country is heavily dependent upon, always has been,  
5 ever since the Manhattan Project, on foreign  
6 nationals on both the utility side and the  
7 commercial side and the weapons side, to implement  
8 our nuclear -- develop and maintain our nuclear  
9 infrastructure.

10 Back to the probabilistic risk assessment  
11 issue, I want to say that we're not asking for, you  
12 know, to test design -- to validate the test design  
13 even though they can be weakened by things like  
14 procedure under specification bias, test or  
15 expectancy bias, participant response bias, test  
16 environment bias, for things like the steam  
17 generator tubes, is probably the best example, the  
18 aging of the tubes can lead to a core melt, with  
19 containment bypass releasing large amounts of  
20 radioactivity directly to the environment. If  
21 operators are not trained adequately to control  
22 steam line break accidents and it's considered by  
23 some people that operators are not trained  
24 adequately to respond to these, concurrent with a  
25 large primary to secondary leakage --

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1 JUDGE KELBER: Excuse me, are  
2 operators trained adequately at the present time.

3 MR. MONIAK: That's debateable.

4 MR. KELBER: Did they -- I have  
5 reviewed that.

6 MR. MONIAK: Okay, what it says is  
7 the Staff needs to develop defensible analyses of  
8 such events, including assessments of human error  
9 probabilities taking into account offering  
10 distractions.

11 MR. KELBER: That's a different --

12 MR. MONIAK: They do have to be  
13 qualified.

14 MR. KELBER: Do operators have to be  
15 requalified from time to time?

16 MR. MONIAK: Yes.

17 MR. KELBER: Does there have to be  
18 under 10 CFR 55.57, a special requalification at  
19 renewal?

20 MR. MONIAK: Yes. No. At renewal?  
21 I'm not sure. I would have to look that one up.

22 MR. KELBER: I think you should take  
23 a look at that one.

24 MR. MONIAK: I believe that's all I  
25 have.

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1 JUDGE YOUNG: I would like to ask two  
2 questions. Are you challenging the rules on  
3 operator licensing?

4 MR. MONIAK: I'm not sure. I don't  
5 think so. What I'm saying is that humans are part  
6 of the safety system, just because nobody's  
7 interpreted it that way before, doesn't mean it's a  
8 challenge to the rule. It doesn't specifically say  
9 that it's only hardware. And in a sense, isn't --  
10 it's going to be interpreted that way. On the other  
11 hand, it's going to be interpreted that way, we are  
12 challenging the rule, but that is not the intent.

13 JUDGE YOUNG: The other thing I  
14 wanted to ask you about, is you've made the argument  
15 that this would fall under SAMA, Severe Accident  
16 Mitigation Alternative. Do you want to expand on  
17 that argument a little bit?

18 MR. MONIAK: Yes. Part of the  
19 environmental review and part of the license  
20 application, the applicants have to submit the  
21 severe accident mitigation assessment. And they did  
22 do that, and -- okay. In the rules it does not  
23 state that. What I'm saying is it falls under that  
24 because in the SAMAs that were submitted, they are  
25 dominated by a reliance on human performance and not

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1 dominated by a reliance upon engineered features or  
2 structural changes or other modifications that would  
3 remove the human elements, that would reduce the  
4 risk by removing the human elements in places.

5 JUDGE YOUNG: I understand you to be  
6 saying that this human reliability assessment would  
7 be a severe accident mitigation alternative. Am I  
8 understanding that correctly?

9 MR. MONIAK: I hadn't thought of it  
10 that way, to be honest, but it would be a good way  
11 to address it.

12 JUDGE YOUNG: Okay. Maybe I  
13 misunderstood.

14 MR. KELBER: I can't follow -- excuse  
15 me.

16 JUDGE YOUNG: I guess what I was --  
17 the next thing I wanted to ask is when you talk  
18 about a human reliability assessment, I believe  
19 those are the terms you used, what do you -- what  
20 does that encompass?

21 MR. MONIAK: What I was stating is  
22 that it's an assessment that would determine what  
23 critical skills are necessary to perform the task in  
24 the aging management program as well as the severe  
25 accident management assessment, what skills are

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1 necessary, how available are those skills today; and  
2 taking into account the present trends that say that  
3 those skills are not going to be as available during  
4 the license renewal period unless that trend is  
5 reversed, how is the licensee going to take efforts  
6 to reverse that trend and ensure that there's going  
7 to be enough highly qualified people who aren't just  
8 qualified according to the rules, but who are  
9 qualified according to today's rules, yes. So  
10 that -- worried that the rules could change, of  
11 course, but that isn't the issue here. Does that  
12 make sense?

13 That they have to -- they should have to  
14 say how are they going to fulfill all these tasks  
15 that require great amounts of technical skill and  
16 know-how and experience as well as education.

17 JUDGE RUBENSTEIN: May I ask you a  
18 question?

19 MR. MONIAK: Doesn't have to be  
20 quantitative, though, in the sense of addressing it  
21 to the increasing risk or decreasing risk.

22 JUDGE RUBENSTEIN: Let me take them  
23 in order.

24 MR. MONIAK: Sure.

25 JUDGE RUBENSTEIN: Why do the skills

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1 for safe operation of a plant and aging management,  
2 which is an ongoing process from day one, differ in  
3 the subsequent 20-year period from the initial  
4 40-year period? I mean, the operators have to meet  
5 the requirements, they have to be current in the  
6 state of technology; as it is today, they have to be  
7 current in the state of the technology as it is  
8 tomorrow, they all have to qualify on simulators,  
9 and the software inherent in the simulator is updated  
10 to meet the changing, so I see it as a continuum as  
11 opposed to a discrete step function. If you address  
12 that, then I have another one.

13 MR. MONIAK: Okay, let me address  
14 that.

15 And I'm first of all saying that  
16 everything in the license renewal application can be  
17 viewed as a continuum except for a few discrete  
18 programs that are identified as new.

19 Secondly, this -- at the beginning of the  
20 licensing period, there was not an issue of -- the  
21 issue of availability of a qualified work force was  
22 not there like it is today. There were not people  
23 throughout the industry and throughout the  
24 regulatory community raising red flags to Congress,  
25 asking for help in recruiting a new generation of

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1 technical expertise.

2 JUDGE RUBENSTEIN: Going -- I haven't  
3 asked, under the second point, you sort of started  
4 to answer, but going back to the first point, the  
5 TLAA, the Time Limited Aging Analysis, deals with  
6 only those special components or systems which have  
7 been identified and the skills and -- the manpower  
8 skills are very similar to the current operational  
9 period.

10 So, in other words, if you take one of the  
11 other contentions, steam generator, eddy current  
12 inspection or something like that, I mean, that's an  
13 evolving technology, people get certified, and they  
14 continue to go through that process and upgrade  
15 their skills, and maybe also get certified in aging  
16 management techniques. So I'm a little hazy on the  
17 discreteness.

18 Let me ask you another question. That's  
19 sort of a global representation of the engineering  
20 community you're making in terms of manpower.

21 Anecdotally, I just read Perdue's nuclear  
22 engineering department is at his highest level in  
23 nuclear engineering ever. So how does this pertain  
24 specifically to Catawba and McGuire in terms of  
25 staffing? If the Commission's regulations are

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1       adequate under 50.55, under operator licensing, and  
2       all those other things, why do you expect it to  
3       change? I mean, either they meet the standard now  
4       and in the future or they don't. What is particular  
5       specialized to aging that says they won't meet the  
6       standard?

7                   MR. MONIAK: Particular to aging is  
8       not just procedures and ability to be qualified to  
9       follow procedures and do certain things, but it's  
10      also the whole -- there's a whole realm of  
11      engineering, like you just said, and it is true that  
12      attendance is up at a few schools, but that does  
13      not -- there's still the trend that's downwards.

14                   Let me -- a lot of the aging management  
15      program is adaptive as well, and so it involves  
16      skills like troubleshooting and creative -- finding  
17      creative solutions and things like that.

18                   JUDGE RUBENSTEIN: But responses are  
19      sharpened as they are like airline pilots, like  
20      times on the simulator; RO, reactor operator, has to  
21      take special tests and have certain experience  
22      levels to be an SRO, and this is an evolving  
23      process.

24                   Now, if you say there's not enough people  
25      available to go take the tests and pass these

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1 operations, then I guess if Duke can't man, for  
2 example, the control room, they would have to shut  
3 down under the regulations.

4 MR. MONIAK: This is correct;  
5 however, the trend could manifest itself in a way  
6 that it would be much more difficult to detect, such  
7 as people working extra, working overtime, could  
8 cause increased fatigue. There could be increased  
9 boredom if solutions are found that actually take --  
10 require less thinking. And so measuring whether or  
11 not they qualify, we're not going to come up with a  
12 scenario at any time in which you can't fill the  
13 operating room, and let me be anecdotal for a  
14 minute. We had the opportunity to visit Russia last  
15 year and visit the BN 600 fast reactor in the  
16 Ekinturnberg rural region. And people aren't being  
17 paid yet they are still showing up for work.

18 And the question was asked are you being  
19 paid, and they were wondering why we were even  
20 concerned, and Janet Zeller, executive director of  
21 BREDL, said that because we want you to be secure in  
22 your job, we don't want you to go to work worrying  
23 about bills. The people who were working at that  
24 plant are considered heroes even by the community in  
25 the area that wants the plant shut down, they called

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1       them heroes. The staffing there, people are  
2       overworked, underpaid, yet it keeps running.

3               Now, this is not Russia granted, but if  
4       we're going to have nuclear power for another 20  
5       years, instead of another technology that is not a  
6       high consequence operation, then there's a need to  
7       say we are definitely going to need people and  
8       you're going to have to start recruiting them now  
9       and developing it now and not waiting until there's  
10      a crisis point in which somebody in the office of  
11      Risk Informed Regulations determines there was a  
12      significant increase in the number of human  
13      performance indicators for one reactor. And then  
14      they all argue about it. That's how it will  
15      manifest itself is in slight increases in plant  
16      performance. It will be very difficult to measure.

17             Rather than going that route, I believe  
18      it's incumbent, we believe it is incumbent for any  
19      licensee that's running a high consequence operation  
20      in which the taxpayer pays the liability, to come up  
21      with a way to adequately staff at all levels  
22      administrative all the way down to technician.

23             MR. KELBER: Mr. Moniak, I think  
24      you've outlined a problem which every human  
25      resources officer and every technical or quasi

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1 technical organization in this country faces every  
2 day. I would like to ask you, once again, I know  
3 you started off at the beginning, and I'm sorry, I  
4 missed it, but where in Appendix B to subpart A of  
5 10 CFR part 51 does this come up? I have it in  
6 front of me and I can't see it.

7 MR. MONIAK: Alternatives to mitigate  
8 severe accidents must be considered for all  
9 plants -- that's where it comes up in that part of  
10 the proceeding, and also arguing that aging  
11 management, as long as it's heavily reliant upon  
12 human performance --

13 MR. KELBER: That's not in the table,  
14 though.

15 MR. MONIAK: Yes, that's not the  
16 table. So for that part, that's what I would argue.  
17 It's a Category 2 issue.

18 MR. KELBER: This would belong then  
19 under a question of an examination by the Staff  
20 probably, and perhaps by the ACRS, of the adequacy  
21 of a proposed severe accident mitigation  
22 alternative. It's not something that we would  
23 necessarily face.

24 JUDGE YOUNG: In that regard, also,  
25 how are you looking at it under that category? How

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1 are you alleging that the SAMA analysis done by the  
2 licensee is deficient.

3 MR. MONIAK: That it's overly reliant  
4 upon human performance.

5 JUDGE YOUNG: It's overly reliant --

6 MR. MONIAK: Overly reliant upon --  
7 let me -- the initiatives that were cited say in the  
8 Catawba scenario assessment, was a maintenance rule  
9 program and there was an administrative program to  
10 ensure that structure systems, components supporting  
11 safety are available and capable. They said that  
12 they would -- the guideline program includes  
13 diagnostic tools and guideline documents for  
14 developing strategies. There's no programs in which  
15 they tried to mitigate the effects of a severe  
16 accident through any kind of a technological fix.

17 JUDGE YOUNG: So how would this human  
18 reliability assessment, if I got the term right,  
19 that you're proposing, how would that fix the SAMA  
20 analysis done by Duke? How would that improve on  
21 that?

22 MR. MONIAK: Well, it would tie into  
23 their programs, so that they ensure the people who  
24 went to those programs are capable of performing the  
25 task. That's how I would address it in there.

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1 JUDGE YOUNG: I guess I'm still -- it  
2 gets back to the question I asked earlier about what  
3 the human reliability assessment encompasses.  
4 You've provided a fair amount of authority for the  
5 proposition that accidents, that human error can  
6 play a large role in accidents, and what I'm trying  
7 to get a handle on is what would be contained in  
8 this human reliability assessment that would improve  
9 upon what Duke has proposed in its SAMA or SAMDA  
10 analysis?

11 JUDGE RUBENSTEIN: I think we're  
12 asking are there any specific deficiencies in their  
13 analysis that you could point to based on an  
14 inadequate human reliability assessment?

15 MR. MONIAK: I would argue at this  
16 point, although I didn't in the contention, that the  
17 over reliance upon human reliability for accident  
18 prevention is a deficiency.

19 MR. KELBER: Specifically, where on  
20 this point?

21 MR. MONIAK: In the severe accident  
22 management --

23 MR. KELBER: But where in that?

24 MR. MONIAK: Oh, Table 2.1 of the  
25 Catawba SAMA, and I don't have the cite on the

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1 McGuire one.

2 MR. FERNANDEZ: Your Honor, which  
3 table was this?

4 JUDGE KELBER: 2.1, I think he  
5 mentions it on page 16. What I'm trying to get a  
6 handle on is you're saying -- you're saying on the  
7 one hand that there's too much reliance on human and  
8 administrative controls in the SAMA analysis, that's  
9 capital S-A-M-A, but the -- what you are proposing  
10 be done is a human reliability assessment, and I'm  
11 trying to see the connection -- I mean, maybe I  
12 understood something differently before I heard you  
13 start talking, but what I'm trying to understand is  
14 what is it that you're proposing be done in this  
15 human reliability assessment that would correct  
16 human deficiencies, because I thought I just heard  
17 you say rely less on human beings, but what would  
18 the human reliability assessment provide?

19 MR. MONIAK: I would say if there is  
20 a human reliability assessment, or we could call it  
21 a human factors analysis or human factors  
22 discussion, whatever, it would provide a discussion  
23 of how the next generation of reactor personnel are  
24 going to be recruited and how they are going to  
25 adequately staff the plant so that the risk of human

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1 error is kept very low.

2 I guess maybe what I'm saying is there  
3 should be a human availability assessment more than  
4 a reliability assessment. It's just that --

5 JUDGE RUBENSTEIN: You mean a  
6 manpower --

7 JUDGE YOUNG: Person power, please.

8 JUDGE RUBENSTEIN: Pardon me.

9 MR. MONIAK: I have difficulty, I  
10 always come up with the basis and stuff first and  
11 then come up to contention. I had difficulty  
12 deciding that, and human reliability assessment  
13 showed up so much in the literature that I just went  
14 with that.

15 MR. KELBER: Mr. Moniak, in judging  
16 the effectiveness of a severe accident mitigation  
17 alternative, a probabilistic risk analysis is done,  
18 generally, to determine whether or not it will  
19 terminate an event successfully. Part of that is an  
20 assessment of the human factors involved. Is that  
21 what you mean?

22 MR. MONIAK: No, that isn't what I  
23 meant, although I would like to see that, but that's  
24 not required --

25 MR. KELBER: It's difficult to draw a

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1 connection between your generalized description and  
2 what one would do with, let's say, putting in a --  
3 let me just draw an example out of the air -- the  
4 battery powered source for divers, which might  
5 involve throwing a switch. I don't understand the  
6 connection between the human reliability assessment  
7 that you've described and the analysis of what  
8 operator action is required to effect that  
9 mitigation device, or system.

10 JUDGE YOUNG: You might, if you want  
11 to hold on to that and think about this as well.

12 MR. MONIAK: Yes, I definitely have  
13 to think about some of these questions now.

14 JUDGE YOUNG: Pardon?

15 MR. MONIAK: Yes, I definitely have  
16 to think about some of these questions now.

17 JUDGE YOUNG: Let me add one to think  
18 about while we go to Duke and the Staff, and that is  
19 that -- in response to my last question and Judge  
20 Rubenstein, you said what you're really talking  
21 about is the availability, the aging work force, the  
22 availability of sufficient personnel to handle all  
23 aspects of the operation so as to prevent accidents.  
24 Is that an accurate statement of what it is you're  
25 arguing here?

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1 MR. MONIAK: Yes, it is, because  
2 that's what is argued throughout the explanation,  
3 the basis or bases that the contention, as well as  
4 the -- yeah, that's argued throughout there.

5 JUDGE YOUNG: Yes, my question was  
6 going to be also, is there anything else or is that  
7 pretty much it, that you're arguing? And you may --  
8 you can come back to both of those questions, Judge  
9 Kelber and mine, after we hear from the Staff as  
10 well.

11 MR. MONIAK: Yes, because I do  
12 recognize there is a constant analyses of, although  
13 there is not -- let me back up. First of all, the  
14 Staff did respond that probabilistic risk  
15 assessments are not even mandated in today's  
16 reactors under the current licensing basis, that's  
17 why I had to say we're not asking for that, and we  
18 weren't, reading through this; and secondly, we do  
19 recognize that that is something that is monitored,  
20 is human performance, you know, the human  
21 performance indicators, whatever. It would be good  
22 to see it monitored at a much higher level and see  
23 the NRC put a large amount of efforts into it from  
24 their end of this, as well as the licensee.

25 JUDGE YOUNG: Well, now, there are

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1 you getting into challenging --

2 MR. MONIAK: That's not challenging  
3 anything. What I'm saying is that is an ongoing  
4 thing. What you said is absolutely right, that it's  
5 more of a human availability discussion and  
6 assessment than it is a reliability assessment. So  
7 there's a choice of words.

8 JUDGE YOUNG: Okay. Mr. Repka.

9 MR. REPKA: Thank you. I don't think  
10 anybody and certainly not Duke Energy would dispute  
11 the idea that the availability of qualified human  
12 resources is important to safe operation of the  
13 plants, and I want to address this in -- the license  
14 renewal context in two areas, first, the license  
15 renewal rule itself in part 54, and then I want to  
16 come back to the issue of part 51 and SAMAs, because  
17 I think that's something that could embellish what  
18 we put in our response.

19 With respect to human performance under  
20 license renewal, I think judging from the questions  
21 that the judges have asked, I think you fully  
22 understand that this is a continuous process. It's  
23 covered by qualifications standards that apply every  
24 day, training programs that apply every day,  
25 operator training, simulator training,

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1       regualification programs for operators, those  
2       operator licenses expire every six years and  
3       operators are subject to regualification.

4               The fact of the matter is, these human  
5       availability issues and also human performance  
6       issues are ongoing, continuous matters, they are not  
7       unique to the period of extended operation, they  
8       apply right now, consistent with the Commission's  
9       basic principle as they outline them in the  
10      statement of consideration for the license renewal  
11      rule. Those matters are subject to current  
12      regulatory processes and are not addressed in the  
13      license renewal rule.

14              The license renewal rule itself is geared  
15      to equip issues and aging issues, so clearly these  
16      are not in part 54 license renewal space.

17              The issue of SAMAs, does human reliability  
18      or human availability need to be addressed in the  
19      environmental review in some way under the SAMA  
20      analysis. That's the question I'm hearing this  
21      morning. I think that this issue is so vague that  
22      it's almost impossible to address exactly what it is  
23      that BREDL is looking for, but I think it basically  
24      misunderstands or shows no understanding of the SAMA  
25      analysis that was actually submitted.

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1           There are extensive SAMA analysis included  
2   in the environmental reports for both McGuire and  
3   Catawba. They follow very similar approach. Both  
4   are based on probabilistic techniques. Both  
5   specifically reference the fact that they draw on  
6   plant specific PRAs and also the previous work that  
7   was done for the NRC through the IPE program, the  
8   individual plant examination program, as well as  
9   subsequent updates of the PRA.

10           If you look, and I happen to have McGuire  
11   in front of me, page 4 of the McGuire SAMA analysis,  
12   which would be attachment K to the application,  
13   specifically quotes from the NRC's response to the  
14   McGuire IPE analysis, work that was already  
15   previously done and is credited here.

16           Item 4 talks about the fact that Duke had  
17   already completed a human reliability analysis, HRA,  
18   which allowed the licensee to develop a quantitative  
19   understanding of the contribution of human errors to  
20   core damage frequency in any human probability. The  
21   point of this is just as an example of the kind of  
22   information that's in the SAMA analysis itself.

23           JUDGE YOUNG: Does it also contain  
24   anything on the availability issue that Mr. Moniak  
25   raised?

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1 MR. REPKA: Well, the availability  
2 issue is not directly relevant to a SAMA review. A  
3 SAMA analysis looks at accident and mitigation  
4 alternatives. And what happens through the PRA  
5 process is that human performance is modeled in that  
6 process. One doesn't always assume a probability of  
7 one for human action. So in doing a risk analysis  
8 of core damage scenarios or containment failure  
9 scenarios, human performance is modeled in that view  
10 and specific insights related to the contributions  
11 of human performance to risk are gained from that  
12 analysis.

13 If you look further into the SAMA  
14 analysis, you'll see in table 2-1, which Mr. Moniak  
15 alluded to, there are specific mitigation  
16 alternatives that are -- were previously implemented  
17 at McGuire that are credited here, and those include  
18 things that address human reliability  
19 considerations.

20 For example, and if you see here, specific  
21 alternatives listed on the table -- in the table,  
22 might refer to procedural guidance to the operators,  
23 specific hardware changes to install automatic  
24 features instead of manual features. Those are  
25 specific alternatives that are based upon human

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1 reliability insights.

2 Table 2-1 in each of the analyses reflects  
3 those alternatives that have already been completed.  
4 If you then look at the additional tables in the  
5 SAMA analysis, table 4-2, and again this is just for  
6 McGuire, talks about specific SAMAs considered to  
7 reduce core damage frequency. A number of those  
8 specific alternatives involve installing automatic  
9 equipment instead of manual equipment. So those are  
10 intended to address human performance issues.

11 The same is true in the table five related  
12 to containment, table 5-1, which are the potential  
13 containment examiners, and there are, again,  
14 particular alternatives identified based upon human  
15 performance insights. Again, those all, though,  
16 relate to human reliability and performance in  
17 action. Human availability, which is are there  
18 enough qualified people, that's not something that's  
19 really susceptible to a risk analysis. That's not  
20 what a SAMA analysis can go to. That really goes to  
21 the fact that the entire regulatory structure is  
22 based upon having qualified individuals, and that's  
23 where the training programs required by regulations  
24 come in; technical specifications related to  
25 operator staffing and qualifications, industry

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1 standards, all of those, they go directly to the  
2 issue of human availability. And if there are not  
3 sufficient qualified human beings to Staff those  
4 positions and meet those requirements, they are  
5 addressed -- that would be addressed today as a  
6 continued plant operation issue. So it's not really  
7 susceptible to a SAMA analysis.

8 JUDGE YOUNG: So are you -- I think I  
9 heard you say earlier that you don't dispute that  
10 human availability is a legitimate issue. You're  
11 saying it doesn't fit into SAMA? Did I understand  
12 that right or --

13 MR. REPKA: What I'm saying, yes, it  
14 is an issue in operating a plant, just as it would  
15 be in operating any technological enterprise; but  
16 it's not something, A, within the scope of license  
17 renewal on part 54 as an aging issue, so there's no  
18 basis there to require some sort of human  
19 availability assessment or a human reliability  
20 assessment, and B, there's no basis in part 51 for  
21 hiring that kind of human availability assessment in  
22 a SAMA analysis. Human performance is already  
23 modeled in the SAMA analysis, and to the extent this  
24 contention is related to human reliability, it lacks  
25 basis, because A, it's vague, and B, it's already

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1       been addressed and there's no understanding at all  
2       of what's been submitted in my application.

3               Beyond that, I would just say that the  
4       whole issue of human resource availability, again,  
5       there's nothing unique there to McGuire and Catawba.  
6       That's an ongoing everyday matter. So the bottom  
7       line here is that there's no admissible contention.

8               JUDGE YOUNG: Ms. Uttal or Mr.  
9       Fernandez?

10              MS. UTTAL: I have nothing to add, and  
11       Mr. Repka has covered all points, unless the board  
12       has any questions to add.

13              JUDGE YOUNG: I guess one thing that  
14       I'm trying to sort of formulate in my mind is  
15       assuming -- the last thing you said about really  
16       it's a generic issue, I doubt Mr. Moniak will argue  
17       with that but we'll ask him in a minute, but  
18       assuming that it fits under a general understanding  
19       of severe accident mitigation alternatives and  
20       there's sort of a basic argument here, if you don't  
21       have enough people, then obviously there could be  
22       problems, how would you address it assuming it --  
23       just from that standpoint, how would the plant or  
24       the plants address the issue of having available  
25       manpower, person power?

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1 MS. UTTAL: That would be addressed  
2 under current licensing requirements.

3 JUDGE YOUNG: Which require certain  
4 number of various types.

5 MS. UTTAL: And the tech specs which  
6 require that certain people be in certain positions.

7 JUDGE YOUNG: And if you ever got to  
8 a point where there were not enough people in the  
9 positions available, then what would happen at that  
10 point?

11 MS. UTTAL: I think that there are --  
12 I think that you're getting into -- way into the  
13 area of speculation, but there are things in the  
14 tech specs that can be changed regarding --

15 JUDGE YOUNG: I guess what I was  
16 trying to get at is what do the rules in the tech  
17 specs say with regard to availability of numbers of  
18 people in various disciplines, to what degree do  
19 they spell that out?

20 MS. UTTAL: I can't address that, I  
21 don't know specifically what the tech specs might  
22 require in terms of the numbers of people.

23 MR. REPKA: The tech specs would go  
24 directly to issues like control room staffing, the  
25 number of operators available. Those kinds of

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1 issues are defined this the tech specs. There are  
2 other staffing -- I won't call them requirements,  
3 but outlined in industry standards such as ANSI  
4 standards that talk about what qualifications an  
5 individual might have if they are going to be in an  
6 engineering position.

7 So there are -- it might not say how many  
8 engineers the company needs to have to fulfill  
9 specific functions, but there are very specific  
10 qualification standards for a number of different  
11 activities. Control room staffing just happens to  
12 be one that's addressed directly in the tech specs.

13 JUDGE RUBENSTEIN: In the theoretical  
14 case, recognizing that the tech specs calls for a  
15 certain maintenance or a certain inspection and the  
16 individual wasn't available, what would happen?

17 MR. REPKA: Well, there again, there  
18 are procedures, planned procedures and other  
19 guidelines that say with respect to certain  
20 functions like, say, take for example maintenance,  
21 this particular maintenance operation will require a  
22 mechanical maintenance personnel with a certain  
23 qualification level. So if you don't have  
24 individual A to do it, you need individual B who has  
25 the same qualifications. They get those

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1 qualifications through either their formal education  
2 or through company training programs or  
3 certification programs.

4 JUDGE RUBENSTEIN: And the individual  
5 may come from the other unit or come from another  
6 site or from headquarters?

7 MR. REPKA: Sure, that's always  
8 possible.

9 MR. KELBER: In any event, this is  
10 all part of a current licensing basis, is that  
11 correct?

12 MR. REPKA: That's absolutely  
13 correct, Judge Kelber.

14 JUDGE YOUNG: I guess I would like to  
15 hear maybe you, Mr. Repka, assuming -- and I've  
16 actually heard the chairman talk about the aging  
17 work force and the problem that's going to present  
18 for the NRC for one, and presumably also for the  
19 plants, unless there is a turn-around which may be  
20 started at Perdue; but in any event, that obviously  
21 would be something that I presume a company would  
22 look in some manner or fashion and would not just  
23 rely upon the universities or the NRC to produce the  
24 experts in the requisite numbers. Do you have -- I  
25 mean, how does Duke look at that issue?

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1 MR. REPKA: I think you're correct to  
2 assume that if there was a problem, it would be in  
3 any licensee's interest to try to address that issue  
4 through things like creating your own qualifications  
5 programs, funding to nuclear engineering departments  
6 at university, and those are all things that we can  
7 speculate might happen or could happen. What Duke  
8 Energy is doing in that area right now, I can't  
9 speak to directly.

10 MR. KELBER: Would they consider  
11 paying engineers more than they pay attorneys?

12 MR. REPKA: Well, that's always an  
13 idea. No comment, sir.

14 JUDGE RUBENSTEIN: To just belabor  
15 the point a little, what percentage of your  
16 operating room staff comes out of the Navy program  
17 other than through the normal academic channels?  
18 Significant?

19 MR. REPKA: I think that it probably  
20 used to be higher than it is now, but I think  
21 significant is probably a fair characterization.

22 JUDGE RUBENSTEIN: 20, 30 percent?

23 MR. KELBER: Out of the Navy?

24 JUDGE RUBENSTEIN: So in addition to  
25 the normal educational process out of the naval

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1 program comes a large body of skilled people which  
2 are available.

3 MR. REPKA: That's true.

4 JUDGE RUBENSTEIN: That could be, as  
5 Judge Kelber said, properly compensated to withdraw  
6 from being under the ice cap.

7 MR. KELBER: That's not exactly what  
8 I said.

9 MR. REPKA: But since there is a  
10 compensation link, and you've raised that, that just  
11 underscores the point I believe Judge Kelber made  
12 earlier, it is an HR issue, human relations issue  
13 that is dealt with through various HR techniques to  
14 try to draw the people needed.

15 JUDGE YOUNG: I want to come back to  
16 this issue that I was talking about again. And that  
17 is, let's say a tentative analysis of this  
18 contention might be that the petitioner has  
19 presented support for the argument that there is a  
20 work force person power availability problem that  
21 has been discussed by chairman and others, and  
22 there's no dispute that human error plays a role in  
23 accidents. Is there a dispute over whether Duke has  
24 addressed not the issues of the human role in  
25 accidents, individuals' roles, but the availability

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1 of numbers of persons in various fields in the  
2 future? Does the application address that? Is  
3 there a dispute on that issue? Because it seems to  
4 me it's coming down, at least tentatively speaking,  
5 it's coming down to a fairly narrow issue, and that  
6 is simply human availability. But what I'm  
7 wondering is what -- is there, in fact, a dispute  
8 about that issue, and if there's not, what is it  
9 that Duke proposes to do about the human  
10 availability? Let's assume it is a problem, the  
11 issue of having enough people to fill these roles as  
12 the work force ages, what is Duke -- what is Duke's  
13 plan to address that?

14 MR. REPKA: Well, there's -- there  
15 certainly is no dispute that's within the scope of  
16 this proceeding, because human availability is  
17 addressed through everyday processes as we've just  
18 been discussing, so that, again, it's not unique to  
19 license renewal in any way. It applies today just  
20 as it would apply in the period of extended  
21 operation.

22 JUDGE YOUNG: But assuming, as you  
23 have, including human issues in your SAMA analysis,  
24 and assuming that sort of almost implicit in that is  
25 that you have to have the humans available to do the

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1 things that you describe in your SAMA analysis, is  
2 there anything in the application that addresses the  
3 issue of having enough available bodies to do the  
4 tasks?

5 MR. REPKA: There's not anything that  
6 would address that issue per se because it's doesn't  
7 need to address that issue. The regulatory  
8 structure, the current licensing basis defines what  
9 is necessary to operate the plant --

10 JUDGE YOUNG: Right, but what I'm  
11 getting at is the issue that has been raised by  
12 chairman Meserve and others about the fact that this  
13 area nuclear energy is having to face up to the fact  
14 that there are fewer people out there available and  
15 the universities are going to have to start training  
16 more, maybe the Navy will be able to provide them;  
17 but even though it's a narrow issue, I'm asking  
18 what -- I'm not talking about what the rules require  
19 people to do and how many people are available; is  
20 Duke doing anything to assure that the requisite  
21 numbers will be available? Is that something that  
22 you -- that Duke has done, and if you don't think  
23 you need to do it, why not?

24 MR. REPKA: Again, I think what the  
25 chairman has alluded to is a -- it's a generic

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1 issue, it's a truism, that we always have to be  
2 sensitive to sources of qualified people. The  
3 company does studies of human resources related  
4 studies. There's been no basis offered to suggest  
5 that Duke has a particular problem in this area.  
6 This is just a generic issue that the entire  
7 industry is always sensitive to and has training  
8 programs, human resource programs, and potentially  
9 other initiatives to address if and when it ever  
10 becomes a real problem that we don't have enough  
11 people to meet our licensing basis commitment.

12 JUDGE YOUNG: So if I'm understanding  
13 your argument to be, if SAMA is one of the Category  
14 2 issues that the Commission has sort of carved out  
15 of the generic issues that the GEIS covers, then  
16 you're saying that the availability aspect of the  
17 human reliability in the SAMA analysis is a generic  
18 aspect that should be carved out of SAMA and put  
19 back in the generic?

20 MR. REPKA: What I'm saying is that  
21 the availability issue doesn't make sense in SAMA's  
22 face, it does not apply. Reliability would apply  
23 because that's modelled to probabilistic techniques.  
24 With respect to availability, the assumption in  
25 diagnose a PRA is you'll need your licensing basis

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1 and have the people you'll need to operate the plant  
2 and now the question is how will they perform. And  
3 you look for risk insights and you look for  
4 improvements in the design and procedural -- and in  
5 design and procedures to identify that.

6 With respect to availability, that's  
7 addressed not in SAMA's case because it's not  
8 susceptible to being addressed there, but through  
9 just normal ongoing processes to assure that we meet  
10 our current licensing basis commitments.

11 JUDGE YOUNG: Well, let me just take  
12 this a little bit farther with you. The Commission  
13 has said with regard to SAMA that it doesn't  
14 prescribe the scope of acceptable consideration of  
15 severe accident mitigation alternatives, nor does it  
16 intend to mandate consideration of alternatives  
17 identical to those evaluated previously. So the key  
18 word I think you used was that it's -- was that the  
19 SAMA analysis that you've done is based on the  
20 assumption that there will be enough people  
21 available, and I guess what I'm wondering is, in  
22 looking at SAMA analyses, it seems -- I don't think  
23 that you would argue that petitioners can never  
24 challenge assumptions, would you?

25 MR. REPKA: Again, I just -- how

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1 would you challenge that assumption in SAMA's face?  
2 What is the mitigation alternative that would go to  
3 the availability of people? I have not heard it  
4 from BREDL and I can't conceive of what it might be.  
5 The issue of if you don't have enough operators,  
6 it's not governed or addressed by a mitigation  
7 alternative, it's addressed by the fact that the  
8 tech specs say you can't operate the plant. If you  
9 don't have enough people to do what you need to do,  
10 you have other issues in the real world. So there  
11 is no mitigation alternative that has been  
12 identified that would correlate to the availability  
13 issue. And I think what -- you can't bootstrap an  
14 ongoing issue into a SAMA issue, it makes no sense  
15 to do that.

16 JUDGE YOUNG: Well, now, all of the  
17 things that you're doing in your SAMA analysis about  
18 human reliability, those are ongoing issues, aren't  
19 they?

20 MR. REPKA: Yes, but again, through  
21 doing a risk study, you can model human performance,  
22 how likely is the individual to do that which they  
23 are required to do by the procedures, what -- you  
24 know, how likely will they be to take the action  
25 required. And then you can learn and mark -- come

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1 up with a specific mitigation alternative.

2 JUDGE YOUNG: Right, I understand  
3 that. But I my point was, your categorizing human  
4 availability issues as ongoing issues also applies  
5 to human performance issues and -- analyzed in a  
6 PRA. So my question is, even though this has come  
7 down to a fairly small issue, I think, in the big  
8 scheme of things, an even in the SAMA scheme, I've  
9 heard you say and I've heard Mr. Moniak say that  
10 there could be analyses of how many people are going  
11 to be available and Duke might -- I think it was you  
12 that said it, that Duke might consider its own  
13 training programs or funding a chair at a university  
14 or something to that effect.

15 So I guess I'm not entirely convinced that  
16 those types of things would necessarily not fit  
17 within a SAMA analysis. And although it's a fairly  
18 narrow issue at this point, I haven't heard you say  
19 anything that would necessarily exclude those or  
20 indicate that there's no dispute at all because you  
21 agree that you haven't -- you have not addressed  
22 that particular issue in your SAMA.

23 MR. REPKA: Well, I would say, again,  
24 that those things are not SAMA's by definition.

25 JUDGE YOUNG: But where is the

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1 definition? That's what I need to understand.

2 MR. REPKA: Severe accident  
3 mitigation alternative.

4 JUDGE RUBENSTEIN: Let me try.

5 JUDGE YOUNG: Let me finish here.  
6 Severe accident mitigation alternative includes  
7 human reliability issues, how human beings are going  
8 to react in certain circumstances, and although it  
9 may seem simplistic and it may seem a truism, it's  
10 obviously got some significance, the issue of human  
11 availability, availability of experts has obviously  
12 got some significance if the Chairman is talking  
13 about it and other people talking about it, and now  
14 I have heard him speak about this.

15 So I guess, you know, maybe it's sort of  
16 so simple it's like the elephant sitting in the room  
17 or something, but I'm still not quite following why  
18 analyzing the availability of human beings with  
19 particular expertise would be even a difficult thing  
20 to do.

21 MR. REPKA: Well, I'm not suggesting  
22 that it would be a difficult thing to do. I think a  
23 SAMA analysis is not the place to do it.

24 JUDGE RUBENSTEIN: Excuse me. Why  
25 don't you give a little background on the

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1 probabilistic use of a human factor input or area of  
2 Commission or omission or the likelihood of an  
3 individual carrying out an event; and in that model,  
4 is it not true that the assumption is that the  
5 person is there, that he is trained, or she is  
6 trained to do it, and then it becomes an error of  
7 that individual who's there and who's not  
8 particularly unavailable due to a manpower shortage  
9 or people shortage.

10 MR. REPKA: Well, I think the way you  
11 just said it is absolutely correct. You would have  
12 an individual that's there that's trained and  
13 qualified and then you model based on human factors  
14 and other human performance considerations how  
15 reliable they are to fulfill that function.

16 Now, the availability assumption, again,  
17 is the idea that a SAMA might be a college  
18 scholarship program does not really go to the issue  
19 of what the SAMA is all about. There are other --  
20 there are many performance issues, there are other  
21 current day plant issues that clearly relate to  
22 severe accidents that, again, are just presumed but  
23 they are not -- you don't bootstrap them in license  
24 renewal space into the SAMA evaluation because  
25 there's a link to safety. That's just not what SAMA

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1 does.

2 MR. KELBER: Is it not the case that  
3 under operator license examination , operators are  
4 required either on a simulator or -- well, let me  
5 say just on a simulator, to demonstrate their  
6 ability to respond to a variety of situations, not  
7 all of them severe accidents but at least some of  
8 them certainly severe accidents?

9 MR. REPKA: That's true.

10 MR. KELBER: And when a system, let's  
11 say high pressure injection system or some  
12 residual -- using the residual water for cooling is  
13 put in place, the technical specifications that  
14 accompany that become part of the current licensing  
15 basis, technical specifications are part of the  
16 current licensing basis.

17 MR. REPKA: Right, that's correct.

18 MR. KELBER: If a SAMA is adopted, it  
19 becomes part of the technical specifications  
20 defining it, become part of the current licensing  
21 basis.

22 MR. REPKA: That's correct.

23 MR. KELBER: If a person is  
24 unavailable, then the current licensing basis is  
25 violated.

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1 MR. REPKA: That's correct.

2 MR. KELBER: Thank you.

3 MR. REPKA: Now, going again to the  
4 issue of ongoing issues, you could take other issues  
5 like oversight, quality oversight or, for example,  
6 corrective action program, things that are addressed  
7 through the NRC's normal reactor oversight process  
8 as cross-cutting issues, these are things that are  
9 there every day, and if you don't -- but you can't  
10 say I need to do a SAMA to evaluate --

11 JUDGE YOUNG: Let me see if I can  
12 find another analogy and just -- we really need to  
13 sort of move on from this. But are there any other  
14 parts of the license renewal application that  
15 address availability issues of any kind of material,  
16 any kind of hardware? Does that come up anywhere in  
17 your application, and if so, how is that handled?

18 MR. REPKA: The answer I'm getting is  
19 no, and again, even for availability of equipment,  
20 the presumption is you're going to get equipment  
21 that meets your current licensing basis.

22 JUDGE YOUNG: Okay. I guess, if  
23 you -- if we weren't talking about a nuclear plant  
24 here and we were talking about something that relied  
25 upon oil, for example, I would assume that in

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1 planning that type of company you would have to take  
2 into account the availability and cost of oil in the  
3 future. Would you agree?

4 MR. REPKA: That's true, and if we  
5 had specific specifications on the kind of oil we  
6 could use, for example, in the emergency diesel  
7 generator, we would have to deal with finding that  
8 kind of oil and planning for it.

9 JUDGE YOUNG: In your application?

10 MR. REPKA: No, in part of a daily  
11 ongoing activity.

12 JUDGE YOUNG: Okay. Just --

13 JUDGE RUBENSTEIN: Either the diesel  
14 would be operable or not. It would or would not  
15 meet the tech spec. If you don't have petroleum  
16 product in the tank, you shut down.

17 MR. REPKA: You do what the tech spec  
18 says, if it's a shutdown, it's a shutdown.

19 JUDGE YOUNG: Okay. Just quickly,  
20 rebuttal and then --

21 MR. MONIAK: Given the history of  
22 exemptions, the request for relief and whatever from  
23 tech specs or other specifications or standards,  
24 there's no saying whether if people weren't  
25 available it would stop running, because if the year

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1 2036 comes along and these reactors are still  
2 required to meet electrical and power needs around  
3 this area, and shutting them off would be considered  
4 an economic liability that is a greater risk than  
5 keeping them running, but they don't run the tech  
6 specs, that's a likely thing; but that's  
7 speculation. And I just want to point out that  
8 meeting the tech specs would be a good argument if  
9 the licensee consistently met the tech specs and  
10 wasn't always requesting relief from them throughout  
11 the industry. They are always getting amendments.  
12 It's hard to tell what the current licensing basis  
13 is.

14 JUDGE YOUNG: Let me just -- let me  
15 interrupt you here. What about the argument that  
16 this is a generic issue? Because obviously it is --  
17 it obviously applies across the board.

18 MR. MONIAK: Well, as far as generic  
19 issues, I would accept that with the caveat that  
20 everything in there is a generic issue. There's a  
21 generic environmental impact statement, generic  
22 aging lessons learned program which wasn't applied  
23 in this process but could have been applied, and I  
24 would add much easier than the system that they went  
25 through. Everything is generic, everything is based

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1 on generic lessons learned.

2 JUDGE YOUNG: Well, not  
3 plant-specific analyses based on these particular  
4 plants. Correct?

5 MR. MONIAK: Most of the analyses in  
6 here are not plant-specific. They are just tiered  
7 to -- for example, the next one I'll get to is steam  
8 generators are tiered toward generic  
9 recommendations. 9706, Nuclear Energy Institute,  
10 they just flat out say we're going to follow these  
11 recommendations, which that was the only other one  
12 of two issues that I was going to raise. It's  
13 difficult to access a lot of this information not  
14 because of Adams but because a lot of it is  
15 proprietary and, for example, on the severe  
16 accident --

17 MR. KELBER: Excuse me, are we  
18 talking at BREDL 3 or Contention 2?

19 MR. MONIAK: I'm using the steam  
20 generator as an example.

21 JUDGE YOUNG: Well, let's stick on  
22 Duke for a minute. What is it that you think that  
23 Duke should be doing that they are not doing?

24 MR. MONIAK: Well, I think that,  
25 having gone through the severe accident management

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1 assessment again, it is true that they do a human  
2 reliability assessment, but that was 1988, and then  
3 they updated the one for McGuire and submitted it in  
4 1994; at Catawba, probabilistic risk assessment was  
5 submitted 2001.

6 JUDGE YOUNG: But what I'm asking you  
7 is what do you think they should be doing now in  
8 this application with regard to the issue that you  
9 raised before, which I understood you to narrow down  
10 to human availability?

11 MR. MONIAK: They should be in the  
12 severe accident management assessment, there should  
13 be initiating events that are either initiated by  
14 human error, analyzed, or compounded by human error,  
15 human initiating events that are --

16 JUDGE YOUNG: But I understood  
17 Mr. Repka to be -- that what he was describing  
18 included the human factor in these accident  
19 analyses, and that what you were raising was the  
20 issue of there being less availability of human  
21 beings who have various types of expertise. And so  
22 what I'm asking you is what do you think they should  
23 be doing that they are not doing?

24 MR. MONIAK: I think exactly what is  
25 said in the contention, that they need to identify

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1       how they are going to meet future requirements to  
2       both avert accidents and so that -- and to consider  
3       humans as part of the safety systems --

4               JUDGE YOUNG: But they do that  
5       already.

6               MR. MONIAK: It's unclear to what  
7       extent at all. I mean, the word human shows up here  
8       about five or six times.

9               JUDGE YOUNG: I guess what I'm trying  
10      to get you to do, and we need to move on to  
11      Contention 3, but is to be specific about -- I don't  
12      think anybody seriously disputes that there is a  
13      problem that if the trend is not turned around,  
14      there's a work force problem. But the issue is,  
15      what could they do that's different than what needs  
16      to be done with regard to all plants in terms of the  
17      availability of experts and technicians in various  
18      fields.

19              MR. MONIAK: I'm just going to cite  
20      the contention then. There should be some kind of  
21      analysis or discussion, and I'm not defining what  
22      kind it has to be, of the impacts of work force  
23      aging, critical skills retention and availability,  
24      advanced technology and human reliability and  
25      ability of future work force to adequately implement

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1 aging programs.

2 I don't know exactly what that entails,  
3 but considering the extent to which humans are  
4 relied upon to make sure that there's not an  
5 accident in the year 2040 as things are winding  
6 down, I find it the most troubling part of the  
7 application that the entire human factor seems to be  
8 almost completely overlooked.

9 JUDGE YOUNG: Anything further on  
10 Contention 2? Do we need a break? Okay, you're  
11 going to argue Contention 3 also?

12 MR. MONIAK: Yes. Now, we'll talk  
13 about metal.

14 JUDGE YOUNG: Pardon?

15 MR. MONIAK: Now we'll talk about  
16 metal instead of human tissue and functions.

17 JUDGE YOUNG: Oh, okay.

18 MR. MONIAK: Okay. Our Contention 3  
19 was of the steam generator aging management program.  
20 The aging management program for steam generators  
21 and associated components such as steam generator  
22 tubes is insufficient and incomplete and does not  
23 assure safe operations that prevent design basis and  
24 severe catastrophic accidents as a result of  
25 undetected or accelerated aging. In addition to the

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1 design basis acts and frequency for steam generator  
2 tube rupture is grossly underestimated. We do not  
3 have as an issue here scope.

4 JUDGE YOUNG: What?

5 MR. MONIAK: Scope is not an issue.

6 JUDGE YOUNG: Scope.

7 MR. MONIAK: Is not an issue. So I  
8 would like to start with -- start with the first  
9 issue being that --

10 JUDGE YOUNG: Judge Rubenstein was  
11 just asking, when you say scope is not an issue, you  
12 mean that --

13 MR. MONIAK: There's no argument from  
14 the licensee or the Staff that this is outside the  
15 scope of the proceedings.

16 JUDGE RUBENSTEIN: Oh, okay.

17 JUDGE YOUNG: That's what I thought.

18 MR. MONIAK: Okay. First issue is  
19 the failure to establish a connection between the  
20 contention and aging management and -- can I just  
21 have 30 seconds? I can't seem to find the page.

22 JUDGE YOUNG: Sure. If you need  
23 five minutes, we can take a five-minute break.

24 MR. MONIAK: That would be good. I  
25 could use like three minutes or five. I just

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1       mismarked a few things.

2                       (Brief recess).

3                       MR. MONIAK: I'm going to start from  
4 point A again. The contention in Contention 2 is  
5 that the aging management program for steam  
6 generators and associated components such as steam  
7 generator tubes is insufficient and incomplete and  
8 does not assure safe operations that prevent design  
9 basis and severe catastrophic accidents. In  
10 addition, the design basis axiom frequency for steam  
11 generator tube ruptures are grossly underestimated.

12                      I'm going to address five issues.  
13 Specificity, the differing professional opinion,  
14 omissions as a deficiency, relationship to Indian  
15 Point --

16                      JUDGE YOUNG: What was the last thing  
17 you said?

18                      MR. MONIAK: Omissions as a  
19 deficiency. The relationship to Indian Point, and  
20 pre-service inspection. The Staff identified the  
21 issue that various contentions were not specific  
22 enough as to how it relates to the aging management  
23 program as well as specificity and connectivity.

24                      I just want to identify a few additional  
25 things that are missing.

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1 JUDGE RUBENSTEIN: Excuse me. You  
2 know, the Staff recasts many of your contentions on  
3 both issues. Do you have a problem with that,  
4 recasting the language of the contention or do you  
5 adopt them and just move on?

6 MS. OLSON: They paraphrase you, he's  
7 asking.

8 MR. MONIAK: That makes it more  
9 difficult to respond.

10 JUDGE YOUNG: If you have any dispute  
11 of their rephrasing of your contention, then it  
12 probably now would be the time to raise any issues  
13 with that.

14 MS. UTTAL: Your Honor, I quoted  
15 BREDL's contentions because they were just  
16 paragraphs.

17 JUDGE YOUNG: We're not suggesting  
18 that there's anything wrong with it. I think Judge  
19 Rubenstein just wanted to give you an opportunity to  
20 disagree if you wanted to with that. Correct?

21 JUDGE RUBENSTEIN: Right.

22 MR. MONIAK: Yes.

23 JUDGE RUBENSTEIN: And you have no  
24 problem?

25 MR. MONIAK: I'll have to think about



1 that, I hadn't thought about it in that context. I  
2 just want to provide a few examples: The licensee  
3 failed to show how the in-service inspection program  
4 will overcome deficiencies in the capability of  
5 nondestructive examinations; techniques to detect  
6 short stress corrosion cracks, cracks which have  
7 been covered by surface deposits, pinholes. Such  
8 cracks are known to grow and propagate quickly at  
9 high stress levels, which can result in sludge  
10 build-up in crevices at the tube support plates.

11 JUDGE YOUNG: Such -- what was the  
12 word, the verb you used such --

13 MR. MONIAK: Such, which can result  
14 in sludge build-up and crevices --

15 JUDGE YOUNG: Before that, before  
16 which.

17 MR. MONIAK: Such cracks.

18 JUDGE YOUNG: Such cracks can what?

19 MR. MONIAK: Such cracks are known to  
20 grow and propagate quickly at high stress levels,  
21 which can result from sludge build-up in crevices at  
22 the tube support plates.

23 JUDGE YOUNG: Thank you.

24 MR. MONIAK: There is no program to  
25 identify how the effects of new and different

1 degradation mechanisms will be monitored because the  
2 biggest issue with steam generators in publication  
3 after publication is as plants get older, different  
4 degradation of steam generator tubes occur. No  
5 discussion of the sensitivity of the MPE methods,  
6 even though in publication after publication as  
7 cited in the contentions, the experts say that  
8 improved nondestructive examination techniques are  
9 therefore necessary to enhance detection and  
10 characterization of difficult flaws; and most  
11 importantly, as I raised in the contention is  
12 unidentified defects type.

13 And deformation is not a crack,  
14 deformation is a change in the -- to quote from the  
15 dictionary, deform is to mar the natural form or  
16 shape of, disfigure or put out of shape. Crack is  
17 to break without complete separation of parts,  
18 become fissured. And given the fact that we're  
19 talking about cracks that can be as small as a  
20 millimeter or less, and having many of them, those  
21 cracks did not deform the parts; and in the generic  
22 aging lessons learned, NIR Reg 18.01, deformation is  
23 cited as a defect type. In NRC information notice  
24 200116, recent foreign and domestic experience with  
25 degradation of steam generator tubes and intervals

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1 at Turkey Point in the spring of 2000, the licensee  
2 detected 69 tubes which required plugging. And they  
3 used -- they detected these indications, pit-like  
4 indications they called them, volume metric pit-like  
5 indications and wear indications, they detected them  
6 with rotating probes.

7 In the licensee's application, the only  
8 method to detect cracks and wearing that is  
9 identified is the eddy current technique, which is  
10 disputable as to whether it sufficiently detects  
11 cracks and can size them. And that's in, throughout  
12 different professional opinions by Dr. Jorem  
13 Hoppenfeld.

14 The only reason I raised the Turkey Point  
15 issue is because it had thermally treated alloy 600  
16 tubes, which the NRC Staff responded that because  
17 Catawba 2, which steam generator has not been  
18 replaced, has thermally treated alloy 600,  
19 therefore, it's not like Indian Pointe tube, which  
20 is annealed, milled annealed alloy 600, that this is  
21 an example of an unexpected occurrence, which the  
22 NRC thought important enough to put out an  
23 information notice about thermally treated alloy 600  
24 tubes. And they concluded that regardless of steam  
25 generator design or materials, it is important to

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1 effectively monitor the tubes and their support  
2 structures.

3 MR. KELBER: Mr. Moniak, do they do  
4 that now?

5 MR. MONIAK: They do that, but  
6 whether they do that sufficiently or not is under  
7 great debate at this moment.

8 JUDGE YOUNG: And in what specific  
9 ways are you asserting that they -- that the way  
10 they do it is deficient?

11 MR. MONIAK: I'm not asserting the  
12 way they're doing it now; I'm asserting the way the  
13 aging management propose in the license renewal  
14 application that it's deficient because this is one  
15 of the most important components in the entire  
16 plant, its history of reliability problems, they are  
17 constantly finding new degradation mechanisms and  
18 the argument that the licensee doesn't have to  
19 identify degradation mechanisms is moot because they  
20 do identify degradation mechanisms and it would be  
21 rather frightening if they didn't because you would  
22 have to be wondering what are they monitoring. You  
23 have to understand how things degrade if you are  
24 going to monitor degradation.

25 MR. KELBER: Are you requiring them

1 to monitor mechanisms which have not yet been  
2 discovered?

3 MR. MONIAK: No. What I said was  
4 they have no system in place to try to -- to -- they  
5 should be anticipating new mechanisms, the history  
6 of steam generator tube ruptures and steam generator  
7 tube problems shows that new problems arise. They  
8 thought alloy 600 was going to be a fix, and they  
9 went to thermally treated alloy 600. Alloy 690 is  
10 cited as being less resistant but less resistant to  
11 corrosion does not mean not corrosive and the steam  
12 generator are proposed for another, whereas the  
13 first round of steam generators listed only 10 to 15  
14 years. These ones are proposed to last for 40 to 45  
15 possibly.

16 JUDGE YOUNG: What about the Staff's  
17 argument that the initiating mechanisms are not  
18 required?

19 MR. MONIAK: Go back to Contention 2,  
20 there's no place that says they aren't required.

21 JUDGE YOUNG: I think that is what  
22 the Staff is saying.

23 MR. MONIAK: There's no place that  
24 says they are required. There's no place that says  
25 they are required. The regulation is not that

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1 specific. And to understand aging, to have an aging  
2 management program without understanding aging  
3 effects and the mechanisms by which things age,  
4 would show that there is no assurance that aging can  
5 be managed.

6 JUDGE RUBENSTEIN: Excuse me. Are  
7 you going to continue on? Or should I ask  
8 questions?

9 MR. MONIAK: No, go ahead, ask.

10 JUDGE RUBENSTEIN: I would like to  
11 focus in on the specific disputes you have with  
12 steam generating within the context of extended  
13 life.

14 Steam generator in the plant started up,  
15 and at that time it starts aging and it's subject to  
16 a variety of erosion, mechanical structural change,  
17 responses to the chemistry and the environment, and  
18 one has waste. One can look at these first presence  
19 where stress corrosion cracking model or look at the  
20 structure, the morphology, the metallography of the  
21 tubing or one can look at these from the standpoint  
22 of saying I'm going to measure the wastage or what  
23 the remaining wastage is and determine the thickness  
24 of this through doing a stress analysis, introduce  
25 the forcing functions from a steam generator tube

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1 rupture from normal operations, and then go on to  
2 say this is adequate, which is the current licensing  
3 basis.

4 And what I heard you say is two things:  
5 One, inspection process which is ongoing through  
6 life, which is part of the normal management of  
7 steam generator problems, is inadequate because the  
8 eddy current, A, doesn't show cracks or fissures, it  
9 just shows wall thickness -- is that right?

10 MR. MONIAK: No, that's not right.  
11 They have difficulty --

12 JUDGE RUBENSTEIN: In the current  
13 licensing basis, when one looks at the remaining  
14 thickness, do they not take that into account in the  
15 current NRC requirement?

16 MR. MONIAK: One thing that eddy  
17 current exams do not -- apparently do not -- they  
18 identify wall thinning but not small pinholes such  
19 as what happened at --

20 JUDGE RUBENSTEIN: When they identify  
21 wall thinning, what do they do with it?

22 MR. MONIAK: They are supposed to  
23 determine whether it meets a criteria for  
24 replacement --

25 JUDGE RUBENSTEIN: -- fills that

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1 criteria.

2 MR. MONIAK: They are supposed to  
3 plug.

4 JUDGE RUBENSTEIN: And they plug?

5 MR. MONIAK: Not necessarily. They  
6 can get relief. They can get exception. For  
7 example, Ocone has a, just a week and a half ago,  
8 I'm not sure if it was a request for relief or -- it  
9 was a safety evaluation report, though, on an Ocone  
10 plug that I believe had thinned beyond a certain  
11 point and they were going to leave it because they  
12 thought it would last until the next refueling  
13 outage. And that also happened at South Texas  
14 recently as well, that tubes that didn't meet the  
15 criteria for replacement of plugging. They were  
16 allowed to go ahead, based on a risk probabilistic  
17 risk assessment.

18 JUDGE RUBENSTEIN: Based on the  
19 number of tubes that are deficient, so they have a  
20 safety evaluation report that analyzes --

21 MR. MONIAK: Yes.

22 JUDGE RUBENSTEIN: -- the probability  
23 of failure and the probability outcome of those  
24 accidents?

25 MR. MONIAK: Apparently, but that is



1       also a source of -- that's also one of the things  
2       that's raised in the different professional opinion  
3       that was addressed by -- and I want -- quick answer,  
4       NIR Reg 17.40 is the top advisory committee on  
5       reactor safeguards, report, voltage based  
6       alternative repair criteria. And it was originally  
7       titled 17.50. I have the title page for it. And  
8       that's why it was cited as such in several documents  
9       that I quoted. So just --

10               JUDGE RUBENSTEIN: Maybe I'm getting  
11       confused. You're talking about qualitative repair  
12       criteria after a tube is threatened and you're  
13       talking about things like sleeving?

14               MR. MONIAK: No. Mainly, I'm  
15       addressing the issue of whether or not a sufficient  
16       program is proposed that is capable of addressing  
17       all of the new issues that have arisen. The program  
18       and instruction now simply says they are going to  
19       monitor cracking and loss of material, which given  
20       the complexity of this issue, pinholes don't count  
21       as cracks.

22               JUDGE RUBENSTEIN: So --

23               MR. MONIAK: And deformation doesn't  
24       count as a crack.

25               JUDGE RUBENSTEIN: So you're

1       challenging the current examination technique as  
2       . being inadequate today and inadequate tomorrow?

3                   MR. MONIAK: I guess I am.

4                   JUDGE RUBENSTEIN: Okay. Now, they  
5       have gone through their life on a number of their  
6       existing steam generators and they have been  
7       replaced?

8                   MR. MONIAK: Yes, on three or four.

9                   JUDGE RUBENSTEIN: So they reached a  
10      point where both economically for their own  
11      standpoint on the ability to pull heat out of the  
12      primary system and in terms of the number of tubes  
13      that are sleeved, plugged or whatever, or  
14      approaching the NRC as wastage allowance, they have  
15      now decided that it's economically proper to replace  
16      the steam generator; and I guess my question is, why  
17      can't this process continue? Why can't they go  
18      ahead and replace steam generators twice?

19                   MR. MONIAK: Oh, because in the case  
20      of a -- it doesn't matter whether they replace the  
21      steam generator or not. What is at issue is how  
22      many steam generator tubes are defective during the  
23      period of operation and whether you can have loss of  
24      coolant as a result of an accident such as a  
25      steam -- steam pipe. If there is an accident in

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1       that case, there is no -- the tubes can -- that are  
2       cracked, that are left in can be subject to stress  
3       that could cause them to rupture even though the  
4       models show that they will not rupture. So  
5       identifying as many -- being as precise as possible  
6       about the condition of the tubes, and then the next  
7       step is that they have to determine whether leaving  
8       those tubes or not in there, if there is a loss of  
9       coolant accident while these cracked tubes are in  
10      there, will this lead to a severe accident, a more  
11      severe accident.

12                   JUDGE RUBENSTEIN: Well, it's likely  
13      that a steam generator tube rupture will violate the  
14      integrity of the primary system and lead to leakage  
15      into the secondary side; alternatively, too many  
16      steam generator tubes which are plugged will degrade  
17      the heat transfer capability and the heat removal  
18      capability from the primary to the secondary site,  
19      but this is an ongoing problem. And if the industry  
20      has been facing it now for a good number of years  
21      and they have inspection programs and they sample  
22      and I think they have a trigger when they sample so  
23      many tubes have wastage, they have to go through and  
24      do 100 percent sample, and this ultimately leads to  
25      a lot of tubes plugged and it ultimately leads or

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1 led Duke in a number of cases to replace the steam  
2 generator because they couldn't meet their accident  
3 analysis and/or mostly the economy of removing heat  
4 from the primary secondary site to the turbine. So  
5 what's new, you don't like the existing aging  
6 management program that surveillance program in  
7 service inspection program today as they extrapolate  
8 it into the future? Is that the basis, the nub of  
9 your contention?

10 MR. MONIAK: Yes. Yes, that is the  
11 basis, because as much new information as there is,  
12 there's such a simplistic approach, the aging  
13 management.

14 MR. KELBER: Is it to the licensee's  
15 economic advantage to keep current with steam  
16 generator technology, make improvements as  
17 necessary? Is it to their economic advantage?

18 MR. MONIAK: Yes, it is.

19 MR. KELBER: Do you think that in  
20 today's competitive world, that's an incentive for  
21 them to key-turn?

22 MR. MONIAK: No, I don't.

23 MR. KELBER: In other words, you  
24 think Duke is failing its shareholders?

25 MR. MONIAK: Absolutely, but that's

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1 an issue that that is outside the scope of this  
2 proceeding.

3 MR. KELBER: Certainly is, sir, but  
4 what I'm saying is that I don't believe that the --  
5 that the attack on the aging program is anything  
6 outside of the current -- I think it's an ongoing  
7 activity. Every power plant, every plant with a  
8 heat exchanger, including automobiles, worries about  
9 their heat exchanger, and that's from day one, as  
10 you may find out some morning when you wake up and  
11 start your automobile and find that there is lots of  
12 steam coming out the front end. I've done that.

13 I think what you were really focussing on  
14 on is certain deficiencies as the plant ages. And  
15 those deficiencies, it seems to me, relate to the  
16 discovery of new things, new mechanisms.

17 Now, I would like to know what in the  
18 regulations requires them to have a program to  
19 discover new initiators.

20 JUDGE YOUNG: Well, let me -- let me  
21 point you more specifically. The Commission has  
22 said that identification of individual aging  
23 mechanisms is not required as part of the license  
24 renewal review. So just briefly, do you have any  
25 response to that? That's from the statement of

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1       considerations, the Staff cites that it's page 60  
2       Federal Register page 22643.

3                       MR. MONIAK: Okay. It's hard to -- I  
4       did identify several of those defect types. Even  
5       getting away from the mechanism issue, there's  
6       several defect types that don't fall into the area  
7       of broad categories, except within the English  
8       language as I understand it. A pinhole is not a  
9       crack and a deformity is not a crack. Cracking can  
10      lead to deformity, but you can have deformity  
11      without cracking. You know, and dentine,  
12      secondary -- of course, that isn't aging, I  
13      understand, but it's still inspection.

14                     There's numerous defect types that have to  
15      be monitored. They can be monitored with different  
16      equipment. For example, Oconee found their defect  
17      with ultrasonic techniques. Turkey Point used a  
18      different technique, rotating probe. And in this  
19      license, it just says they are either going to do,  
20      use this eddy current, which is not even arguably --  
21      its limitations are recognized, or it is going to be  
22      visual inspections. There's thousands of tubes  
23      every time -- or hundreds of them --

24                     JUDGE RUBENSTEIN: As I understand  
25      the thrust of your argument is, A, there are

1 mechanisms out there which may cause wear and/or  
2 defects in the tubes. The NRC doesn't regulate  
3 based on mechanisms, albeit they like to understand  
4 it, they regulate based on stress analysis, on the  
5 different forcing functions relative to the  
6 thickness of the tube. And this is an ongoing  
7 problem. In other words, if the eddy current or the  
8 rotating eddy current doesn't properly define the  
9 thickness of the tubes, then they either have to --  
10 well, they are not properly evaluating the current  
11 state of the plant. Is that basically your  
12 contention? They don't regulate on first  
13 principles, they basically regulate on the load  
14 capability of the tube --

15 MR. MONIAK: Apparently, it would  
16 be --

17 JUDGE RUBENSTEIN: -- under various  
18 forcing functions. So either you take issue that  
19 they can't determine the thickness of the tube or  
20 their analyses wherein they say we want to have 40  
21 percent of the wall left is inadequate, or whatever.  
22 I'm willing to listen.

23 JUDGE YOUNG: Let me -- let me direct  
24 you in your answer, I want you to give your answer  
25 to that and then I think we probably need to move on

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1 on this. What I would like you to address after you  
2 answer that is I'm looking at pages 34, 35, 36 of  
3 your contentions as basically listing the challenges  
4 that you're making. And so answer Judge  
5 Rubenstein's question if you would, and then if you  
6 could just quickly summarize the various challenges  
7 that you're making so that we can move on to Duke.  
8 And then also, if there are any others, specific  
9 responses you want to make to any of the arguments  
10 that Duke or the Staff have made in their responses.

11 MR. MONIAK: There were two issues  
12 that I wanted to address. One was in terms of the  
13 increased service inspections that we raised in the  
14 request for relief, and I guess it was a different  
15 date than I cited. However, the pre-service  
16 inspections were not conducted according to code.  
17 And NRC doesn't have a new regulation on steam  
18 generator integrity, although they have drafted a  
19 few guides, and one of the draft guides from PG  
20 1074, pre-service inspection, simply says additional  
21 pre-service inspections should be conducted with  
22 specialized and more sensitive NDE techniques to  
23 establish a definitive baseline record against which  
24 in-service changes may be compared. And as stated  
25 in the contention, this didn't happen.

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