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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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OFFICE OF THE  
ADJUTANT GENERAL

**Title:** YANKEE ATOMIC ELECTRIC  
COMPANY (YANKEE NUCLEAR  
POWER STATION)  
PREHEARING CONFERENCE

**Case No:** 50-029-LA-R

**ASLBP No.:** 98-736-01-LA-R

**Work Order No.:** ASB-300-644

**LOCATION:** Greenfield, MA

**DATE:** Tuesday, January 26, 1999

**PAGES:** 1 - 175

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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In the Matter of: :

YANKEE ATOMIC ELECTRIC COMPANY : Docket No. 50-029-LA-R

(Yankee Nuclear Power Station) : ASLBP No. 98-736-01-LA-R

Prehearing Conference :

- - - - -X

Grand Jury Room  
Franklin County Courthouse  
425 Main Street  
Greenfield, MA

Tuesday, January 26, 1999

The above-entitled matter came on for prehearing  
conference, pursuant to notice, at 9:33 a.m.

BEFORE:

THE HONORABLE CHARLES BECHHOEFER, Judge

THE HONORABLE THOMAS D. MURPHY, Judge

THE HONORABLE THOMAS S. ELLEMAN, Judge

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## P R O C E E D I N G S

[9:33 a.m.]

CHAIRMAN BECHHOEFER: Good morning, ladies and gentlemen. This is a --

SPEAKER: The mike is not on.

CHAIRMAN BECHHOEFER: The mike doesn't work. The mike is for the reporter only. So if I don't talk loud enough, tell me. Just say "louder" or something like that, because I often don't speak as loud as I perhaps should.

This is a prehearing conference in the matter of Yankee Atomic Electric, the license termination plan. The Atomic Safety & Licensing Board that has been designated to hear this proceeding is -- up here on my left is Thomas Murphy, who is a health physicist, and on my right is Professor Thomas Elleman, he is a professor emeritus in the Department of Nuclear Engineering at North Carolina State University and a physical chemist besides. And my name is Charles Bechhoefer, I am an attorney and chairman of the board here.

I think for the purposes of the record, parties ought to identify themselves and for the purposes of the reporter, as well. So I will just go -- the people who are here as parties should identify themselves. Go left to right, my left to right.

MR. LOVEJOY: My name is Sam Lovejoy, I am the

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1 chairman of the Franklin Regional Counsel of Governments,  
2 and on my left is Charles Olchowski, he is a member of the  
3 executive committee, and I am also here with Adam Laipson,  
4 the former chairman and vice chairman of the Franklin  
5 Regional Counsel of Governments.

6 MS. KATZ: Hi, my name is Deborah Katz, I am with  
7 the Citizens Awareness Network, I am here to represent them.  
8 We have members, in fact, here from different reactors in  
9 New England at this point, decommissioning reactors, as  
10 well.

11 MR. BLOCK: I am attorney Jon Block, representing  
12 the New England Coalition on Nuclear Pollution. With me on  
13 my right is Charles Gorsuch, who is a trustee of the New  
14 England Coalition on Nuclear Pollution, and closest to me,  
15 Dr. Marvin Resnikoff, who is our expert in the proceeding,  
16 and whose expertise we are sharing with Citizens Awareness  
17 Network at this time.

18 MR. GAD: Mr. Chairman and members of the board,  
19 my name is Robert Gad. Sitting beside me is my partner  
20 Thomas Dignan and we appear before this board on behalf of  
21 Yankee Atomic Electric Company.

22 MS. HODGDON: I am Ann Hodgdon, appearing for the  
23 NRC staff, and I have with me today two other attorneys,  
24 Marian Zobler, who is also appearing for the staff, and  
25 Stephanie Martz. Also at the table is Morton Fairtile who

1 is the project, the NRR project manager for Yankee Rowe.  
2 And over here is Joe Nick, who is in Region I, and I don't  
3 know that I can properly recite his title, but he --

4 CHAIRMAN BECHHOEFER: Let him try him if he wants  
5 to.

6 MS. HODGDON: He is a health physicist.

7 MR. NICK: I am the principal inspector at the  
8 Yankee Atomic Station.

9 MS. HODGDON: Well, I knew that, but I didn't know  
10 that was his title, I knew that was what he did. All right.  
11 Thank you.

12 His function, yes, he is the principal inspector  
13 at Yankee Rowe. And Larry, first name Clayton, Pittiglio --  
14 Pittiglio, however you prefer, it's P-i-t-t-i-g-l-i-o, and  
15 he is the NMSS project manager for the Yankee Rowe and for  
16 this project, the license termination plan.

17 I also have with me Mike Masnik, who came with us,  
18 he is not sitting at counsel table. He is the section chief  
19 of decommissioning in NRR.

20 MR. LAFOND: Can I say something? Could we have  
21 Mr. Lovejoy correct what he said his position was on the  
22 Franklin Regional Counsel of Governments? Because I think  
23 that is inaccurate when he said he is the chairman.

24 CHAIRMAN BECHHOEFER: Sorry. I am the chairman of  
25 the planning board of the Franklin Regional Counsel of

1 Governments, authorized to be here by them.

2 MR. LAFOND: Thank you.

3 CHAIRMAN BECHHOEFER: Okay. And would you  
4 identify yourself for the reporter?

5 MR. LAFOND: My name is Lennie Lafond, I am the  
6 chairman of the board of selectmen from the town of Rowe,  
7 and I am also on the executive board of the Franklin  
8 Regional Counsel of Governments.

9 CHAIRMAN BECHHOEFER: Thank you. Our major task  
10 for this conference is to hear arguments on the various  
11 contentions that have been submitted. As you may remember,  
12 the Commission itself, the Nuclear Regulatory Commission,  
13 issued a decision in October, I think it was, which  
14 determined that the -- two of the petitioners have standing  
15 to participate and that is the New England Coalition and the  
16 Citizens Awareness Network. And they remanded the  
17 proceeding to the Licensing Board to entertain contentions,  
18 and if at least one contention is accepted, to hold a  
19 hearing.

20 So our purpose today, we have had contentions  
21 submitted by both parties. We have the further petition of  
22 the Franklin County group to participate as an interested  
23 municipality, and we will take that up later. And I might  
24 say they can only participate in that capacity if we decide  
25 to hold a hearing on the behest of some other party, because



1 they would be appearing as -- under 2.715(c), I think it is,  
2 as an interested governmental agency. It used to be  
3 interested state, but that got expanded, so governmental  
4 entity.

5 So I think the first thing we will take up are the  
6 contentions. And we thought we would do them starting out  
7 with NECNP's contentions and just do them seriatim, and them  
8 -- well, I might start first, and seeing in view of the  
9 various responses that have been received with respect to  
10 various contentions, do any of the petitioners wish to  
11 withdraw any of their contentions or consolidate them with  
12 those of another petitioner, because that might simply  
13 things. We thought we would go through, first go through  
14 NECNP's, but if NECNP or Citizens Awareness Network wishes  
15 to withdraw any of them, in view of comments in other  
16 matters, we would like to give them the opportunity to do so  
17 and it would save everybody time. So --

18 MR. BLOCK: Can we confer a moment on that?

19 CHAIRMAN BECHHOEFER: Yes.

20 [Pause.]

21 MR. BLOCK: Thank you, Judge. We are not going to  
22 consolidate, however, we did have some corrections that we  
23 would make in the course of going through the contentions,  
24 certain errors that were pointed out by Mr. Gad that we  
25 would be willing to accept correction on, but we feel that

1 they could best be addressed seriatim as we go through the  
2 contentions. And I don't think any of those are a real  
3 major point, but I will leave that to the board to decide.

4 CHAIRMAN BECHHOEFER: Okay. Well, why don't we  
5 just first get into the NECNP contentions and we will just  
6 start with contention A. Mr. Block, why don't you lead off  
7 and then we will hear what the other party -- we will do it  
8 contention by contention, rather than party by party.

9 MR. BLOCK: All right.

10 CHAIRMAN BECHHOEFER: So I think that is clear  
11 when we --

12 MR. BLOCK: Our contention A reads, "YAEC LTP does  
13 not adequately characterize the site. Contrary to the  
14 requirements of 10 CFR 50.82, the site characterization data  
15 and methodology YAEC employs in its LTP for the Yankee  
16 Nuclear Power Station at Rowe, Massachusetts, Yankee Rowe,  
17 henceforth, is not adequate. In pertinent part, YAEC cannot  
18 demonstrate that the LTP will assure the level of protection  
19 of public health and safety which the NRC regulations  
20 mandate, citing 10 CFR 50.82(a)(9), (10) and (11)."

21 Shall I go on to the basis, Judge?

22 CHAIRMAN BECHHOEFER: Well, don't just read it,  
23 but if you have anything that you would like to amplify.

24 MR. BLOCK: All right.

25 CHAIRMAN BECHHOEFER: In light of comment.

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1 MR. BLOCK: Well, I thought you wanted to have  
2 that read into the record. I misunderstood, I'm sorry.

3 CHAIRMAN BECHHOEFER: Oh, no. No, no. No. We  
4 would like any amplification that you may have in view of  
5 some of the comments that were received and that type of  
6 thing. And then we are going to hear from the other  
7 parties.

8 MR. BLOCK: Okay. Thank you, Your Honor. In  
9 regard to the staff and the licensee's criticisms, we would  
10 like to state to the board that what we are claiming here is  
11 that Yankee has not, at least in Basis 1, which is what I  
12 will address first, that Yankee has not detailed the  
13 distribution of radionuclides in off-site locations, and  
14 that the NRC, in their filing, has questioned whether  
15 sampling in off-site locations is required.

16 Our position -- our petition also refers to  
17 neighboring properties, off-site or on-site neighboring  
18 versus adjacent. We think that this diverts attention from  
19 the substance and the essence of what we are trying to get  
20 forward before this board in this contention. And that is,  
21 that Yankee has not determined background with sufficient  
22 precision, as we believe is required by the regulation, in  
23 order to make the kind of plan that is contemplated in the  
24 regulation.

25 And when the NRC staff criticized this, they

1 quoted a section of NUREG-5849 and we believe that the  
2 emphasis there, or the exact sentences should be before the  
3 board, and recalling also that this only represents a  
4 guidance to the licensee.

5 "Background is determined by measurements and/or  
6 sampling at locations on-site or in the immediate vicinity  
7 of the site, out to several kilometers from the site  
8 boundary, which are unaffected by site operations." And to  
9 us, the key here is "unaffected by site operations," and the  
10 applicant has not shown that its sampling is unaffected by  
11 the previous operations of the facility by failing to make  
12 an adequate distinction, prior to setting up the criteria  
13 for its future sampling, about exactly what background is at  
14 this site. We think this should happen first.

15 And along those lines, what I would hasten to add  
16 is that there is a potential remedy. There are, of course,  
17 several potential remedies. But if the board should see it  
18 this way, perhaps the proper thing is to say that at this  
19 time further consideration of the LTP is tabled and that  
20 Yankee has to do some sampling and come back with a specific  
21 number dealing with background that is the basis for the  
22 rest of the plan that they will be carrying forward. And at  
23 that point, of course, the way in which they derive that  
24 number might be open to criticism. We can only criticize at  
25 this point speculamentis what they say they intend to do

1 that way, and we offer that criticism in the later portions  
2 of the contention.

3 As to the second basis that we put forward --

4 DR. MURPHY: Excuse me for a second.

5 [Pause.]

6 CHAIRMAN BECHHOEFER: Mr. Block, I think what we  
7 will do is have parties comment on each basis, since there  
8 is quite -- there's five or six of them, I think. And it  
9 might be easier for the parties to all comment on a given  
10 basis, then come back. So why don't you finish basis -- the  
11 first basis, and then we will hear from the other parties.

12 DR. MURPHY: We are trying to keep the record so  
13 that it is easy to go through, also, Mr. Block.

14 MR. BLOCK: Yes, thank you, Your Honor. I don't  
15 have anything further at this point to add about Basis 1,  
16 and so I will leave the floor to the next party to comment.

17 Were there any questions from the panel?

18 DR. ELLEMAN: Yes. Mr. Block, does NECNP have a  
19 strategy toward the determination of the background that you  
20 would be comfortable with and believe would be a suitable  
21 approach?

22 MR. BLOCK: Let me consult with Dr. Resnikoff a  
23 moment.

24 [Pause.]

25 MR. BLOCK: Dr. Resnikoff suggests that the issue



1 for us is that adequate sampling be done prior to the  
2 determination and that it include a variety of  
3 radionuclides, we think broader than what has been indicated  
4 in the plan, before the attempt to make the approximation of  
5 background is made.

6 As for the specifics, in terms of instrumentation,  
7 I think that would remain to be seen, after perhaps some  
8 discovery on this, because I think it certainly is a  
9 disputed issue.

10 Were there any other questions?

11 DR. MURPHY: Well, are you saying that you want to  
12 sample background off-site, as opposed to on-site, is that  
13 what you are saying? It is not clear to me where you are  
14 going with this. You want more samples, but do you just  
15 want more samples on-site, or do you want them off-site or  
16 what?

17 MR. BLOCK: Well, the key is finding unaffected  
18 locations, stating what the locations are, sampling in those  
19 areas, and then making comparisons. And I think that is the  
20 point that we are trying to make, that that is what is  
21 necessary.

22 DR. MURPHY: And you are contending that Yankee  
23 has not done that?

24 MR. BLOCK: Yes.

25 DR. MURPHY: Okay.

1 DR. ELLEMAN: I know this can be a complex issue,  
2 but you used the words "adequate number of off-site  
3 samples." Do you have any thought as to what you might view  
4 as an adequate number?

5 MR. BLOCK: I would like to consult again.

6 [Pause.]

7 MR. BLOCK: Dr. Resnikoff advises that they need  
8 to take enough samples so that the confidence interval is 95  
9 percent. I must confess I only have a vague idea of how  
10 that plays out, but I hope that that is clearer to somebody  
11 that works in the field, as you do, Doctor.

12 CHAIRMAN BECHHOEFER: Mr. Gad or Dignan, as the  
13 case may be.

14 MR. GAD: Thank you, Your Honor. It is important  
15 to remember, I think, that the only thing that is up for  
16 grabs in what we are now calling an LTP proceeding is the  
17 plan, not the implementation of the plan. The plan hasn't  
18 been implemented yet, the implementation is, in part,  
19 underway. This is about the plan and not its  
20 implementation.

21 Now, the substance of NECNP A.1 is in this  
22 sentence which comes from page 4 of NECNP's pleadings, and I  
23 quote, "As Yankee readily admits, however, it has not yet  
24 determined background levels." end of quote. This is one of  
25 a series of contentions that might be called "not done yet"

1 contentions, and they are inadmissible because this  
2 proceeding is not about how well the plan has been  
3 implemented. The Commission has said that that issue arises  
4 when you apply for license termination, which is some ways  
5 down the pike.

6 Now, I think that is a sufficient ground for  
7 saying that this, as framed, is not an admissible  
8 contention.

9 Let me just make an observation or two, because  
10 the term background levels is occasionally flung around in a  
11 pedestrian way. Background has at least three components to  
12 it. The folks in the back of the room would probably tell  
13 me it has a hundred components to it. I can only tell you  
14 it has three components. There's the cosmic, there's what  
15 naturally shows up in the rocks and the dirt, and whatever,  
16 that has been there from the beginning of time, and there  
17 are manmade, but not plant-related, elements as a result of  
18 other activities.

19 Now, it is not so simple as going out and picking  
20 a location and saying, okay, I am going to put a machine  
21 there and let it sit for a couple of days and that is  
22 background. In the course of implementing the site survey  
23 plan, you might discover an area that seems to be a little  
24 high, and so you investigate as to why it is high, and you  
25 find in that soil, or that bit of building materials, or

1 that whatever, isotopes that are driving the reading up, but  
2 did not come from the plant. That becomes background.

3 And the point of this is to illustrate that the  
4 determination of background is part of the implementation of  
5 the plan. The plan says, and, in fact, commits -- and, in  
6 fact, is obliged to determine the background levels, because  
7 it is obliged to determine the levels that come from the  
8 residue that results from plant operations. This  
9 contention, which is that we haven't done it yet -- and it  
10 is true, we are not finished doing it yet, is not admissible  
11 because it is about implementation, not about --

12 CHAIRMAN BECHHOEFER: Well, is not the method of  
13 implementation a proper subject to be considered now,  
14 because it is something that maybe will never be  
15 considerable? Considered, I am sorry. I mean it may be now  
16 or never for --

17 MR. GAD: The plan, that is to say, what your  
18 methodology is, to the extent you can be prescriptive about  
19 it up-front certainly is open, Your Honor, and the LTP and,  
20 in particular, the site survey plan describes how background  
21 will -- background determinations will be made. And, in  
22 fact, they are made in a host of different ways, some of  
23 which does happen to go off-site, albeit not necessarily by  
24 very much, but the fact of the matter is that, by  
25 definition, what you want to know is what is the background

1 on-site. That is to say -- that is to say, what is the  
2 source of radiation that is detectable on-site that does not  
3 come from plant operations?

4 But contention A.1 isn't about this. Contention  
5 A.1 is about, and I quote, "As Yankee readily admits, it has  
6 not yet determined background levels."

7 Now, if Your Honor is suggesting to me that, oh,  
8 goodness, wouldn't it be appropriate for someone to come in  
9 and say, well, for doing background readings, you shouldn't  
10 do X, you should do Y. And to have some basis, some  
11 technical basis for Y, doing Y -- that is a bad selection --  
12 doing X prime is necessary in order to determine the  
13 contributors of on-site radiation that don't come from plant  
14 operations, yes, that would be entirely valid. That is not  
15 contention A.1. There is nothing in there that is a  
16 methodological change, other than finish the job and do more  
17 of it. And that is inadmissible, Your Honors.

18 DR. MURPHY: Before you -- are you finished?

19 MR. GAD: Yes, Your Honor.

20 DR. MURPHY: Before you sit down, you used the  
21 terminology "site survey plan," and that is a little bit  
22 confusing to me because I see in the license termination  
23 plan that there are at least two different surveys that are  
24 going on, and maybe more, but there is a site  
25 characterization survey which is either going on, or has



1 occurred. And then there is so-called final site survey  
2 plan, which I think is the plan that is used to release the  
3 site when you are ready to terminate your license.

4 I need you to be specific when you are talking  
5 about a site survey plan as to which one you are talking  
6 about, or are you just talking in generalities?

7 MR. GAD: Well, actually, Your Honor, the way it  
8 works out is that there is not necessarily a bright dividing  
9 line, because the process is inherently iterative. At the  
10 one end, and not to interrupt myself, but maybe at the next  
11 break, I am going to ask if we can pull that shade down  
12 because it is -- well, no, it is --

13 CHAIRMAN BECHHOEFER: Go on. We have got an  
14 all-purpose board here.

15 [Laughter.]

16 SPEAKER: We sweep the floors, too.

17 MR. GAD: I hate to say it out loud, but I was  
18 being blinded by the light.

19 [Laughter.]

20 MR. GAD: Thank you, Your Honor. At the one end,  
21 okay, the final site status survey must be passed in the  
22 sense that you crank it out, you get the numbers, you put  
23 them in RESRAD, you see what comes out, and that will tell  
24 you whether or not you have met the site release criteria  
25 that is in the LTP. Footnote, those site release criteria

1 in the LTP are a tad more constraining than either the site  
2 release criteria in 1402 or the site release criteria in the  
3 SDMP, which actually grabs this plant.

4 But you can't -- you can't just sort of wait for a  
5 year or two and then go out and do the final status survey,  
6 because if you do, you are going to find things that have to  
7 be remediated, then you are going to have to go back and do  
8 parts of it over again.

9 So the process is iterative. We start with a  
10 characterization which tells us essentially what we have,  
11 and may identify parts of the site that have to be  
12 remediated up-front, and then you do that work. And then,  
13 depending upon what is going on at the site, you take parts  
14 of the site that you believe will, quote, "pass," close  
15 quote, and you can run the final status survey on those  
16 sections. If they pass, that's fine. If they don't, then  
17 you analyze as to why they don't pass and what you must do  
18 about it.

19 So it is perfectly true that in the real world it  
20 is not like we have Volume 1 and Volume 2, and we don't  
21 touch Volume 2 until Volume 1 is completed. There is a good  
22 deal of iteration as you go through, and the process will  
23 continue for as long as there is fuel on-site. Your Honor.

24 DR. ELLEMAN: Mr. Gad, on just the issue of  
25 background determination, does the licensee now know exactly

1 what is to be undertaken to determine the background, or is  
2 this an evolving process that will be determined, dependent  
3 upon the results they get and the information that comes  
4 from the initial measurements?

5 MR. GAD: It is necessarily the latter, Your  
6 Honor. It must be. Now, you can start out --

7 DR. ELLEMAN: For something in flux, potentially  
8 in flux at this time.

9 MR. GAD: Well, yes, indeed. Although the trouble  
10 with the in flux implies to me that it is like a moving  
11 target. It is not really a moving target.

12 DR. ELLEMAN: Yes.

13 MR. GAD: It is a target that may -- has -- may  
14 yet to have been uncovered. We can start out by saying, and  
15 treat background the way you treat it in the newspaper, and  
16 say, all right, you get some many millirem per year if you  
17 stand in the middle of the green field circle down there.  
18 That's, frankly, primarily cosmic and a little of the  
19 bituminous concrete that is in the highway. But that is  
20 only a piece of the background that you need for the kind of  
21 studies, and the kind of surveys, and, ultimately, the kind  
22 of free release that you are going to have to do here.

23 It may very well be that when you look at this  
24 pitcher, all right, you get a reading out of this pitcher,  
25 carafe, and so you say to yourself, okay, why is that high?

1 And then you find out why it is giving you a reading, and  
2 that will ultimately reduce to a radionuclide and isotope  
3 that is giving you the reading. And then you take a look  
4 and you say, okay, did that come from plant operations? Or  
5 did it not? If it did not, then it is background, albeit  
6 not in the cosmic or buried in the earth sense that most  
7 people think of background in.

8 The process is necessarily ongoing because you  
9 can't have completed it until you have completed the last  
10 gridded area of the site survey plan.

11 CHAIRMAN BECHHOEFER: Well, is there not a  
12 methodology that could be specified now for when you do it?

13 MR. GAD: The methodology is specified, Your  
14 Honor. It involves a number of direct readings, TLD type  
15 readings. It involves an analysis of historical records.  
16 Remember, there has been environmental monitoring going on  
17 at this plant for 30 years. It involves soil samples. All  
18 right. You take a soil sample, you run it through a  
19 spectroscopic -- very hard to say -- fast analysis in order  
20 to find out what radioactive nuclides are in there and you  
21 begin classifying them as either manmade, not manmade,  
22 plant-related, not plant-related. All of that is in the  
23 plan, all of that is ongoing, albeit not complete at this  
24 point.

25 But ultimately the process is not complete until

1 the end and frankly you may discover something near the end  
2 for which you have to design a new process in order to  
3 figure out is that background or is that plant-related -- so  
4 it is in there and Contention A-1, Your Honor, does not  
5 identify any aspect of the methodology that it says is  
6 wrong, but Contention A-1 says, and I quote once again, "As  
7 Yankee readily admits, however, it has not yet determined  
8 background levels."

9 Point one, that's true. Point two, not admissible  
10 contention.

11 CHAIRMAN BECHHOEFER: Well, that latter may be  
12 just purely a background statement, rather than the  
13 contention itself. I mean I don't know. I was thinking in  
14 terms of methodology is probably all you can specify now  
15 and --

16 MR. GAD: Well, if that is all you can specify  
17 now, Your Honor, then you can't get a contention in. The  
18 rules on specificity -- we must identify a particular point  
19 of fact or law that is going to be in contention and then we  
20 have to have a basis for saying in essence if you do it my  
21 way you will achieve the regulatory goal and if you don't do  
22 it my way you won't achieve the regulatory goal. Those are  
23 the pleading rules.

24 Now what I extracted out of A-1 is the sentence  
25 that I quoted to you, because what it in essence says is you



1 haven't done the job yet. Indeed, it says as you readily  
2 admit you haven't done the job yet. Let me stand up here  
3 and readily admit we haven't completed the job yet. That is  
4 not what this hearing is all about.

5 MR. BLOCK: Well, two points of information for  
6 the Board if I might.

7 I think Mr. Gad would probably stand corrected on  
8 this. You need both D and D and RESRAD and the D and D  
9 actually provides the larger scope of analysis of  
10 radionuclides. RESRAD I think is being used by the client  
11 in a limited way. Second, there is at page 36 of our  
12 pleading we cited to an inspection report which indicates  
13 that the background soil study has been done, and the  
14 inspector noted that there was a report that was not -- that  
15 this is a report that is not publicly available, and  
16 similarly that there was a technical basis document on  
17 Strontium-90, but these are not things that we have access  
18 to. Therefore, you know, we are limited in what we can  
19 generalize about the way that this is being done.

20 I want to stick to those points until I have some  
21 rebuttal time, but thank you.

22 MR. GAD: Your Honor --

23 DR. ELLEMAN: Mr. Block's comment certainly  
24 relates to the question that I was preparing to ask, and  
25 maybe this is a question for Mr. Clayton, I am not sure.

1           We have Rev. Zero and Rev. 1 of the License  
2 Termination Plan. Those documents reference a number of  
3 NUREG reports that are to be followed in the assay and  
4 remediation process.

5           Are there any other documents prepared by the  
6 Licensee that relate to their plans or what is underway that  
7 we should be aware of and have access to relevant to these  
8 plans?

9           MR. GAD: Well, now that is a compound question,  
10 Your Honor.

11          DR. ELLEMAN: Yes, it is.

12          MR. GAD: The answer to the first half is yes,  
13 there are a whole host of procedures. There is a procedure  
14 for doing "x" -- there is a procedure for doing "y" --

15          DR. ELLEMAN: That isn't really what I had  
16 reference to.

17          I was thinking more of results that have been  
18 obtained or actions that have been taken.

19          MR. GAD: There are in-process results, yes. I  
20 don't think they are huge at this point but, yes, they do  
21 exist.

22          DR. ELLEMAN: But they are not out in the public  
23 media as a report that we would have for our potential use  
24 at this time, is that the situation?

25          MR. GAD: I am not sure one way or another but

1 certainly the process hasn't reached the point where they  
2 would normally be published.

3 I don't know what has been given to the Staff and  
4 once you give something to the Staff that's about as public  
5 as you can get, and I can't really tell you one way or  
6 another.

7 CHAIRMAN BECHHOEFER: Depends what you stamp on  
8 it, but --

9 MR. BLOCK: Point of information on that. They  
10 are not available as far as we know in the Public Document  
11 Room, and we would refer again to the inspection report at  
12 A-2-4, referring to RP98-72, supplementing background report  
13 for Cesium-137 with technical basis document, and I think it  
14 might be helpful if that were made available in the spirit  
15 of resolving whatever things can be resolved. Thank you.

16 MR. GAD: Let me put up one observation, Your  
17 Honors, and that is the days in which one could seek to get  
18 a contention admitted in an NRC adjudicatory hearing by  
19 saying well, I don't know but if you give me a little  
20 discovery I may find out ended not later than 10 years ago.

21 CHAIRMAN BECHHOEFER: Ms. Hodgdon, you have --  
22 well, actually it is your turn.

23 MS. HODGDON: Yes. I found that last interchange  
24 somewhat confusing because Mr. Block jumped in even though  
25 it wasn't his turn, and he jumped in with a number of things

1 that are not within the scope of his Basis 1 as we were  
2 discussing it, and so I would prefer to address anything  
3 related to the inspection reports until we get to the point  
4 for which those things were offered. I think it would be  
5 clearer.

6 In other words, I think not only should -- we  
7 should keep within the bounds of the contention to the  
8 extent that we can just because I think it is very confusing  
9 anyway and there's a lot of overlap, but you can go out from  
10 your Basis 1 to all your other bases and ask me to address  
11 now something that I wasn't prepared to address now in  
12 relation to this contention, so that is just a general  
13 comment. I did not object.

14 I think it would be a good idea if we went NECNP  
15 and then Yankee and then the Staff, and, as Mr. Block says,  
16 he does get rebuttal and -- to the extent that he needs it  
17 or maybe he doesn't, I don't know. That is the Board's  
18 rules.

19 So I am just trying to get some kind of  
20 determination about the scope and the reason for this is I  
21 might as well tell you now, the Staff has divided these  
22 things up so that -- and I don't even know that you need to  
23 know this now -- I will address some of them and Ms. Zobler  
24 some others and Ms. Martz some others, and so although I  
25 could address this matter now, I don't think it's very

1 useful to do that, and so I would just limit my remarks on  
2 Basis 1 and I, too, may be going a bit outside the scope but  
3 I will start.

4 The question -- Mr. Block raised a question about  
5 NUREG 5849 and said that it was just guidance and therefore  
6 not a rule or he said isn't it just guidance, and Dr. Murphy  
7 asked whether the Petitioner -- in challenging the use of  
8 that NUREG, was he suggesting that there was some better way  
9 to do it? -- and he apparently wasn't, but in any event with  
10 regard to that NUREG's status, I would like, and I think it  
11 will save us all some pain, if we introduce at this time the  
12 concept of the SDMP Action Plan and the fact that Yankee  
13 actually did apply for -- did submit its License Termination  
14 Plan under that plan, so if you look at new Subpart (e) to  
15 Part 20, Radiological Criteria for License Termination,  
16 which was published in the Federal Register on July 21st,  
17 1997, 62 Federal Register, 39088 -- I believe -- I can't  
18 really read it, it's at a funny angle -- might have to have  
19 another shade pulled down -- so --

20 MR. BLOCK: I am going to have to object to this.  
21 She has just asked the Board to avoid doing this and now has  
22 jumped to her pleading at page 9, Basis 3, and is  
23 interjecting her argument about the Action Plan. I believe  
24 what's sauce for the gander is sauce for the goose.

25 MS. HODGDON: If I may, Judge Bechhoefer, I am



1 addressing Mr. Block's question about whether or not NUREG  
2 5849 is guidance, and he jumped in with that -- no, he did  
3 not. I'm sorry. He said that in his legitimate time up.  
4 He addressed that and I am entitled then to address it, and  
5 that is what I am doing.

6 I am saying that the LTP was submitted under  
7 201401(b)(3), which says the criteria in the subpart do not  
8 apply to sites which submit a sufficient LTP or  
9 decommissioning plan before August 20th, 1998, et cetera,  
10 and in accordance with the criteria and in accordance with  
11 the criteria identified in the SDMP action plan, and so it  
12 gives you the Federal Register cite for that up someplace  
13 ahead of that.

14 I'll read it to you. It's April 16th, 1992, 57  
15 Federal Register, 13389, and so if you find that action plan  
16 you will discover what the criteria are and what documents  
17 we are talking about here. I hope everybody has a copy  
18 because I didn't bring enough to go around. It is the  
19 Federal Register -- presumably -- yes, I see that there are  
20 copies.

21 I will --

22 DR. MURPHY: Excuse me. We have copies of the --  
23 of Subpart (e).

24 MS. HODGDON: Do you have the SDMP action plan,  
25 Federal Register notice, April 16th, 1992, Volume -- it's 57

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1 Federal Register 13389.

2 DR. MURPHY: Yes, I have a copy of the action  
3 plant.

4 MS. HODGDON: If you read this document, you will  
5 see what those criteria are, and you will see that it  
6 includes NUREG 5849. That is the point that I wish to make,  
7 and I do think that it was in response to Mr. Block's  
8 remark.

9 CHAIRMAN BECHHOEFER: Ms. Hodgdon?

10 MS. HODGDON: Yes?

11 CHAIRMAN BECHHOEFER: I have this in front of me  
12 and this was not particularly -- this was never published  
13 for comment, was it? It is just a notice. I don't think  
14 it's entitled to anything more than a Reg Guide would be.

15 MS. HODGDON: Whether the -- are you talking about  
16 the Reg Guide or the SDMP action plan?

17 CHAIRMAN BECHHOEFER: The action plan.

18 MS. HODGDON: It was not at the time that it was  
19 published in 1992 published for comment. However, there was  
20 considerable comment on it, I understand, in the Subpart (e)  
21 rulemaking which began with the notice on August the 22nd,  
22 1994, and finally resulted in the publication of this rule,  
23 which I am just looking at, in 1997, and so that was an  
24 enhanced rulemaking.

25 There were many workshops held on it and they

1 published many NUREGs with the comments that they had on it.

2 I don't know anybody that's read all of them but I  
3 believe there might be people that have read all of them, so  
4 I, myself, have not read all of them, but I am familiar with  
5 that.

6 So this does not appear here out of the blue,  
7 saying that these plants are grandfathered. That is not  
8 what it says, although they use that in the statement of  
9 consideration. It says these plants -- that certain plants  
10 are entitled to come under the SDMP Action Plan.

11 The reason for that is at the time they published  
12 this rule, the documents that relate to new Subpart (e) were  
13 not available, and so I now am wandering a little bit off,  
14 but if I can finish my sentence, what Yankee did was apply  
15 under the SDMP Action Plan, which documents are in this  
16 NUREG. At least they are listed and what they are. It's  
17 Reg Guide 1.86, most importantly, and these new documents  
18 that I am telling about, but these new documents were also  
19 looking forward to new Subpart (e) to Part 20, and so what  
20 Yankee did was apply in relation to the proposed rule which  
21 came out in 1994, and so it's two different things. They  
22 did both of them. That is why it is confusing.

23 I do believe, however, that I understand it, so I  
24 will just -- I don't want to offend the process by going on  
25 and on about this at this time. It will come up again. I

1 have said, I think, enough at this point.

2 I am sure that -- well, I don't think I have  
3 anything further to say on Basis 1 except we agree with --  
4 well, we have already said what we had to say in our  
5 pleading and anything that may have been added here we  
6 already addressed, actually.

7 CHAIRMAN BECHHOEFER: Well, Ms. Hodgdon, this  
8 Subpart (e), all it says is Subpart (e) criteria do not  
9 apply to plans submitted under this, so that's fine. They  
10 don't apply but it doesn't say necessarily that this is to  
11 be considered a rule.

12 All it says -- all the rule says is that the  
13 criteria don't apply.

14 MS. HODGDON: Well, that means it can go the way  
15 of Shoreham and Fort St. Vrain, which decommissioned under  
16 the SDMP Action Plan, which has not site release criteria  
17 with regard to dose.

18 CHAIRMAN BECHHOEFER: Yes, but that doesn't mean  
19 that that criteria could not necessarily be imposed, I don't  
20 think. I don't think that means that. It just means that  
21 you can apply under this.

22 MS. HODGDON: It means we are creating a new rule,  
23 except that it wouldn't be fair to apply it to plants who  
24 are about to come in for their License Termination Plan  
25 because the documents that implement the rule, the documents

1 that allow you to use the rule are not yet ready, so we are  
2 saying that this rule is not really applicable to plants  
3 that come in at a certain time where the Staff approves the  
4 plan -- or it says the Commission actually -- prior to a  
5 certain date, and it accordance with the criteria identified  
6 in the SDMP Action Plan.

7 CHAIRMAN BECHHOEFER: Yes. All it says is the  
8 rule doesn't apply to that.

9 MS. HODGDON: Okay, so you are saying that this  
10 rule is not applicable to Yankee --

11 CHAIRMAN BECHHOEFER: I am not saying anything. I  
12 am questioning and I am trying to figure out what it means.

13 MS. HODGDON: Well, it means that Yankee doesn't  
14 have to meet certain provisions of new Subpart (e) --

15 CHAIRMAN BECHHOEFER: Well, again, that's --

16 MS. HODGDON: -- and of course it doesn't say, it  
17 actually doesn't say that they have to meet the SDMP either.  
18 I mean you are correct, but the Staff, the SDMP Action Plan  
19 would require that in order for them to get Staff approval  
20 for the decommissioning, so I would say that it may not be  
21 artful but that that is what it says.

22 [Discussion off the record.]

23 CHAIRMAN BECHHOEFER: I think next I would like  
24 to -- if Citizens Awareness Network or CAN, if I may call  
25 you that --

1 MS. KATZ: Certainly. Call us CAN. Everyone else  
2 does.

3 CHAIRMAN BECHHOEFER: -- wishes to comment and  
4 also the Franklin County Board wishes to offer any comments.

5 MS. KATZ: I was thinking about this, because a  
6 number of New England Coalition, who have phrased things  
7 much better than we could, and I want to apologize for us  
8 being ordinary citizens and what difficulty we may have  
9 caused everyone in terms of our contentions but we feel that  
10 in certain ways we are representing members of our community  
11 and we may not be the most articulate in terms of that, but  
12 our concerns are real, and we feel it's very important what  
13 is coming up in terms of this whole struggle.

14 I mean in certain ways what we have experienced in  
15 the context with Yankee Atomic have been the idea of a  
16 work-in-progress repeatedly where things would work out in  
17 the end, and in fact in terms of CAN vs. NRC, what we found  
18 out was that it didn't work out in the end, and that part of  
19 what had happened was illegal, so we are concerned in that  
20 context about the issues of methodology because in a number  
21 of the issues we raised, we can't be clear what Yankee's  
22 methodology is.

23 I haven't been able to articulate it so clearly as  
24 that, but we don't understand how they are going to  
25 calculate background. We were concerned about that issue

1 and where they are going to take those readings as well, and  
2 because of the vagueness of the LTP it is very hard for us  
3 to be able to pin down our argument because there is not  
4 enough information given to make the argument clear.

5 There have been documented and undocumented spills  
6 and releases at Yankee Atomic. There is a GAO report which  
7 in fact goes into the issues of what has been undocumentedly  
8 allowed to be buried at nuclear reactor sites. It was a  
9 1989 report which raised the issue that reactors in fact  
10 have a lot of undocumented waste buried on site and  
11 potentially off site that has not been calculated, and we  
12 are concerned about the level of determining what is  
13 Yankee's and what isn't because what we are afraid of is  
14 that Yankee is going to claim a lot of the radioactivity  
15 that is there on-site or around the site has been left from  
16 the bomb testing or is from background, rather than from the  
17 routine 31-year operation of the reactor.

18 So clarification on methodology would help and I  
19 think to take the stance that this is just -- we have to  
20 trust the process when there is no ability for us to appeal  
21 this at any point after this, we don't think is a reasonable  
22 way to proceed, that the methodology should be clear and  
23 maybe background has to be clear before they get approval  
24 for the LTP -- but it is sort of like we are supposed to  
25 trust a process that we are concerned is really experimental

1 because Yankee is setting a precedent for the whole industry  
2 in terms of the way they are going to decommission the site.

3 We have gone through this with the component  
4 removal project the same way, and we feel that the kind of  
5 scrutiny that needs to take place here, in fact should be  
6 greater because it is basically the first reactor. There  
7 have been other reactors, but Shoreham operated for 100  
8 hours. We weren't dealing with a site that was routinely  
9 contaminated like Yankee's has been, and we believe that the  
10 lack of clarity is a serious issue and that the issue of  
11 methodology is at the heart of the way they proceed.

12 In the inspection reports, there is a term that  
13 the NRC used that we put into our brief which was about  
14 philosophy and Yankee's philosophy, which I think ties into  
15 the issue of methodology, that their philosophy appears to  
16 be as little -- to do as little as possible and to justify  
17 doing that on the basis whether it is of taking averagings  
18 of readings or, you know, the process of lower calculations,  
19 but this is of concern to us, and it is all of one piece, so  
20 that ties into what we would say later, but it's about this  
21 issue of background.

22 We believe that there have to be readings taken  
23 upwind from the reactor in places that have had less effect  
24 by the reactor, kilometers away, to determine a more  
25 accurate view of what, or at least for Yankee to lay out --



1 maybe they are going to do that, but there is no clarity  
2 that that is what they are going to do in this and we  
3 haven't found anywhere where that is written, so maybe if it  
4 was included in the LTP that that is how they are going to  
5 do it, and they are going to try to find a less affected  
6 area and do averaging and see what that is, we may begin but  
7 when we were in the component removal process and in the  
8 issues of -- when we got discovery, I mean one of the issues  
9 was that I think Yankee's background was going to be 60  
10 millirem a year for a rem site, and they made those  
11 calculations.

12 Well, there are certainly areas in the area that  
13 are lower than that, and I am not sure that that is the  
14 amount that should be used. It was a concern then because  
15 of the amount you then add up in terms of what they are  
16 going to be allowed to leave behind above background, and  
17 all of this is of concern in terms of the site.

18 MR. LOVEJOY: Thank you, Your Honor. I think I  
19 would just like to repeat what the Council of Governments  
20 has been trying to say throughout the process and that is  
21 that we are looking to the Board and to the process for an  
22 assurance that whatever methodology is instituted is  
23 reviewable, is independent, and is capable of being  
24 commented on, and the trouble is that we actually -- Mr. Gad  
25 I think stated it perfectly. He said we are not here to

1 study implementation. We are here to review a plan, and  
2 then he said of which parts we are implementing.

3 I don't know how you do that. I am caught in the  
4 remarkable Catch-22 wondering how you implement the plan of  
5 which a plan is being reviewed that we are already  
6 implementing.

7 I think it is a problem, so the Council of  
8 Governments does not have the financial wherewithal to come  
9 up with the expertise to do a plan, so at the bare minimum  
10 we are looking for either an NRC order or Yankee voluntarily  
11 coming up with enough of a methodology that we could present  
12 to someone even on a gratis basis to say is this a logical  
13 plan in a highly technical field, and perhaps someone at the  
14 University of Massachusetts or MIT or somewhere, some  
15 friend, would at least be willing to volunteer a small  
16 amount of time to review it, but at the moment we are not in  
17 the position to review any plan. The methodology simply is  
18 not there.

19 So we are really only looking for the Board to  
20 take those steps to give the public the confidence that when  
21 this plan is implemented that we have a clean site. Thank  
22 you.

23 CHAIRMAN BECHHOEFER: Okay. Mr. Block, your  
24 response?

25 MR. BLOCK: Thank you, Your Honor. I want to go

1 back first, if I might -- not take them in the exact  
2 order -- but go back to some comments that Ms. Hodgdon made  
3 in raising the business of the SDMP and not to beat a dead  
4 horse but I think that what is missing is the full citation  
5 that goes along with her claim that this applies, saying  
6 that not only that those criteria are not applicable to  
7 sites that submit a sufficient LTP before August 20th, 1998  
8 and that such LTP is approved by the Commission in  
9 accordance with the criteria identified in the STMP Action  
10 Plan before August 20th, 1999.

11 Now I would maintain that the latter, whether the  
12 latter approval will take place in a timely way, may be  
13 dependent upon what we do here today in this room, and I  
14 would also maintain that the former and the issue of  
15 sufficiency is also at issue here, that if they had  
16 submitted a sufficient plan perhaps we wouldn't be here, and  
17 that is what we are trying to raise in our contention is one  
18 about sufficiency of the plan, and I think that if it turns  
19 out that they are not sufficient that they are not going to  
20 go forward.

21 Furthermore, the NRC Staff itself didn't deem the  
22 plan sufficient and raised a series of questions by letter  
23 that were not answered until December of 1998. Therefore,  
24 in the submission of the first revision of the plan there is  
25 an indicia that it was not a sufficient plan and therefore

1 it was not timely, and I think if the Board wants to take a  
2 simple and direct route, the simple and direct route would  
3 be that a plan may be submitted within the envelope  
4 described in the rule but be knocked out if it isn't  
5 sufficient, and the Staff certainly didn't embrace the plan  
6 and make their publication of a finding of no significant  
7 hazards on or prior to August 20th, 1998, and so I think  
8 there is some serious question about the sufficiency and  
9 that without both sufficiency and timeliness that they don't  
10 come under the rule.

11 Second, going back to statements and comments by  
12 both the Licensee and the Staff, I think that what we want  
13 to focus attention on in our first contention, which I  
14 believe remains supported by all of its bases including  
15 Bases Number 8, 9 and 10, which do reference the inspection  
16 report at issue, that the question here is one of how they  
17 are going to do this and that where Mr. Gad placed great  
18 emphasis on our noting that Yankee readily admitted it has  
19 not determined background levels yet, he omits to read the  
20 prior sentences which indicate that we're concerned with how  
21 this is being done and that it is a "how" issue.

22 In addition, Yankee must identify all potential  
23 radionuclide contaminants at the site. We disagree whether  
24 they are going to be making that identification based upon  
25 what they said in the plan. The relative ratios of these

1 radionuclides -- we have some question about whether this is  
2 clear and the procedure they are using, whether it is clear,  
3 and the general extent of contamination, and we are  
4 questioning that.

5 Therefore, on the level of the type of issue that  
6 I believe the Commission indicated strongly is before us,  
7 the methodology, we are making the boldest direct  
8 questioning of this methodology, and to the extent that they  
9 say that that is not what is to be disputed there is an  
10 issue of dispute that the Board would really need to resolve  
11 at the outset because this is going to come up again and  
12 again and again.

13 If there is -- I would agree with Mr. Lovejoy. I  
14 mean how do you dispute the methodology if the answer is  
15 well, it's all in process? You know? I mean is a Picasso a  
16 Picasso before he puts his signature at the bottom? I mean  
17 clearly you have to make some kind of a determination about  
18 what is the product we are dealing with here.

19 I believe we are dealing with what was filed and  
20 what was available to the public, and that has to be  
21 considered as if it was the final word from them at this  
22 point, not that their good faith, their promises, the  
23 representations, their close working relationship with the  
24 Staff will somehow assure us that everything will be  
25 hunky-dory in the end, so I say that what we have here is a

1 process question and that we are not questioning the  
2 evolution but the specific methodology that is there for us  
3 to question.

4 CHAIRMAN BECHHOEFER: Mr. Block, I guess you're up  
5 again for your second basis.

6 You don't have to make comments if you don't want  
7 to, but this is your chance.

8 MR. BLOCK: Excuse me a moment. I'm going to try  
9 to get some water.

10 MS. KATZ: It's on your table.

11 MR. BLOCK: Thank you.

12 Moving right along to Basis Number 2, here we're  
13 going to the issue of the completeness of the process, and  
14 the issue again is the kind of samples that were taken and  
15 the way in which the samples were taken. So again we  
16 believe that we have raised an issue on methodological bases  
17 and that we are seeking clarification of how exactly these  
18 processes will be carried out in a way that seems consistent  
19 with what we understand the guidance to be in this area.

20 Also, in terms of -- well, let's see if I -- no, I  
21 would rest with that under number 2, so do you want to go  
22 forward with that? Were there any questions about number 2?

23 CHAIRMAN BECHHOEFER: Mr. Block, let me ask you a  
24 question about the last sentence on Basis 2. Are you  
25 talking here about the methodology, more or less the same

1     thing we were talking about earlier, or -- because this is  
2     -- says you can't determine the survey readings unless  
3     background is determined. Now isn't that the same thing we  
4     were talking about before?

5             MR. BLOCK: Well, it's similar in the sense that  
6     we're making a similar point about the way in which this  
7     needs to be carried out.

8             CHAIRMAN BECHHOEFER: Right. So --

9             MR. BLOCK: There's also the issue of the  
10    columnated versus the uncolumnated beam, and the effects of  
11    using one over the other, and what kind of an effect that's  
12    going to have overall on the kind of measurements that are  
13    being made. Because you have a subtraction that's going to  
14    take place here, and I guess what we'd be contending, and  
15    again I hope I'm representing -- I'm sure Dr. Resnikoff will  
16    pull my coattails if I say this incorrectly, that you can't  
17    end up trying to subtract from -- one quantity from the  
18    other unless the ways in which the two numbers were  
19    determined is the same, and so we are criticizing the  
20    methodology that we see that's there, the approach that's  
21    being taken and its lack of clarity as to how they will  
22    obtain that background number.

23            CHAIRMAN BECHHOEFER: And you would like us to set  
24    criteria for obtaining background.

25            MR. BLOCK: Well, yes, ultimately, but what I'd

1 like to see would be an opportunity to take a look at -- for  
2 the Board to take a look at documents that Yankee may have  
3 prepared, for Dr. Resnikoff to review them, for him perhaps  
4 to be discussing with people at Yankee what the methodology  
5 is, and that that discussion come back to the Board so that  
6 the Board can make that determination. That would be  
7 correct.

8 CHAIRMAN BECHHOEFER: Right. Well, I was just  
9 talking about the bottom line.

10 MR. BLOCK: Right.

11 CHAIRMAN BECHHOEFER: Right.

12 DR. MURPHY: I'm having difficulty understanding  
13 what the completeness of the survey has to do with being  
14 able to subtract one from the other. Why is that?

15 MR. BLOCK: Can I consult?

16 DR. MURPHY: I don't understand where you're  
17 going. I'm trying to understand where you're going with  
18 this.

19 MR. BLOCK: Dr. Resnikoff advises that what we're  
20 looking here for is the above-background contribution of  
21 operations, and so the determination would have to be made  
22 in advance and in the same way in order to be able to  
23 subtract away and get the plant contribution, what was  
24 operational contribution. And that would be what you were  
25 going to remediate, not --



1 DR. MURPHY: Why is that different from what you  
2 were talking about for the first hour on the first basis?

3 You use the example of not -- of taking in-situ  
4 gamma spectrographic measurements, but I'm trying to  
5 understand how that correlates with an incomplete survey and  
6 how that allows you to or helps you determine what  
7 background is.

8 MR. BLOCK: This is difficult for me. I beg the  
9 Board's indulgence. What -- if I understand again Dr.  
10 Resnikoff correctly that there will be differences in the  
11 gamma measurements with the columnated, the uncolumnated  
12 beam, and also the composition of radionuclides that's  
13 involved, and that if they are looking for the less than  
14 five microrad per hour measurement with a columnated beam,  
15 they're going to get different data than if they use a  
16 noncolumnated beam. And so I hope that clarifies the  
17 difference between 1 and 2.

18 DR. MURPHY: I hear what you're saying. Let's go  
19 on. Let's go on.

20 CHAIRMAN BECHHOEFER: Okay. Mr. Gad or Dignan.

21 MR. GAD: Thank you, Your Honor.

22 Let me come back, if I may, to the columnated beam  
23 when I descend from the philosophical to the specific, but  
24 -- assuming I ever descend -- but Your Honors have heard now  
25 for a while, and I quote, "We disagree." "We have some

1 questions." "We question that."

2 And I submit to you, and I hate to be the skunk at  
3 this lawn party, but I submit to you that whole purpose, the  
4 Commission's stated purpose behind the 1989 revisions to  
5 section 2.714 was to do away with that sort of a contention.

6 That's not admissible. The contention must be  
7 specific and it must be precise and it must say this little  
8 box is what we fight over, so that, you know, one side can  
9 vote for one side of the box and one side can vote for the  
10 other and the Board can ultimately umpire. You can't umpire  
11 a contention that says we disagree, we have questions about.  
12 Why don't we suspend the whole proceeding, go out and have a  
13 little gabfest for a while, and then we'll come back and  
14 talk about the Board.

15 Now, that's the contention -- that's an argument  
16 that used to be made, Your Honor, and some boards used to  
17 accept it. And the Commission has said no, we do  
18 contentions before we do discovery. And if you can't do a  
19 contention without discovery, then you can't do a  
20 contention.

21 Now what we did in reviewing the submission, and  
22 A-2 is an interesting example, was that we actually looked  
23 for something in there that was specific, that was concrete,  
24 and the so-called columnated detector was the only thing  
25 that we could find in A-2 that was concrete. And the

1 argument that is made in A-2 is that you should not use a  
2 columnated detector if you are taking background readings of  
3 gamma-induced or earth-induced radiation. The problem is  
4 that whoever authored that section of NECNP's contentions  
5 misread the LTP.

6 The page in question says what we are going to use  
7 a columnated detector for. It is for spectroscopic  
8 analysis. And the reason that you use a columnated detector  
9 -- a columnated detector, Your Honor, is like a telescope  
10 with a long sunshade on it so that you can only see the  
11 target and you don't get blinded by the light that's coming  
12 in through the windows. And what the LTP says this device  
13 is going to be used for is spectroscopic analysis of soil, a  
14 piece of concrete, whatever it happens to be, so that you  
15 are not measuring dose levels, what you're really looking to  
16 do is to identify radionuclides by their signature energy  
17 levels. That's what it's used for.

18 So in essence A-2 says you shouldn't use an X to  
19 do Job A, and the LTP doesn't say you're going to use an X  
20 to do Job A, there's no contest. And everything else that's  
21 in there we could not find concrete enough to either rise to  
22 the standards or frankly respond to.

23 CHAIRMAN BECHHOEFER: Ms. Hodgdon.

24 MS. HODGDON: I believe that the staff can pretty  
25 much stand on what it's already said. There's no -- it's

1 hard to understand what NECNP is saying here about its  
2 feelings with regard to the columnated as opposed to the  
3 uncolumnated beam, and that it's our understanding that you  
4 use the columnated beam to identify the isotope, and that's  
5 all, and that's what it was being used for. But in any  
6 event, what we pointed out in our paper is that they don't  
7 point to anything in the LTP to suggest that what Yankee did  
8 was not appropriate for the purposes or that they should  
9 have done something else. I mean, there's a lot of  
10 confusion there.

11 CHAIRMAN BECHHOEFER: Ms. Katz, any comments?

12 MS. KATZ: I was actually trying to find New  
13 England Coalition's actual second contention. What we are  
14 concerned with is the issues of methodology, and in reading  
15 NECNP's contentions, the issue that came up in that again  
16 was the degree of clarity about what Yankee was going to do  
17 and how, which we didn't find specifically laid out in the  
18 LTP. And certainly if those things were specifically laid  
19 out, we might not be here, any of us. But it's from the  
20 vagueness of the LTP itself, the lack of clarity, and it may  
21 be that Yankee does it to keep its options open so that it  
22 can choose to pick out of a Chinese menu what it would like  
23 to do.

24 But that very process leads to a kind of confusion  
25 in terms of understanding whether Yankee's really going to

1 be accountable for what it says it will do. And I think  
2 some of the issues that are being raised are in terms of  
3 making sure that all of the radionuclides that belong to  
4 Yankee as opposed to the Department of Defense, I guess, or  
5 to background or to God get picked up to a level that  
6 satisfies the requirements of the NRC. And so the issues of  
7 doing as thorough an analysis and it's clear to us and  
8 certainly Mr. Gad raises well, we could go outside and talk  
9 about it, and in some ways, well, maybe that's what should  
10 take place, on a certain level we could talk out what's  
11 being used and we might not have to struggle this out here  
12 in this way. But it's the lack of specificity and vagueness  
13 that's of concern to us that the licensee will be  
14 accountable.

15 CHAIRMAN BECHHOEFER: Mr. Lovejoy, any comments?

16 MR. LOVEJOY: Yes. I'd like to just make it  
17 short. In the Yankee response of January 20 that we  
18 received, at page 4 their response to this contention  
19 included two bullets. The first one, it does not comply  
20 with the pleading requirements, most understandable. But  
21 the next bullet, I just want to raise this because this is  
22 the kind of confusion that sort of the average citizen,  
23 average public trying to sort out this process would wonder  
24 about.

25 I had a schoolteacher in third grade that said

1 when I run into a sentence like this, I'm supposed to read  
2 it aloud and see if it helps.

3 It manifestly is not related to the status survey  
4 plan in this case, which does not embody a decision not to  
5 sample or monitor a large area. This is a triple negative.  
6 Now the trouble is I don't understand Yankee's response, and  
7 I've tried to sort this out, and I think what they're saying  
8 is that they never made a commitment to sampling and  
9 monitoring under the status survey plan. So if that's what  
10 they're saying, then again I would repeat my previous  
11 comments. If we don't have a plan that we can review  
12 because it's a moving target, then obviously we can't  
13 comment and the assurance of the public therefore drops. So  
14 I'm simply raising that manner of response to show that  
15 confusion is paramount.

16 Thank you.

17 CHAIRMAN BECHHOEFER: Mr. Block.

18 MR. BLOCK: Thank you, Your Honor.

19 Recalling that Basis Number 2 was in support of  
20 lack of adequate characterization, I think what we were  
21 trying to say here is that the specificity coming out of the  
22 description in the plan of how the surveys were being  
23 conducted were a concern that if you're just measuring for  
24 gamma and not specific radionuclides, there will be a  
25 difference between the results of using a columnated as

1 opposed to an uncolumated beam, and that in fact the use of  
2 an uncolumated beam is going to give higher readings. The  
3 use of the columated beam is going to get those readings  
4 below the concern level that's indicated by the licensee.  
5 And I think that's what we were trying to indicate as our  
6 concern about the lack of adequacy in the approach that's  
7 being taken.

8 Thank you.

9 CHAIRMAN BECHHOEFER: Why don't we take about a  
10 ten-minute break, and then we'll be back for A-3.

11 [Recess.]

12 CHAIRMAN BECHHOEFER: Okay. Back on the record.

13 I would just like to point out, and several people  
14 have found this already, there's a signup sheet for limited  
15 appearance statements for tonight in the back, and several  
16 people have signed it already. I'd just like to note that  
17 it's there. And we're likely to take the people both who  
18 sign up here and two people wrote in in advance. We're  
19 likely to lead off with them, but -- assuming they're there  
20 at the time.

21 Okay. Back to the various contentions. To the  
22 extent possible, we would like you to, you know, confine  
23 remarks to the things you haven't said in your written  
24 filings, because -- just to move things on a little bit  
25 faster, I should say. We've read all the papers that have

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1     been filed, so --

2             MR. BLOCK: Thank you, Your Honor. We'll try not  
3     to be repetitive.

4             Our comments on the criticisms of Basis 3, which  
5     was stating that the direct gamma exposure rates that Yankee  
6     says it's going to try to achieve of five microrad per hour  
7     are not protective, the staff is saying essentially that  
8     they're just following the regulations and therefore if we  
9     claim that they're not protective, we're challenging the  
10    regulations. And I hope to clarify for the Board what the  
11    difference is here in what the staff thinks that we're  
12    saying, what the licensee believes we're saying, and what in  
13    fact we're saying.

14            Yankee is arguing that they are going to be  
15    remediating the site TEDE dose of 15 millirem per year, and  
16    we're saying that they're not. We're saying that cleaning  
17    up to a direct gamma of five microrad per hour will lead to  
18    a TEDE greater than 15 millirem per year. The gamma dose  
19    will be higher than 15 millirem per year, and additional  
20    pathways need to be included.

21            The staff don't argue with our basis. They argue  
22    whether we're challenging the regs. Whether this is a  
23    challenge to regulations or not we believe again diverts  
24    attention from the focus of the contention. We're arguing  
25    that the cleanup standard is not protective, and in this



1 case where we're dealing with guidance rather than  
2 regulation, NUREG-1500 and other documents being simply  
3 guides, they have to be interpreted and applied properly.  
4 And so the issue would be how do they need to be applied in  
5 this matter, how do they need to be interpreted in this  
6 matter, in order to assure that the plan when carried out  
7 and the plan as written before it attempts to be carried out  
8 will assure adequate protection of public health and safety.

9 And our basis I think lays this out in detail, so  
10 I won't go over it again, since the Board has asked us to  
11 move on. We're saying that Yankee is required to protect  
12 the public health and safety, and it's required to do so  
13 under the NRC's regulation, and we have made a further  
14 argument that women and children will receive a TEDE greater  
15 than 15 millirem per year, and we argue that on two grounds.  
16 We think that the residential scenario is different for the  
17 critical groups that are involved who may be present 100  
18 percent of the time, and we don't think the NRC staff has  
19 even touched this.

20 On the other hand, Yankee seems at page 7 to be  
21 conceding that there are going to be people who are going to  
22 be receiving exposures higher than 25 millirem per year, in  
23 speaking of the way in which the regulation contemplates an  
24 average. So this raises still an additional question about  
25 the licensee's commitment to go to 15, and the Part 20 use

1 of 25, and exactly, you know, where do we weigh in here in  
2 knowing how much the site will be cleaned up and to what  
3 level.

4 Thank you.

5 CHAIRMAN BECHHOEFER: Thank you.

6 Mr. Gad.

7 MR. GAD: Your Honors, the Contention A-3 is  
8 inadmissible because it is a direct challenge to the  
9 regulations, and because the Commission on the standing  
10 aspect of this matter has already addressed it and ruled it  
11 to be inadmissible.

12 In substance, assuming for the moment that we are  
13 under 1402, that's 10 CFR Section 20.1402, the site release  
14 criterion is stated in TEDE, Total Effective Dose  
15 Equivalent. Contention A-3 says that if you could get five  
16 micro R per hour from plant-related material at the surface,  
17 then some people might get more than the criterion TEDE.  
18 They do this by simple mathematics. You multiply 5 micro R  
19 per hour by enough hours, and you will get -- put aside the  
20 difference for the moment between rads and rems -- you will  
21 get more than 25 or 15 millirems per year.

22 Now, this is exactly the assertion that the  
23 Commission evaluated in CLI 98-21 and said was inadmissible.  
24 Why is that? Because NECNP and CAN have misperceived what  
25 the regulation requires. This is not a site boundary

1 criterion such as you might have under Part 20 during  
2 operations, which talks about the most exposed individuals.  
3 This is a criterion that must be met as to the average  
4 member of the critical group, both of which terms are  
5 defined in the guidance documents that are explicitly  
6 referred to in the Federal Register notices by which 10 CFR  
7 20.1402 were promulgated.

8           So the 25, which is the value that's in the  
9 regulation, doesn't stand alone. It's not 25 applied  
10 however someone wishes to apply it. It's 25 as applied to  
11 the average member of the critical group. There is no  
12 assertion. There is rather the concession in this  
13 contention that you will make it as to the average member,  
14 but you won't make it as to some other people. The  
15 Commission's already said you can't do that.

16           Two quick observations. The first one is that,  
17 Your Honor, the world is divided into two groups of plants,  
18 depending upon which criteria -- which site release criteria  
19 the Commission has said it will apply. There are the SDMP  
20 plants, and there are the 1402 plants. There is no third  
21 group.

22           Now it just so happens that Yankee is an SDMP  
23 plant, in which case there is no TEDE site release  
24 criterion. What criterion is there? Five micro R per hour,  
25 and it happens to be in the SDMP that the Commission

1 promulgated and incorporated by reference into 20.1401. So  
2 whichever way you go, whether you treat this as a SDMP  
3 plant, all right, with your five micro R per hour average,  
4 10 micro R per hour max, site release criterion, contention  
5 A-3 is a challenge to that regulation. Or if you treat it  
6 as a 1402 plant, which has a TEDE requirement, and no micro  
7 R per hour requirement, then the Commission has said this  
8 contention is a challenge to that regulation, and the  
9 Commission has said it's inadmissible.

10 Second observation. You have by now determined,  
11 if it took this long, that Yankee's LTP in fact overcommits.  
12 Yankee's LTP commits to a TEDE requirement even though it's  
13 an SDMP plant, and it commits to a TEDE of 15 rather than 25  
14 microrem per year to the average member. That doesn't  
15 change, however, what the legal standards are. Contention  
16 A-3 is inadmissible because it is a challenge to the  
17 Commission's regulations, and because the Commission has  
18 said so.

19 DR. MURPHY: You said microrem per year, Mr. Gad.  
20 Did you mean --

21 MR. GAD: No, no, no. This is the trouble with  
22 lawyers. No, the direct reading is micro R per hour, and  
23 the TEDE requirement is in units of millirem per year, and  
24 with the Board's leave, if I said it any differently, maybe  
25 we can amend it.

1 DR. MURPHY: You mentioned the five micro R per  
2 hour, and you said that was to be measured at the surface.  
3 I'm trying to recall --

4 MR. GAD: We're not yet at that point. That's the  
5 next contention, Your Honor. But both the SDMP and 5847  
6 dictate that when you're making that reading, you do it for  
7 different purposes, you do it at one meter from whatever the  
8 survey unit is. Remember, sometimes it's open land area,  
9 it's one meter above the ground. Sometimes it's the wall of  
10 a building, the floor of a building, it's one meter from the  
11 surface. But that's actually another contention down the  
12 way.

13 DR. MURPHY: I understand. I was just trying to  
14 clarify what you said earlier in your remarks.

15 MR. GAD: If I garbled it, Your Honor, it won't be  
16 the first time.

17 DR. ELLEMAN: Yes. Mr. Gad, a couple of questions  
18 that will help me, I think, better understand what is going  
19 to happen in the evaluation of radiation levels. The five  
20 micro R per hour really is about the lowest possible  
21 detection limit that the instruments have, isn't it?

22 MR. GAD: Outside of the laboratory, that's  
23 correct, Your Honor.

24 DR. ELLEMAN: Yes, and in field use, and that is I  
25 believe stated in the report, that the detection sensitivity

1 is five micro R per hour for the general survey and  
2 ionization-type detection devices that are being used.

3 MR. GAD: For the field-portable units I believe  
4 that to be correct. Now I also understand that if you're  
5 doing the inside of a wall of a building you might make some  
6 accommodations if you needed greater sensitivity.

7 DR. ELLEMAN: Yes. But basically we're looking at  
8 the minimum detection level possible with these instruments  
9 at five micro R per hour.

10 MR. GAD: I understand that to be correct, Your  
11 Honor.

12 DR. ELLEMAN: Now we had some earlier discussion  
13 about these columnated detectors. It had been my impression  
14 when I read the license termination plan that a planned use  
15 of that information was to determine the spatial  
16 distribution of radioisotopes and then use that information  
17 to calculate a dose rate, not measure it, per se, but  
18 calculate it from the radioisotopes that were detected with  
19 those columnated detectors.

20 MR. GAD: My understanding is it starts a little  
21 differently, although eventually you're going to end up at  
22 the same place. My understanding is the point of using the  
23 columnated device is so that you can do a spectroscopic  
24 analysis of what the radionuclides are in a given sample  
25 without tainting it from energy that's coming in outside of

1 the columnation zone.

2 Now, when I say that we want to focus on a  
3 particular sample, obviously then you are going to map that  
4 against other samples in order to determine what it is  
5 you're dealing with, and in particular whether or not it is  
6 plant-related or not plant-related. So there is eventually  
7 there is a spatial limitation, but the point of the  
8 columnated detector is so that you can do spectroscopic  
9 analysis of the sample, not of the world.

10 DR. ELLEMAN: Right, but are not those data to be  
11 used in calculating a radiation exposure to an individual  
12 that is occupying the area? If you don't do that, then I  
13 don't know how you're going to measure the five micro R per  
14 hour or anything less than that because you're at the  
15 detection limit for your instrumentation.

16 MR. GAD: The way Yankee uses the five  
17 micro/R per hour, okay, is as a screen. That is to say --

18 DR. ELLEMAN: Right.

19 MR. GAD: -- if you trip it, --

20 DR. ELLEMAN: Yes.

21 MR. GAD: -- let's go find out why.

22 DR. ELLEMAN: Yes.

23 MR. GAD: The TEDE is not -- is calculated by  
24 knowing what isotopes we have at the surface, what isotopes  
25 we have below the surface, and then running them through the

1 model --

2 DR. ELLEMAN: Right, for calculating the dose.

3 MR. GAD: -- which says if I have a certain  
4 quantity of a certain isotope at a certain activity level,  
5 then the model will say, okay, I get so much from a shine  
6 dose, I may also get so much from a water dose, I may get so  
7 much from an agricultural dose and so forth.

8 DR. ELLEMAN: Yes.

9 MR. GAD: I don't believe it's so simple as  
10 saying, okay, I take my geiger ruler, I get a reading, I  
11 multiply that by a number of hours, and that's my shine  
12 list.

13 DR. ELLEMAN: Right. I guess where I was heading  
14 is it seems to me the survey instruments are simply going to  
15 be used to locate high areas of radiation exposure. Your  
16 actual determination of dose, which is what the issue is  
17 that's under discussion now, is going to come out of the  
18 model --

19 MR. GAD: Exactly.

20 DR. ELLEMAN: -- in which you're using the  
21 radioisotope distributions to determine that does.

22 MR. GAD: Exactly right.

23 DR. ELLEMAN: Okay.

24 MR. GAD: And that's an additional reason why the  
25 equation so many micro/R per hour equals so many millirem



1 per year is a faulty equation. But we're not the ones who  
2 made the faulty equation.

3 DR. ELLEMAN: Yes. Okay. I wanted to clarify  
4 that. Thank you.

5 CHAIRMAN BECHHOEFER: Okay. Ms. Hodgdon?

6 MS. HODGDON: Yes. I think that Mr. Gad spoke to  
7 two issues, and we're in general agreement with what he said  
8 about both of them. I would add just a couple of thoughts  
9 to that, and that is the document that I cited you to  
10 before, the SDMP action plan criteria, they -- it mentions  
11 there at Federal Register 57 -- 57 Federal Register 13390  
12 that five microrad per hour, and that's where that comes  
13 from. It says 5 -- well, I can get to that with the next  
14 one -- 5 microrad per hour above natural background at one  
15 meter. Well, I didn't start the sentence right.

16 They say termination of operating licenses for  
17 nuclear reactors, Reg Guide 1.86. These are the criteria  
18 for SDMP action plan -- applicants under that action plan.

19 So termination of operating licenses for nuclear  
20 reactors, Reg Guide 1.86, table 1, for surface contamination  
21 of reactor facilities structures should be removed. It goes  
22 on what the radionuclides are. I was trying to skip over.  
23 But anyway, it says, Cobalt 60, Cesium 137 and Europium 152  
24 also that may exist in concrete components and structures  
25 should be removed so that the indoor exposure rate is less

1 than five micro renkin per hour above natural background at  
2 one meter, and then it goes on with other things.

3 So I would say that the staff's argument was based  
4 on -- with regard to the five microrad an hour was based on  
5 the applicability of that reg guide which is grandfathered  
6 in the new rule, in new Subpart E to Part 20.

7 Beyond that, with regard to the dose -- and the  
8 thing is that under the SDMP action plan, Yankee would not  
9 be bound by any dose -- I mean, because there is none with  
10 the -- there's no articulated dose with the SDMP action  
11 plan.

12 But Yankee, as it came in in the middle of this,  
13 also strove to meet the proposed rule, and so I would  
14 suggest that it helps to read the rulemaking of both the  
15 propose rule and the final rule.

16 But just to add one thought to what Mr. Gad said,  
17 is that one must keep in mind with regard to these exposures  
18 -- I mean, we agree, of course, that the average member of  
19 the critical group -- that that is, in fact, what the rule  
20 says and what the Commission said in CLI 9821, that any --  
21 you may not quarrel with that; that's a regulation. But I  
22 was just going to try to explain something beyond that, and  
23 that is --

24 CHAIRMAN BECHHOEFER: Wait a minute. What's a  
25 regulation? That's not the way I read it.

1 MS. HODGDON: The TEDE is to the average member of  
2 the critical group that is in the regulation, as I read it.  
3 1402 says --

4 CHAIRMAN BECHHOEFER: Yes, but that's not  
5 applicable.

6 MS. HODGDON: Yankee has chosen to meet it. Then  
7 there also might be a question --

8 CHAIRMAN BECHHOEFER: Well, that doesn't mean it's  
9 applicable.

10 MS. HODGDON: -- of whether they meet 1401(d),  
11 which says when calculating TEDE to the average member of  
12 the critical group, the licensee shall determine the peak  
13 annual TEDE dose expected within the first thousand years  
14 after decommissioning.

15 So I'm saying that once you get into calculating  
16 dose TEDE, that that is what you're into, you're into how to  
17 do it and what it means and who it's applicable to, and it's  
18 applicable to the average member of the critical group.

19 So I'm saying you can do it this way, you can do  
20 the SDMP action plan which doesn't have dose but uses the  
21 five microrad an hour criterion from the Reg Guide 1.86, and  
22 that was what was used prior to the adoption of this rule  
23 where we go to dose, and the dose that's mentioned there to  
24 the average member of the critical group is 25 in the new  
25 regulation.

1 But the one additional point that I was trying to  
2 make is that that is to be understood in the context of Part  
3 20, where the dose is actually 100 millirem a year. So I'm  
4 going to read to you from page 3905-A, Federal Register -- I  
5 can't find the cite on -- 62 Federal Register 3905-A, where  
6 it says the level of risk and need for a constraint -- they  
7 say this is a constraint, this 25, it's a constraint that's  
8 appropriate for decommissioned sites, sites that were  
9 released for unrestricted use. So they say that the reason  
10 that the 25 is appropriate -- I'll go on to say that --  
11 that's a constraint, as I just said.

12 The need for a constraint or margin of safety  
13 below the one -- well, I should go over the 100, what we're  
14 dealing with here -- 100 millirem a year public dose limit  
15 of 10 CFR Part 20 to account for the potential effect of  
16 multiple sources of radiation exposure. So in other words,  
17 the reason they went to 25 was that they thought that there  
18 might be some reasonable possibility that some -- that the  
19 average member of the critical group or even some other  
20 members of that group incurred some additional dose  
21 someplace else, and they wanted to make sure that he stayed  
22 below 100. So my point is that 100 is the real number  
23 that's the Part 20 limit. I hope I haven't confused people  
24 more than they were already confused.

25 Now, the rulemaking is very well done, it's quite

1 clear, and it helps a lot to read both the proposed rule and  
2 the final rule, which is what I was just reading from, and  
3 the cite for that is 62 Federal Register 3905-A, July 21st,  
4 1997, on the adoption of the final rule.

5 CHAIRMAN BECHHOEFER: Well, where is your hundred  
6 -- what rule number? Not the Federal Register number.

7 MS. HODGDON: My hundred is the number in subpart  
8 -- did somebody give me that? It's not in subpart E as far  
9 as I know. It's all over Part 20. It's the number that the  
10 Commission, and not only the Commission -- if you read the  
11 -- what I was just reading from, you will see that there's  
12 national and international agreement regarding this number,  
13 which is why they use it. And so would somebody find that  
14 cite for me?

15 MR. GAD: 1301.

16 MS. HODGDON: What?

17 MR. GAD: 1301.

18 MS. HODGDON: 1301. Thank you. 1301. I'll look  
19 at it and be sure I get you the right thing. I think it  
20 occurs more than once in here, but that is dose limits for  
21 individual members of the public. Yes, that's the right  
22 one. Thank you.

23 MR. GAD: Thank you.

24 MS. HODGDON: 20.1301, dose limits for individual  
25 members of the public, and that's 100 millirem, and as I

1 said, 25 is a constraint, and they explain what they mean by  
2 constraint in there. That apparently is also by  
3 international agreement.

4 CHAIRMAN BECHHOEFER: I might comment that the  
5 hundred is really inapplicable to terminated sites. It  
6 applies for an operating reactor and there's been  
7 cost-benefit balances saying that you can have a little bit  
8 more when you have an operating reactor, you're getting some  
9 benefit out of it.

10 MS. HODGDON: No.

11 CHAIRMAN BECHHOEFER: This doesn't apply at all to  
12 decommissioned sites.

13 MS. HODGDON: The point is it has been determined  
14 that 100 millirem is a safe dose beyond -- at which no  
15 health effect has ever been determined. Therefore, it would  
16 be appropriate to use some fraction of that number for sites  
17 that were being released for unrestricted use, and the  
18 number they chose was 25 because that also agreed with the  
19 international consensus. And the thought there was that in  
20 addition to that 25 that you might be getting, the limit --  
21 well, the average member of the critical group, that you  
22 could also -- there was some reasonable possibility that you  
23 might get some dose some place else, and so -- and they want  
24 to be sure that you come out under 100 because they think  
25 100 is safe.

1           That's all in here. I'm really not making it up.

2           [Laughter.]

3           CHAIRMAN BECHHOEFER: No, I was reading it and  
4 it's in front of me.

5           MS. HODGDON: That's all I have to say on that.

6           CHAIRMAN BECHHOEFER: Okay. Is that all that you  
7 have on that? Okay. Ms. Katz.

8           MS. KATZ: Well, actually, this whole issue is of  
9 serious importance to our community, and first, I want to  
10 say because having historically gone through this, it was  
11 Brian Grimes from the Nuclear Regulatory Regulation Division  
12 who said that Yankee would be held to a 15 millirem standard  
13 and did it at public meetings here in this community. So  
14 the issue of who made the choice about this, at least as far  
15 as our remembrance and what we went through, was that the  
16 NRC was going to hold Yankee to 15 millirems, and this was  
17 done before the rule was in place. The rule, in fact, has a  
18 higher standard, but this was from the NRC setting that  
19 regulation, which they may have then altered.

20           Now, Brian Grimes may have said things in our  
21 community he wasn't allowed to say, but this is what our  
22 community he wasn't allowed to say, but this is what our  
23 community heard at a hearing, in fact in this courthouse.

24           CHAIRMAN BECHHOEFER: Was a transcript taken?

25           MS. KATZ: I can get the transcript and we can

1 raise it to you. I will look -- it was in the transcript as  
2 far as I know, and there are people here who were present  
3 who participated in that who could swear to having  
4 experienced that. That was of great concern to us, in fact,  
5 how much Yankee was going to leave behind.

6 I mean, we are concerned in two ways with this.  
7 One is in terms of the rule itself, but the other is in  
8 terms of the interpretation of the rule.

9 You know, at this point, the rule that Yankee is  
10 following or would like to follow in the way that it does is  
11 to protect the average member of the most affected  
12 population, and this for them is an adult male weighing over  
13 200 pounds who resides at the site only eight hours a day,  
14 is indoors 55 percent of the time, and is outdoors gardening  
15 one percent of the time.

16 This standard has no relevance to our community.  
17 Now, it has no relevance to our community for a number of  
18 reasons, and I want to say that historically, we even had a  
19 meeting with the NRC in which we had the Massachusetts  
20 Department of Health come here and hold a hearing about the  
21 increases of disease in our community.

22 Since that time, which was something like six or  
23 seven years ago -- Morton would have a better sense of than  
24 I do about that -- Mr. Fairchild -- in fact, there was a  
25 draft document released by the Massachusetts Department of



1 Health which showed statistical significance in breast  
2 cancer, a statistical significance in non-Hodgkin's  
3 lymphoma, an array of cases of multiple myeloma throughout  
4 the Valley, and a four-fold increase in Down's Syndrome.

5 We believe that the issue of the health  
6 consequences and the suffering in our community has to be  
7 taken into account in terms of any site release criteria  
8 that Yankee has to meet because since this community is  
9 suffering, the effects that radiation could have on these  
10 people is different than in a healthy community. That's one  
11 issue we want to raise. And that is not saying that Yankee  
12 caused these health consequences. We can't say what caused  
13 it except we know that a lot of polluters used our river,  
14 including Yankee Atomic, in terms of releasing  
15 radioactivity. But there was dioxin released into our river  
16 and a lot of things.

17 We are a poor, rural community, which has put us  
18 in a position to, in fact, have corporations use our  
19 community in ways that haven't necessarily been the most  
20 beneficial for us.

21 But I want to get back to this issue of who is the  
22 critical population, because we believe the interpretation  
23 in this is that the critical population has to be children,  
24 and that in fact in terms of 20.1001, what is used in terms  
25 of the regulations for the protection against ionizing

1 radiation is said to be an individual. That's what it says  
2 -- a total dose to an individual. The individual does not  
3 seem to be defined beyond that. But in terms of  
4 reasonableness, in terms of common sense, the people who  
5 have to be most protected in terms of the future, in terms  
6 of present life, are our children. And in fact, in our  
7 community, our children are suffering. So the issue of this  
8 standard is essential to be dealt with in terms of that.

9 We believe that women and children bear a  
10 disproportionate amount of radiation and the effects of  
11 radiation. The BIER 5 report in fact raises those issues.  
12 We raised them, in fact, and quotes from that in terms of  
13 it.

14 We in fact have problems with the regulation  
15 itself because we do not feel that even besides the  
16 interpretation, there are issues of Down's Syndrome, there  
17 are issues of other birth defects, there are issues that go  
18 beyond cancer in terms of a weather vane for a sense of  
19 miscarriage as well in terms of showing the effects of  
20 radiation on communities. But we do not believe that this  
21 interpretation is the right one, what Yankee is creating.  
22 Although they keep wanting to put us in the corner of being  
23 the worst case scenario, that what Yankee is really creating  
24 is the least case scenario, and that this is really  
25 unacceptable.

1 CHAIRMAN BECHHOEFER: Well, we'll have to look and  
2 see whether the rules as they now stand permit us to look at  
3 anything other than adult males.

4 MS. KATZ: Well, that's what's in question here,  
5 --

6 CHAIRMAN BECHHOEFER: Yes. Right.

7 MS. KATZ: -- that we think that since it says an  
8 individual and it doesn't define it, then we believe the  
9 definition that has to happen for the most -- the average or  
10 the most critical population needs to be women and children.  
11 We're not saying that --

12 CHAIRMAN BECHHOEFER: Well, no, we --

13 MS. KATZ: -- people with AIDS should be the --  
14 because they would suffer the greatest immune deficiency and  
15 potential for exposure to radiation; we're saying that women  
16 and children, in fact, are a reasonable average.

17 CHAIRMAN BECHHOEFER: Yes. Well, we'll have to  
18 look and see what we believe the regulations require,  
19 assuming they do.

20 MS. KATZ: Right.

21 CHAIRMAN BECHHOEFER: Mr. Lovejoy?

22 DR. ELLEMAN: Could I ask a question, please?

23 CHAIRMAN BECHHOEFER: Oh, sure. I'm sorry.

24 DR. ELLEMAN: If a proper family grouping were  
25 chosen, in your view, are you comfortable with the concept

1 of averaging the dose, or do you insist that every member of  
2 this group be below the 15 millirem per year?

3 MS. KATZ: We really believe the rule should apply  
4 to children because they're more vulnerable in this and they  
5 suffer the greatest risk in terms of exposure, and certainly  
6 by taking in the effect in terms of children, you in fact  
7 have the greater ability to protect other members of the  
8 population.

9 DR. ELLEMAN: So you're saying you want the  
10 children to be below the 15 millirem.

11 MS. KATZ: Yes.

12 DR. ELLEMAN: Okay.

13 MS. KATZ: And especially given, you know, the  
14 site-specific issues, that in some ways, there's a kind of  
15 generic position that's taken in terms of the environmental  
16 assessment and the issue of the rule. But we're saying  
17 there are specifics in communities that need to be addressed  
18 on a site-specific basis, just as decommissioning -- certain  
19 reactor sites are more contaminated than others. Certain  
20 licensees have done a better job. Well, the truth in  
21 communities as well is that some communities are sicker than  
22 others, and that has to be taken into account in terms of  
23 the regulation and the application of it.

24 CHAIRMAN BECHHOEFER: Mr. Fairtail, let me ask  
25 you, did you make a commitment at that meeting to meet the

1 15 or not?

2 MR. FAIRTAIL: Ms. Katz said that it was made by  
3 Brian Grimes, --

4 CHAIRMAN BECHHOEFER: Oh, I'm sorry.

5 MR. FAIRTAIL: -- a former employee, at this  
6 meeting that we held here in this courthouse.

7 CHAIRMAN BECHHOEFER: I'm aware of that, of the  
8 meeting, but --

9 MR. FAIRTAIL: Off the top of my head, I don't  
10 remember it. It was a number of years ago. But it would be  
11 in the transcript, as she said. But it wouldn't -- it also  
12 would not be staff policy. I think he was probably voicing  
13 a personal opinion. Assuming he said it, it would have to  
14 be taken in the vein of a personal opinion.

15 CHAIRMAN BECHHOEFER: Right. Well, I was just  
16 trying to establish whether the staff had made any  
17 commitment to the community to --

18 MR. FAIRTAIL: No.

19 CHAIRMAN BECHHOEFER: -- have levels reduced to --

20 MR. FAIRTAIL: No.

21 CHAIRMAN BECHHOEFER: -- some amount.

22 MR. FAIRTAIL: No, we didn't make any commitments  
23 for Yankee at all in that regard.

24 CHAIRMAN BECHHOEFER: Well, I don't mean a  
25 commitment for Yankee; a commitment for the staff to enforce

1 some degree.

2 Okay. Mr. Lovejoy.

3 MR. LOVEJOY: Well, frankly, the region took my  
4 position with regard to radiation levels and specific  
5 radiation issues regarding the plant. I would just like to  
6 add that just by the nature of the dialogue and, I think, a  
7 certain level of confusion which comes up through the  
8 acronyms and the different ways of looking at different  
9 radiation doses and different measuring methodologies, I  
10 would just hope that the board, when it issues a ruling,  
11 perhaps also issue some sort of explanation with regard to  
12 the ruling so that the ruling could be, you know, printed on  
13 the front page of the Greenfield Recorder in plain English  
14 and the average citizen of Franklin County could have some  
15 confidence in what the ruling meant.

16 MS. KATZ: Yeah.

17 MR. LOVEJOY: And I would respectfully request  
18 that.

19 MS. KATZ: Thank you.

20 CHAIRMAN BECHHOEFER: Okay.

21 Mr. Block.

22 MR. BLOCK: Yes. I think that Ms. Katz ably  
23 covered the area that I was going to emphasize about  
24 critical group, and I believe that it's stated in the  
25 contention. I feel fairly strongly that neither of the

1 arguments has really touched this, and that if nothing else,  
2 what you can see is a dispute over this point.

3           Moreover, I wanted to bring to the board's  
4 attention on the issue of the sensitivity of gamma  
5 detection, in NUREG CR5849 at page 5.14 in Table 5.6, the  
6 sensitivity of a scintillation detector that could be used  
7 for field surveys is five times greater than what was noted  
8 by the board. So I would ask you to take a look at 5849 at  
9 the citation I offer and see if, in fact, one microrad per  
10 hour is not, in fact, the correct level of sensitivity that  
11 would apply and, therefore, the determinations could be made  
12 far more finally than was indicated in the earlier  
13 conversation.

14           Thank you.

15           CHAIRMAN BECHHOEFER: I guess we're ready to go on  
16 to the next one.

17           MR. BLOCK: Basis number four for contention A is  
18 that direct gamma exposure rates at one meter above ground  
19 will not protect children and other persons; and in a sense,  
20 this is another aspect of the previously raised point but  
21 coming from a slightly different angle.

22           The staff are arguing that the action plan, which  
23 we don't view as a regulation, says one meter, and therefore  
24 this is protective, but they're really ignoring our basis.

25           Regarding the size differences affecting direct

1 gamma, we again refer back to the publication, the FGR  
2 Number 13 at page 88, which states that limited calculations  
3 indicate that the dose to organs of the body from external  
4 radiation increases with decreasing body size. Two  
5 references are cited in the FGR 13, and this appears to us  
6 to be another material point that's in dispute. We really  
7 do want to see them do their surveys differently.

8 CHAIRMAN BECHHOEFER: Thank you.

9 Mr. Gad.

10 MR. GAD: Your Honors, like A-3, contention A-4 is  
11 a challenge to the way that it -- it is a challenge to the  
12 standard that the Commission set and has previously been  
13 rejected. Like A-3, it is based on the assertion that some  
14 people may receive more than the average, and for that  
15 reason, it is an impermissible challenge.

16 Now, I have to tell you, I warmed to this  
17 contention when I first read it because anyone who has gone  
18 through life my height gets very warm when people start  
19 worrying about the impacts on short people. But the fact of  
20 the matter is that if you're going to talk about a direct  
21 reading of gamma radiation or, for that matter, light  
22 intensity or, for that matter, sound intensity, anything  
23 that dissipates with distance, and you're going to set a  
24 standard for how much is acceptable or for any other  
25 purpose, you have to couple it with a distance. Ten



1     decibels at 50 feet is not the same thing as ten decibels at  
2     20 feet, although it may be the same thing as 30 decibels at  
3     20 feet.

4             The Commission set this standard, and so if you're  
5     going to say, all right, you have to measure it not at one  
6     meter but at a foot, then you're going to have to reduce the  
7     level, the trip level on the meter in order to come out with  
8     the same standard because the Commission set the standard.

9             Now, for 1402 plants, the guidance, NUREG 5849,  
10    which is explicitly referred to in the statement of  
11    considerations, which explains how the Commission set this  
12    standard, you will find the following informative language.  
13    This is page 2-4. I quote: "For open land areas, exposure  
14    rates are measured at one meter above the surface and may be  
15    averaged over 100 square meter areas." You find the same  
16    language at page 4-16 or 4.16 -- I can't remember which.

17            If you treat this as an SDMP plant which used a  
18    direct reading as a criterion, and therefore must have  
19    coupled it with a distance at which the measurement is read,  
20    lo and behold, you find one meter.

21            So whether you approach this from the north or  
22    from the south and whether you approach this with a  
23    particular fondness for contentions that look out for short  
24    people or not, it is still a violation of the Commission's  
25    regulation. Like A-3, it has already been -- of which it is

1 a subset -- it has already been excluded by the Commission.

2 CHAIRMAN BECHHOEFER: Again, I will raise the  
3 point, are these really regulations or anything more than  
4 guidelines?

5 MR. GAD: I'm sorry, Your Honor, I didn't hear the  
6 beginning.

7 CHAIRMAN BECHHOEFER: I say the one question I  
8 have in my mind on a number of these is are these  
9 regulations or are they anything more than guidelines?

10 MR. GAD: I don't know what the --

11 CHAIRMAN BECHHOEFER: And I'm --

12 MR. GAD: Excuse me, Your Honor.

13 CHAIRMAN BECHHOEFER: I'm not sure they are  
14 regulations. If you consider a regulation adopted after  
15 notice and comment and all that kind of stuff, these people  
16 -- this doesn't make it.

17 MR. GAD: I can offer you, Your Honor, only a  
18 couple of observations. Number one, if you go back and you  
19 read how the Commission arrived at 1402, they explain how  
20 they got there, they explained the reports that it was based  
21 upon, they explained, for instance, why their regulation was  
22 intended to be an implementation, as staff counsel said a  
23 minute earlier, an implementation of the 100 millirem for  
24 the max exposed person.

25 But we are doing it in a situation where we don't

1 assume -- in order to get the 100 millirem for the maxed  
2 exposed person, he's got to sit on the fencepost, okay, all  
3 year long. Therefore, he can't be at any other -- he can't  
4 be at the dentist and he can't be down near some other  
5 plant. So that represents his max dose.

6 Now, if that was the target -- make sure that no  
7 one got more than 100 -- but the way that they did it was to  
8 use this average member of the critical group -- it's a  
9 benchmark -- now, the minute you say this is the exposure to  
10 the average member of the critical group, the minute you say  
11 it, you know, that if, in fact, that's what you spit off,  
12 then some people are going to get more and some people are  
13 going to get less.

14 Earlier, it was said that I had conceded that some  
15 people would get more from Yankee. That's not true because  
16 we haven't done the final status survey yet, and in fact  
17 we're going to come in well below the 25. But if you set  
18 the standard at 25 -- that is to say you set it for the  
19 average person -- then the short people are going to walk  
20 through the door easier, okay, and the tall people are going  
21 to have to duck. But we set it at the 25 because that  
22 assures that no one will get the 100.

23 Now, all I can say, Your Honor, is if you go back  
24 and read how 1402 came along, you will see that the concepts  
25 embodied in 5849 were in fact before the Commission when

1 they set that standard. That's what it means.

2 It's also true that 1402 doesn't have a direct  
3 reading, a micro/R per hour criterion. So if you're going  
4 to hold Yankee to one, you have to do it under the SDMP, and  
5 if you're going to hold Yankee or anything else to a direct  
6 reading criterion, you have to specify the distance at which  
7 that reading is measured, and lo and behold, the SDMP  
8 specifies one meter. That's why I say. So the SDMP is a  
9 regulation. It was incorporated by reference into 1401. So  
10 if you look at it --

11 CHAIRMAN BECHHOEFER: Well, I questioned that  
12 earlier. It's incorporated by reference by saying it  
13 doesn't apply, or the 1401 doesn't apply to it, to --

14 MR. GAD: 1401, Your Honor, says -- the Commission  
15 has said it says -- that for plants that are described, all  
16 right, their site release criteria will be the SDMP action  
17 plan and not 1402, which is regarded as a tighter criterion.  
18 There's no third possibility. If Yankee isn't either one of  
19 those, then we have no site release criterion, the hearing  
20 will be significantly shorter.

21 CHAIRMAN BECHHOEFER: No, longer. We'll have to  
22 establish it.

23 [Laughter.]

24 CHAIRMAN BECHHOEFER: It might take us a while.

25 MR. GAD: There is no situation, Your Honor, under

1 which the criterion is whatever the board picks.

2 CHAIRMAN BECHHOEFER: Well, we're acting for the  
3 Commission at this stage.

4 MR. GAD: At this point, that's my answer, but  
5 I've forgotten what the question was.

6 CHAIRMAN BECHHOEFER: That's the best way to leave  
7 it, I think.

8 Ms. Hodgdon.

9 MS. HODGDON: Well, I think we'll just save  
10 people's time by saying that for the same reasons the staff  
11 argued with regard to Basis 3, because Basis 4 seems to be  
12 closely related, one of them was -- well, both of them were  
13 arguments about standards, and this one is an argument about  
14 how to use an instrument, and the standard is articulated in  
15 a number of places, including the SDMP action plan, as one  
16 meter; therefore, however you take that, that's the way it's  
17 done. We think that's a regulation. But even if it  
18 weren't, that's the way it's done, and anybody coming in  
19 with an argument that it should be done some other way would  
20 have to show how that other way worked, and that is well --  
21 that proposition has been addressed in several Commission  
22 decisions about if you don't like this regulation which  
23 calls -- for example, one case says use of the ASME Code --  
24 if you don't like this regulation, then tell me, how else  
25 can I do it?

1           So this instrument wouldn't -- performs best  
2           apparently at a meter, and that's what the regulations all  
3           say. And so for somebody to come in and say that some other  
4           number would be better and therefore they shouldn't do it  
5           this way has just got to be lacking in basis, specificity  
6           and everything else, and beyond which is a quarrel, a  
7           challenge to the regulations. And I wasn't going to say  
8           anything.

9           CHAIRMAN BECHHOEFER: Ms. Katz.

10          MS. KATZ: Well, I mean, what the issue to me is  
11          in this is about the level of contamination in the ground  
12          water, which is an essential issue to the community because  
13          since the groundwater flow throughout the community, there  
14          is the potential for not just Yankee's site, because the  
15          groundwater doesn't end on Yankee's site.

16          CHAIRMAN BECHHOEFER: Wait. Are you on four?  
17          We're still on four.

18          MS. KATZ: I'm sorry. I'm already -- this is in  
19          line with the issues of exposure in terms of protecting  
20          children and women, and we believe that the issue of  
21          understanding the pathways of exposure for children and  
22          women, for the elderly, for the facts of people who live in  
23          this community, have to be taken into account.

24          A lot of people garden. There's a lot of  
25          agricultural work that's done in this community. So the

1 issue of the pathways of exposure need to be relevant to the  
2 community in which Yankee's analysis is taking place. The  
3 issue of using the -- a male who's gardening one percent of  
4 the time is ludicrous for this community. It's not what  
5 happens. And so for this rule and this guidance to have  
6 meaning, it should be relevant to the community in which it  
7 takes place, and people garden a lot here and we live off  
8 the food that we grow a lot.

9 CHAIRMAN BECHHOEFER: Okay.

10 MS. KATZ: And I'm sorry for being on the wrong  
11 page.

12 CHAIRMAN BECHHOEFER: Okay.

13 Mr. Lovejoy.

14 MR. LOVEJOY: I would just renew my plain-English  
15 request once a ruling is handed down. Thank you.

16 MS. KATZ: Good.

17 CHAIRMAN BECHHOEFER: All right.

18 Mr. Block.

19 MR. BLOCK: Yes. Briefly.

20 It seems to me that once again, the issue is  
21 whether regulation that doesn't seem to be discriminatory on  
22 its face may, in fact, be grossly discriminatory in  
23 operation. And if Yankee takes radiation measurements at  
24 one meter in height, we're contending that Yankee needs to  
25 evaluate the likely radiation dose to a child and consider

1 that information in determining the release criteria for the  
2 site.

3 I also wanted to comment on the use of the  
4 averaging over the hundred square meters, and I think that  
5 it's important to note that not only does that encompass  
6 sort of -- or what's been described as the labins around the  
7 living room for one person, but it's also a garden patch,  
8 and that when you consider, you know, multiple people eating  
9 out of that garden, you're talking about increasing the  
10 amount of radiation that people are going to receive.

11 I think, if anything, the problem here is less one  
12 of the scenario approach as a whole, despite the constant  
13 attempts to characterize what we're saying as an attempt to  
14 oppose that basis in regulation, we're saying clearly,  
15 specifically, again and again, it's the way that these  
16 guidances are being applied, and that they could be applied  
17 differently, and were they applied differently, we might not  
18 be sitting here now taking up your time.

19 Thank you.

20 CHAIRMAN BECHHOEFER: Okay. Mr. Block, I guess  
21 you can continue on five.

22 MR. BLOCK: Five is our basis in support of the  
23 original basis A about lack of adequacy stating that the  
24 on-site subsurface contamination has not been categorized.  
25 The staff seem to ignore this by stating that it depends on



1 an internal Yankee memo, and, you know, so. But the numbers  
2 also appear at table 2.3 in the license termination plan,  
3 and maybe that will help them feel a little better about  
4 what we're saying.

5 The staff also argue that Yankee is cognizant of  
6 contamination below 15 centimeters, and has stated, quote,  
7 that it will perform site remediation or further  
8 investigation of those areas. That's fine. Our contention  
9 should be ignored based on some promise, and I certainly  
10 don't agree with that. I think that the whole issue here  
11 isn't whatever kind of understandings may be arrived at  
12 between the staff and the licensee, but rather what is laid  
13 out concretely.

14 So I would say that, you know, when we look at  
15 this plan as a whole, we say the plan doesn't rise to the  
16 level of a contention. That's the problem we have, and I  
17 think that's what Mr. Lovejoy is addressing from a broad  
18 public point of view.

19 CHAIRMAN BECHHOEFER: Mr. Block, would you be  
20 satisfied if the contention were worded as stated in the  
21 applicant's response at page 10?

22 MR. BLOCK: If I might take a moment to review  
23 that, Your Honor.

24 [Pause.]

25 MR. BLOCK: Judge, I guess we feel that it's a bit

1 narrower than what we were saying, but that I'm inclined to  
2 say yes, you know. As I said, there are some points I would  
3 concede to Mr. Gad, and I would be inclined to say yes on  
4 this if that's what suits the board, you know, in terms of  
5 approaching what we're saying. However, we felt that we  
6 were trying to cover a bit more ground with the way that we  
7 put it, or should I say a bit more subsurface.

8 CHAIRMAN BECHHOEFER: Well, when we get to the  
9 contentions on cost, we'll also maybe consider what you had  
10 in here, too.

11 MR. BLOCK: Okay.

12 CHAIRMAN BECHHOEFER: If we narrow the contention  
13 to as Mr Gad or Dignan has set forth, and Mr. Gad, I take it  
14 you would be satisfied that this -- if worded as on page 10  
15 of your response, and if the cost aspects were at least not  
16 included here, you would consider this a valid contention.

17 MR. GAD: Let me parse that a couple of ways, Your  
18 Honor. The cost part of it is clearly out.

19 CHAIRMAN BECHHOEFER: Well, it's out here. When  
20 we get to cost, we may or may not allow a cost contention  
21 in.

22 MR. GAD: Right. I have to tell you that  
23 interpreting contention A.5 was more difficult than the rest  
24 because of its failure to meet the pleading specificity  
25 requirements.

1           One way to have interpreted it would have been to  
2     assert that the plan doesn't call for that inventory of  
3     subsurface radionuclides that are plant related and  
4     contribute to the TEDE that 5082 requires.

5           Now, on its fact, that would be an admissible  
6     contention as we framed it there. The problem is that as  
7     the staff points out, there is no basis for such a  
8     contention because the plan does not say, as you would have  
9     to assert in order to admit this contention, the plan does  
10    not say we're going this far and no further, and indeed, the  
11    plan commits to, putting aside whether or not it is obliged  
12    as an SDMP plant to do so, the plant commits to the TEDE  
13    approach, and in order to run the TEDE dose model, okay, you  
14    need to take into account those subsurface -- those  
15    radionuclides residing subsurface that are plant related and  
16    that will contribute to the TEDE in order to run the dose  
17    model.

18           So yes, that would be an admissible contention in  
19    a case in which you could conclude that there was a basis  
20    for it -- i.e., that the plan was deficient because it said,  
21    we're going to stop and go no further. That really isn't  
22    this case.

23           Another way to interpret this is as a cost  
24    contention, because after all, the operative statement  
25    starts out by saying, this -- refers to everything else

1 above -- this means that Yankee has never determined the  
2 full extent of the soil contamination on site and therefore  
3 cannot accurately determine the full costs of remediating  
4 the site. That would be excludable.

5 Frankly, the third way to interpret this is as  
6 another not-done-yet contention, because the data that they  
7 point to and report is, of course, in-progress data. The  
8 TEDEs have not been run for any survey units that are  
9 affected by subsurface contaminants. So I actually don't  
10 think the contention should be admitted because I do not  
11 think that the basis for it required by 2714 has been laid.  
12 If it were to be admitted, it should be admitted the way we  
13 redrafted it.

14 CHAIRMAN BECHHOEFER: Well, does the fact that Dr.  
15 Resnikoff has supported this wording under oath, I guess, as  
16 I remember, is that expert opinion saying that it should be  
17 done this way?

18 MR. GAD: No. Dr. Resnikoff has not testified  
19 under oath that: I have read the plan and these words --

20 CHAIRMAN BECHHOEFER: Yes, he has.

21 MR. GAD: There wasn't a period there, Your Honor,  
22 it was a comma.

23 CHAIRMAN BECHHOEFER: Oh, I'm sorry.

24 MR. GAD: He has not testified under oath that: I  
25 have read the plan and the plan shows me right here that

1 they do not intend to sample for subsurface contaminants  
2 below a certain level. Dr. Resnikoff's affidavit says: I  
3 read their contentions and I like them, and I swear to it.  
4 No, that does not supply basis.

5 CHAIRMAN BECHHOEFER: Okay. Do you have further  
6 comments?

7 MR. GAD: No, I'm just looking for a signal to sit  
8 down.

9 CHAIRMAN BECHHOEFER: Okay.

10 Ms. Hodgdon?

11 [Pause.]

12 DR. ELLEMAN: Mr. Gad, could I ask a question?  
13 I'm sitting here pondering all that I have heard here  
14 recently. On this item of subsurface contamination, do you  
15 feel the site termination plan specifies what is to be done  
16 in this area of measuring for subsurface contamination?

17 MR. GAD: It depends on the level of detail and  
18 degree and prescription that you require, because by  
19 definition, you're chasing something.

20 The plan says that we are going to calculate the  
21 1402 TEDE per 5849 and the dose model. Now, the difference  
22 between SDMP and 1402 is that we have to do it that way, and  
23 the TEDE includes all pathways, including groundwater,  
24 including agricultural, and not limited to surface shine.  
25 So therefore, you have to know what the subsurface

1 contribution is, if any.

2 Now, in the ordinary case, you don't expect to  
3 find much. In the extraordinary case, the unusual case,  
4 such as the ion pit, all right, then there may very well be  
5 some. So what you do is you start sampling until you have  
6 satisfied yourself that you know what the array is, both  
7 across the radioisotopes and in terms of distribution in the  
8 soil. It doesn't necessarily require that you go to China,  
9 that you can then run a dose model. And yes, that's what  
10 the plan says it's going to do. Now, exactly how far are we  
11 going to go? Don't know until we start digging. How many  
12 places are we going to look? That's reasonably well set out  
13 because you start with a historical basis, but it is always  
14 affected by the surface scans, the screens.

15 CHAIRMAN BECHHOEFER: So I can read the site  
16 termination plan and infer from it that a certain number of  
17 subsurface measurements are going to be taken -- let's call  
18 them X -- unknown, and that if they yield a certain result,  
19 an additional number of Y subsurface measurements will be  
20 taken? Is that inherent in the site termination plan?

21 MR. GAD: If you read the plan with the  
22 understanding of the target that it is required to  
23 demonstrate satisfaction with -- i.e., the TEDE requirement  
24 as described by the Commission in promulgating 1402, and the  
25 documents that the Commission relied upon and referred to

1 when they created that standard, then I am told that if you  
2 speak the language of that field, yes, that is necessarily  
3 implied because there ain't no other way to do it.

4 CHAIRMAN BECHHOEFER: Yes, I would agree.

5 MR. GAD: You know, I mean, with all due respect,  
6 and I don't mean this to come out flippantly, but there are  
7 some things that don't work in plain English.

8 CHAIRMAN BECHHOEFER: I guess what I'm sort of  
9 groping for here is, is there some reason that the licensee  
10 didn't state what the X measurements and the following Y  
11 measurements would be --

12 MR. GAD: You can't know.

13 CHAIRMAN BECHHOEFER: -- given certain --

14 MR. GAD: You can't know in advance, Your Honor,  
15 because once again, you have to know what your array is  
16 across the radioisotopes. There comes a point at which some  
17 radioisotopes just don't make any difference in the TEDE  
18 calculation, all right? They drop out. They're dominated  
19 by other things.

20 Likewise, it depends on what your vertical array  
21 is as you go down in the soil because at a certain point in  
22 time, then you've eliminated virtually all pathways, perhaps  
23 all pathways save one, and that has now been bounded by  
24 other isotopes in the groundwater.

25 So what you have to do is to satisfy yourself that

1 you have calculated this TEDE requirement. That is not the  
2 same thing as saying that you have to have catalogued every  
3 item between here and China.

4 DR. MURPHY: Can I follow up on that?

5 MR. GAD: Yes, Your Honor.

6 DR. MURPHY: What I hear you saying is a -- what  
7 sounds to me like a reiteration of what's in NUREG 5849.

8 MR. GAD: Yes.

9 DR. MURPHY: I mean, that's basically what 5849  
10 would have you do to meet the staff's requirements for a  
11 final site survey.

12 MR. GAD: And that's why I think that it is  
13 implicit if not explicit in the plan itself, because the  
14 technical aspiration is to describe this TEDE dose using a  
15 dose model, and you can't do it otherwise than this way as  
16 5849 described because you won't have the input data.

17 DR. MURPHY: I guess what I'm getting to is it's  
18 not -- I don't remember or I don't recall how firmly you've  
19 committed to using 5849.

20 MR. GAD: That -- Your Honor -- well, so far as  
21 we're aware, there's no other way to come up with a TEDE in  
22 1402 terms than to do it the way the Commission said to do  
23 it. And we're not -- we don't intend to reinvent the wheel  
24 here.

25 DR. MURPHY: Okay.



1 MR. GAD: We do regard it as a voluntary  
2 undertaking, but having undertaken to do it, we're going to  
3 do it. May prove to regret that, but that's the current --  
4 DR. MURPHY: What you're saying is you need to do it in  
5 order to get from A to B.

6 MR. GAD: Exactly right, Your Honor.

7 DR. MURPHY: Okay. Okay.

8 CHAIRMAN BECHHOEFER: Ms. Hodgdon.

9 MS. HODGDON: Yes. I believe the staff said in  
10 its response that they -- the staff cited to the final  
11 status survey plan Rev. O at A.30 where it said that surface  
12 soil grab samples will generally be collected to a depth of  
13 15 centimeters at discrete locations and at frequencies  
14 which are based on the classification of the survey unit,  
15 and then it says, which is -- this is the -- either we  
16 relied on this or a different statement somewhere else in  
17 the document -- sampling at greater depths will be done in  
18 areas where site characterization or other information  
19 indicates potential contamination at depths greater than 15  
20 centimeters, and that takes you back to that table which I  
21 think is 2.3, Table 2.3, which gives you that contamination  
22 at greater depth.

23 So although that statement is somewhat cryptic,  
24 what the staff took that to mean was that it was Yankee's  
25 intention to do it according to those documents that we've

1 just talked about, 5849 and together with the other  
2 documents that implement that.

3 In other words, I think that staff understood it  
4 because the staff knows that there isn't any other way to do  
5 it and that it has to be done. And so depending on what you  
6 think about this contention that they haven't done it yet,  
7 that's true, they haven't done it yet, or -- but with regard  
8 to the contention, if you read, that they don't have any  
9 intention to do it, well obviously they have an intention to  
10 do it because they've so stated, and they have to do it in  
11 order to get there.

12 Another comment that we had was with regard to  
13 expert opinion. There's a recent case, Private Fuel  
14 Storage, LBP 987, commenting -- that's 47 NRC at 142; the  
15 citation is to page 180 -- where it says that an expert  
16 opinion that merely states a conclusion without providing a  
17 reasoned basis or explanation for that conclusion is  
18 inadequate because it deprives the board of the ability to  
19 make the necessary reflective assessment of the opinion as  
20 it is alleged to provide a basis for the contention. And so  
21 it was our feeling that Dr. Resnikoff's expertise did not  
22 directly support the basis of this contention or, indeed, of  
23 any other of -- any CMP's contentions, and that therefore,  
24 that expert opinion -- it just doesn't go to the basis of  
25 the contention. It's not useful in making a determination

1 regarding the admissibility of the contentions.

2 Thank you.

3 CHAIRMAN BECHHOEFER: Ms. Katz.

4 MS. KATZ: Well, there are issues that New England  
5 Coalition brings up that are related to our concerns, and  
6 I'll try to address some of them.

7 I mean, as we're elucidating, as you judges are  
8 elucidating what Yankee is basing the way it's doing its  
9 work on has been a mystery to us, and in one way, the  
10 clarification of asking questions opens some of it up. But  
11 the LTP has not been clear. And, you know, Mr. Gad says  
12 that in an ordinary case, you're not expected to find  
13 anything, but, you know, in a GAO report issued May '89,  
14 NRC's decommissioning procedures and criteria need to be  
15 strengthened. It states that the monitoring of buried waste  
16 needs to be improved. Until January of '81, NRC allowed all  
17 licensees to bury radioactive waste on site without prior  
18 NRC approval, and that of the licensees that the GAO  
19 examined, all had limited documentation of waste burial with  
20 real gaps by the licensee and the regulator.

21 Groundwater contamination -- generally the NRC  
22 --and that there was groundwater contamination generally.  
23 The NRC did not require licensees to monitor either soil or  
24 groundwater contamination from the buried waste, and the  
25 requirements the NRC did set -- and this has to do with the

1 level of the contamination -- is that the total quantity of  
2 each burial did not exceed 1,000 times the amount specified  
3 in the regs for various radioactive materials.

4 The waste was buried four feet or more below the  
5 surface -- four feet or more below the surface -- and  
6 burials were at least six feet apart and the number of  
7 burials did not exceed twelve in any one year, and that no  
8 burial records were required to provide to the regulator.  
9 Also, the GAO review found that the data was at best  
10 incomplete.

11 So that the issue in terms of an ordinary case is  
12 that the ordinary case, according to the GAO, is that, in  
13 fact, there may be waste buried on the site and that there  
14 has to be some commitment and some way that is included in  
15 the LTP that there will be an investigation of buried waste,  
16 so that we can have some affirmation and surety that the  
17 site is cleaned up, because what happens is that it appears  
18 to be cleaned up close to the surface, and then it turns out  
19 later that there is waste buried underneath which it seems  
20 was routinely done by generators, that this does not meet a  
21 standard for a community, and the idea that they're going to  
22 -- the promise that they'll complete it is not enough of a  
23 guarantee for us.

24 We think that there has to be some commitment and  
25 some methodology laid out about the way they would go about

1 looking for any waste that may have been buried that's  
2 undocumented. And they acknowledge even some of the waste  
3 was undocumented in the LTP itself, that they had buried  
4 some waste and that they didn't have the documents. Well,  
5 if they found some waste that was buried, then there's a  
6 potential and that is evidence that there could be more and  
7 that it needs to be dealt with in a way that we have surety  
8 that they're going to really clean it up.

9 CHAIRMAN BECHHOEFER: Mr. Lovejoy.

10 MR. LOVEJOY: I would just say 5849, SDMP, 1402,  
11 125, 15-5, now we are at TEDEs. And I would just hope that,  
12 you know, the Commission could adopt the tightest, safest  
13 criteria they possibly can, and make it explainable so that  
14 there isn't a great deal of confusion in the general public.  
15 Because what we are really doing here is, at some time in  
16 the future, Yankee is going to walk away, and I don't mean  
17 that in an irresponsible way, Yankee is going to release,  
18 abandon, walk away from a nuclear site, and the citizens  
19 simply want to have the most confidence they can that when  
20 that occurs, the safest, tightest criteria have been applied  
21 to that release. And that is, in plain English, what we  
22 hope to see from this process.

23 MR. BLOCK: A couple issues that have been raised,  
24 I would just like to touch on again, the issue of Dr.  
25 Resnikoff's participation in this process and what exactly

1 his declaration means. I think that his declaration was  
2 pretty clear in stating that he assisted in the preparation  
3 of these, he helped to write them. He assisted in their  
4 preparation, reviewed them, and he certifies under penalty  
5 of perjury that the technical facts presented in the  
6 contentions are true and correct to the best of his  
7 knowledge, and the conclusions drawn from them are based on  
8 his best professional judgment.

9 As you can see, when I have been asked to explain  
10 things, I have had to turn to him to explain them to me.  
11 There are things that I have put forward that I confess I  
12 don't completely understand. I have done the best that I  
13 can under the circumstances.

14 I also made an effort when I received the staff's  
15 pleading to take a look at the private fuel storage case,  
16 and I would urge the board to do so. It is an enormous,  
17 rambling piece of work. I think that the panel in that  
18 instance was under a tremendous amount of pressure based on  
19 the amount of material they had to review, and the timeframe  
20 that they had set for themselves, and that I trust that if  
21 the board takes some time to look at it, you will see that  
22 many of the opinions expressed therein lack basis and  
23 justification on the part of the panel. And this is  
24 unfortunate, but that is just how that particular piece of  
25 work is.

1 I think it remains the case that this is not a  
2 CLI, it is another board opinion, and that this panel has to  
3 strike out, within the territory it is in, to make a  
4 decision. It can look to those other board decisions for  
5 some guidance or direction, but I don't believe that it is a  
6 definitive pronouncement, and I would urge the board simply  
7 to take a look at it, and to take with a grain of salt the  
8 applicability here.

9 I have brought Dr. Resnikoff here at our expense.  
10 He is available if people want to question him. I also note  
11 that neither the staff nor the licensee chose to get any  
12 kind of expert assistance with their filings in this matter,  
13 and that since we have done that, it is seems to me somewhat  
14 disingenuous that he be discredited merely on the basis of  
15 the fact that he didn't provide you with a detailed analysis  
16 in his declaration in support of every single point that is  
17 there. He was there, he helped to write it. In fact, in  
18 some instances, I wish he hadn't been helping to write it,  
19 but so much for it, and that is how it is. And that is what  
20 I wanted the board to know.

21 DR. ELLEMAN: Mr. Block, may I ask you a question  
22 on this issue, please?

23 MR. BLOCK: Sure.

24 DR. ELLEMAN: Mr. Gad has said, I believe, that  
25 the licensee will make whatever subsurface measurements are

1 required to input to the model to calculate dose, and that  
2 they will make whatever remediation is needed to make sure  
3 that dose meets the defined criteria that we have been  
4 discussing.

5 And, Mr. Gad, I am modifying your words perhaps,  
6 but I am hoping I am capturing the sense of what you have  
7 said.

8 MR. GAD: I am still nodding, Your Honor.

9 DR. ELLEMAN: Okay. Now, Mr. Block, what, in  
10 addition to that, would you need to satisfy you that this  
11 site is going to be cleaned up in a satisfactory manner?

12 MR. BLOCK: I want to consult with Dr. Resnikoff,  
13 if I may, just a moment.

14 [Pause.]

15 MR. BLOCK: I hope I can put this in the words he  
16 gave me. The question for us is the adequacy of the  
17 description that is there, and are they going to walk the  
18 entire site taking, you know, geiger counter readings all  
19 the way across the site at every instance? Are they going  
20 to be digging up, looking for buried material there? Are  
21 they going to be looking for alpha emitters at these points,  
22 when they are in fact doing gamma surveys?

23 It would seem to us that there is a lack of  
24 specificity and that that really is the problem, that what  
25 is missing is the substance. It is not enough to just say



1 we are going to try to do it the way it says in the  
2 guideline. More is needed in order to understand exactly  
3 how they are going to put this thing into process. And it  
4 seems to me that that lack is a material point in dispute.  
5 Mr. Gad says it is there, we say it ain't.

6 Does that answer your question, Judge?

7 DR. ELLEMAN: I think so, yes. Thank you.

8 CHAIRMAN BECHHOEFER: Mr. Block, on this last  
9 contention, you heard both Mr. Gad and Ms. Hodgdon mention  
10 that they didn't believe an adequate basis had been set  
11 forth. The way I read the contention, you have cited -- you  
12 have not only relied on Dr. Resnikoff, but you have cited  
13 this table, too. Is there anything else that perhaps these  
14 articles set forth in Footnote 13? Is that what you intend  
15 to constitute as the basis for this contention?

16 MR. BLOCK: If I may have a moment?

17 CHAIRMAN BECHHOEFER: Strike Footnote 13, that  
18 goes to the other contention.

19 MR. BLOCK: Right.

20 [Pause.]

21 MR. BLOCK: Dr. Resnikoff advises that only the  
22 documents that are cited are the documents that we are  
23 relying on, and that, in his view, the core of what we are  
24 looking for are going over the site with a geiger counter  
25 and taking core samples down to the aquifer, you know, past

1 whatever point there is contamination, till they stop  
2 finding contamination in their core samples. And that is  
3 really what we are looking for, and I believe that that is  
4 covered in the citations that we have given in Footnotes 14,  
5 15 and 16, I believe. Thank you.

6 CHAIRMAN BECHHOEFER: Okay. Let's go on to Number  
7 6, A.6.

8 MR. BLOCK: Basis Number 6 is that Yankee has not  
9 detected all alpha emitters likely to be present at the  
10 site. And in this we are arguing that plutonium-241 in  
11 piping which has been cut up during the decommissioning has  
12 been detected and, therefore, Yankee must sample at least  
13 for that. If 241 exists in piping, then other isotopes are  
14 likely, the Americium-241, and although plutonium-241 is a  
15 beta emitter, but other plutonium isotopes and Americium-241  
16 are alpha emitters, the staff argue that we have not shown  
17 that plutonium-241 exists anywhere else on the site. Well,  
18 since we are not able to go out there and take some samples,  
19 I am not sure exactly what they would like from us.

20 The basic point is that we have stated a  
21 contention and the basis for the contention, and that is  
22 really all we have to do, and that is how I would answer the  
23 staff's criticism. Thank you.

24 CHAIRMAN BECHHOEFER: Mr. Gad.

25 MR. GAD: Your Honors, once again, this A.6

1 required more than the average amount of interpretation as  
2 to exactly what it was trying to put forth. In the one  
3 sense, it is another one of these "not done yet"  
4 contentions. After all, the statement of the contention,  
5 and that is what we are adjudicating here, the statement of  
6 the contention is, and I quote, "Yankee has not yet," -- and  
7 I am sorry -- "Yankee has not detected" -- past sense --  
8 past tense -- "all alpha emitters likely to be present at  
9 the Rowe site."

10 Well, that is certainly perfectly true, at least  
11 in the sense that we haven't thrown up our hands said we are  
12 done, but it is also entirely inadmissible. And it avoids  
13 the real question. The real question is, is there a  
14 deficiency in the plan?

15 Now, if the contention were that Yankee's plan  
16 does not call for surveying and assessing all alpha emitters  
17 that are reasonable to look for here, then that would be a  
18 valid contention in that it would address the plan, but it  
19 has the problem of lacking -- of what is its basis for  
20 assuming that you are going to find the two in question, all  
21 right, plutonium isotopes, and Americium-241 at this site.

22 Now, normally, these materials are not ejected  
23 from the primary system, if they exist there at all. There  
24 is no means by which they would end up on the ground. They  
25 don't go up the off-gas stack. I mean they can't make it up

1 the off-gas stack. And so you say to yourself, okay, sure,  
2 do you want me to go look for that? Why should I go look  
3 for it? And the answer is because someone found trace  
4 elements of plutonium-241, not in piping, but in the RPV,  
5 which was shipped off-site, intact, and which was an  
6 entirely closed system.

7 And so, you know, you would have, if you got away  
8 from the "not done yet" part, all right, you might have a  
9 valid contention. If so, you would have to state is as we  
10 suggested in the rewrite. But Your Honors will have to  
11 satisfy yourself that what NECNP points to is a sufficient  
12 basis for thinking that there is any point to the effort in  
13 the first place.

14 CHAIRMAN BECHHOEFER: Now, they seem to have  
15 pointed to this one, just this one article.

16 MR. GAD: I'm sorry, Your Honor?

17 CHAIRMAN BECHHOEFER: I said this one article  
18 seems to be their basis.

19 MR. GAD: That is right. Is this the reactor  
20 pressure --

21 CHAIRMAN BECHHOEFER: And which they have cited.

22 MR. GAD: Right. This is the reactor pressure  
23 vessel. This is the thing that held the fuel during  
24 criticality, okay, in a pressurized reactor. And they found  
25 trace elements of, I believe it was plutonium-241 when the

1 thing got down to wherever its final resting place was. I  
2 am not sure where it was. Your Honor.

3 DR. ELLEMAN: Mr. Gad, does the plan anywhere  
4 address the detection of alpha-emitting isotopes in the  
5 remediation site?

6 MR. GAD: We are going to get back to this -- What  
7 degree of detail and what degree of specificity do you  
8 require? As I said before, this plan aspires, sets for  
9 itself the goal of calculating the TEDEs per 5849. That is  
10 not an implication, it says so. And at least in theory, any  
11 isotope might contribute to that TEDE. And if you find  
12 circumstances that say, okay, I have a situation here where  
13 I have a reasonable basis for believing that there is  
14 something out there, and it would contribute, then you have  
15 to find it, and you have to evaluate it, that is to say,  
16 quantify it and then plug it into the equation.

17 That is not the same thing, and I don't want to be  
18 -- I don't want to mislead anybody, or be misunderstood.  
19 That is not the same thing of saying I have to evaluate  
20 every atom that is all the way down to China, on the site  
21 and all the way down to China, because we happen to know  
22 what the predominant isotopes are, and we happen to know  
23 what the predominant contributions to TEDE is. And so at  
24 some point you reach what might be called convergence, all  
25 right. I have now figured out what the 99 percent value is.

1 I could keep on doing this until long after Mr. Dignan  
2 retires, but I am not going to get a higher number, so I  
3 quit.

4 DR. ELLEMAN: Well, sir, everything you say is  
5 true. But the detection of alpha-emitting isotopes is a  
6 rather arcane science in itself, it is not easy to do. And  
7 the alpha-emitting isotopes could indeed potentially  
8 contribute to internal dose, and to not have the subject of  
9 alpha-emitting isotopes addressed in any way that I can  
10 detect in the plan would appear to me to be an omission of  
11 something that is potentially important.

12 MR. GAD: All right. The best I can offer Your  
13 Honor at this point is, and, of course, you have a distinct  
14 advantage over me, because you can actually read these  
15 things, all right, but if you read the sections on what the  
16 plan calls "hard to detect" --

17 DR. ELLEMAN: You are right, there is a such a  
18 section and it does not mention alpha particles in any way.

19 MR. GAD: I believe -- I may be going out on a  
20 limb, but I believe that "hard to detect" includes, is not  
21 limited to, but includes some of the transuranic alpha  
22 emitters.

23 DR. ELLEMAN: Well, if you read it, it speaks to  
24 nickel-63, it speaks to other difficult to determine  
25 isotopes.

1 MR. GAD: I think the application is generic, Your  
2 Honor. Apart from that, once again, don't ask me because I  
3 am not an expert and you can read it better than I can.

4 DR. ELLEMAN: All right, sir.

5 CHAIRMAN BECHHOEFER: Okay. Ms. Hodgdon.

6 MS. HODGDON: Yes. I think the statement of the  
7 contention is somewhat confusing in that it says, "Yankee  
8 has not detected all alpha emitters likely to present  
9 on-site." I think they mean that they don't have any plans  
10 for looking for them, because, obviously, you can't detect  
11 things are likely to be present. They have be present in  
12 order for you to detect them.

13 So, going beyond that, you get to the basis -- and  
14 the staff did not say, as Mr. Block characterized the  
15 staff's response as saying, that we didn't think you had to  
16 look anywhere else on the site, because, actually, this  
17 plutonium-241 wasn't on the site, it was -- this paper is  
18 about the plutonium-241 contamination found by Hake in the  
19 head, the 79,000 pound head, when it arrived at Hake. The  
20 point they made was that -- I believe they said there was  
21 seven-tenths of a curie contamination, of which largely it  
22 was cobalt-60, but 3 percent of it was plutonium-241.

23 And that, the allegation -- I mean the basis that  
24 is offered here is that this was found in pipes. And so  
25 this is not a pipe, it is the head. And so we thought that

1 they should provide some basis for thinking that there might  
2 be plutonium-241 on the site because it had been found in  
3 the head. And, of course, there isn't any basis for  
4 thinking that because it never went anywhere. And the way  
5 they know it never went anywhere, it was never found  
6 anyplace else. And besides which, it wouldn't be in its  
7 nature to migrate anyway, it is a very heavy substance,  
8 whatever I am going to call it.

9 CHAIRMAN BECHHOEFER: Isn't that a question of the  
10 merits?

11 MS. HODGDON: Let me finish my sentence.

12 CHAIRMAN BECHHOEFER: Isn't that a question of the  
13 merits, though?

14 MS. HODGDON: No. I am saying that there is no  
15 basis for their saying, that they ought to -- that this is a  
16 basis for doing the thing they say ought to be done.

17 Judge Elleman made a much better point when he  
18 said -- Don't you have to do that anyway? And why didn't  
19 you say so? Is there something in your document that says  
20 that you are going to do that anyway, look for alpha  
21 emitters in these hard to detect things? And so that is not  
22 the basis on which we attack this contention.

23 Our attack on this contention, or our disagreement  
24 with it was based on the fact that there was absolutely no  
25 basis offered here because they said, they characterized



1 this document, which presumably they read, as saying that  
2 there was plutonium-241 in the pipes at Yankee, and I am  
3 saying that it was in the reactor head, not at Yankee, but  
4 it was at Hake, and it subsequently went to Utah, where it  
5 is now. I believe it went to Envirocare. And, actually,  
6 what this article was about, was about how they cleaned it  
7 up and it cost them only \$200,000 to do it the way they did,  
8 and they might have done more. In any event, it is not  
9 about the pipes.

10 And, so, if you thought it was in pipes, it wasn't  
11 in the pipes, it was in the head. So that was the point we  
12 were trying to make. And so, the characterization, we  
13 didn't think you ought to look anywhere else on-site is not  
14 true, this wasn't on-site.

15 DR. ELLEMAN: Can I ask a question?

16 CHAIRMAN BECHHOEFER: Yes.

17 DR. ELLEMAN: I believe you said, Ms. Hodgdon,  
18 that no plutonium was found anywhere else on the site.

19 MS. HODGDON: I said no plutonium was found in  
20 relation to this plutonium-241 in the head. That -- Mr.  
21 Fairtile would maybe have to tell you what things are  
22 attached there and where they went and so forth, which I  
23 don't know, but I know that no plutonium was found in them.

24 DR. ELLEMAN: Okay. So that implies there was a  
25 program to look for it and to survey for the plutonium?

1 MS. HODGDON: Well, there was with regard to the  
2 decontamination during the decommissioning plan, the  
3 dismantlement and the sending of stuff off-site. And, so, I  
4 don't know that no plutonium was found anywhere else, but I  
5 know that no plutonium was found in relation to that  
6 plutonium, that plutonium there in the head, which was the  
7 plutonium that NECNP was relying on for their statement that  
8 it was found in pipes. Do you follow me?

9 DR. ELLEMAN: I guess. What I was trying to  
10 confirm is whether they had ever looked for plutonium  
11 elsewhere in the facility or on components and materials.

12 MS. HODGDON: I wouldn't want to testify to that,  
13 but I believe that they were required to with regard to what  
14 went off-site. And you should ask the licensee that because  
15 -- or Mr. Fairtile probably knows. But I don't specifically  
16 know. I know -- all I know is this one narrow issue with  
17 regard to the head.

18 DR. MURPHY: Mr. Gad, do you want to comment on  
19 that?

20 MR. GAD: I was -- yes. One hates to pop up  
21 uninvited, but I just wanted to clarify something.

22 CHAIRMAN BECHHOEFER: Well, you were just.

23 MR. GAD: Say again, Your Honor?

24 CHAIRMAN BECHHOEFER: You were just invited.

25 MR. GAD: Oh, thank you. Perhaps to lunch maybe.

1 What counsel for the staff is talking about is that, with  
2 respect to the piping, the downstream piping from the RPV  
3 head, after the discovery of this, they went back and looked  
4 at the records. Now, this piping, all right, primary side  
5 piping is disposed of under Part 61. You do have to do an  
6 evaluation of everything that goes out that way. And so  
7 someone went back to see was there any plutonium that was  
8 detected in what amounts to downstream piping from the RPV  
9 where the finding was made at Hake. Not the same thing as  
10 saying that anyone went out all over the site and took, you  
11 know, a plutonium detector and walked the site, not the same  
12 thing.

13 CHAIRMAN BECHHOEFER: Ms. Katz.

14 MS. KATZ: We raised the issue of what Hake found  
15 as well, and one of the things I wanted to say is that Hake  
16 doesn't talk about the piping, that is true, but what they  
17 acknowledge is they were surprising at how much plutonium  
18 was in the head, that the 3 percent was a lot more than they  
19 expected to find. And what it raised for us was the  
20 question of whether there, in fact, is plutonium in  
21 particles that is on the site, and we were concerned whether  
22 that had been tested, and from reading -- tested for -- and  
23 from reading the LTP it is not clear that that has taken  
24 place.

25 I mean one of the things happened during the

1 underwater cutting of the million curie baffle during that  
2 whole experimental process was the release of hot particles  
3 throughout the site, and it is in Yankee's own records, and  
4 we got it through discovery through the last process. And,  
5 in fact, there were 114 worker contaminations and 41 of them  
6 were facial, and this was a very dirty process that went on  
7 with this cutting. And part of what may have been released,  
8 and what we are concerned about, is what may have been  
9 migrated throughout the site, which, for us, was not just in  
10 terms of the plutonium, but also in terms of other  
11 particles, that Yankee might, in fact, average out instead  
12 of cleaning up.

13 And these particles are a serious concern to us in  
14 terms of potentially contaminating members of the public and  
15 our community are going on that site and being exposed to  
16 it, or picking it up in your clothes and taking it home.  
17 This is a real thing that we believe they need to check for.

18 So the issue of bringing up Hake, though, was  
19 about the surprise at how much plutonium there was in the  
20 head, not that they were cutting up the head on the site.

21 CHAIRMAN BECHHOEFER: Thank you. Mr. Lovejoy.

22 MR. LOVEJOY: For the Regional Government, I would  
23 just like the record to reflect that I am sitting here  
24 scratching my head in great awe and wonderment at all these  
25 details, and, hopefully, a rendering in plain English in the

1 decision might assist the general public. Thank you.

2 CHAIRMAN BECHHOEFER: Thank you. Mr. Block.

3 MR. BLOCK: Thank you. Our understanding of the  
4 article, Hake was surprised when they discovered the  
5 plutonium. They ordered a second survey to make sure that  
6 what they were finding, in fact, was there. If it is in the  
7 piping, it is in the piping, and downstream, upstream, you  
8 know, these are places where one wants to look.

9 The question that we are raising with our  
10 contention, not, I emphasize, the contention as it has been  
11 rewritten by Mr. Gad, but the basis in support of the  
12 contention that they haven't adequately characterized that  
13 site, that basis going to the fact that the plan does not  
14 indicate how they will measure alpha, and that is what the  
15 purpose of Number 6, is to support the broader contention  
16 with the basis and to refer you to an article that, if you  
17 read it, raises reasonable inferences. I wouldn't have  
18 thought that one of them might be, as I think the staff  
19 seems to be suggesting, that somehow the plutonium got on  
20 this vessel on its way to Hake, you know. I mean to me that  
21 really does defy credibility.

22 Finally, Dr. Resnikoff offers an additional cite,  
23 he can't remember the title or the number, but it is a NUREG  
24 written in 1986. One of the authors is Ostunali, and in  
25 there they describe how plutonium will be found in piping in

1 the decommissioning process.

2 DR. MURPHY: Would you provide us with the full  
3 cite of that?

4 MR. BLOCK: Yes, we will. We will provide the  
5 staff, the licensee and anyone else who wants it, in  
6 addition to the board members, with that site. Thank you.

7 CHAIRMAN BECHHOEFER: I think at this stage we  
8 probably should break for lunch, come back starting with  
9 A.7. I don't know the restaurant situation around here,  
10 where there are places to eat. We can go off the record for  
11 this.

12 [Whereupon, at 12:52 p.m., the prehearing  
13 conference was recessed, to reconvene at 2:20 p.m., this  
14 same day.]

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## A F T E R N O O N   S E S S I O N

[2:20 p.m]

CHAIRMAN BECHHOEFER: Back on the record. Before starting, we would like to note that we will have to conclude by 5 o'clock this afternoon because the limited appearance session will start at 7 o'clock and we need a little break for dinner so we have limited appearances scheduled from 7:00 to 9:30, again in this room.

I noticed about 15 people have signed up and we had a couple of write-ins before that so there will be a few people and others will be accepted, but we will hear the people who have signed up first.

So now we are going back to Basis Number 7 of A.7, I guess. Mr. Block?

MR. BLOCK: Thank you, Your Honor.

Basis Number 7 for Contention A, that the License Termination Plan doesn't adequately characterize the site, is that Yankee's designation of affected versus non-affected areas of the site is arbitrary. Here we cited an inspection report showing that Yankee reclassified an area from affected to unaffected without any basis. We call that arbitrary. One sample in an allegedly unaffected area had high Cobalt-60 readings. No one stated something was wrong with the sample and a high reading may indicate high subsurface contamination, so our position is that this is

1 another aspect of the problem that exists with the way in  
2 which they propose to do their sampling and that there needs  
3 to be protocols in the plan that would describe how and  
4 under what conditions such changes in designation would be  
5 made, and I call the panel's attention to the inspection  
6 reports referenced. I think that you will find that it is  
7 highly informative to read about how Yankee interacted with  
8 I believe it was a contingent of people from Oak Ridge on  
9 this point.

10 Did the panel have any questions?

11 DR. MURPHY: What are you calling our attention to  
12 again?

13 MR. BLOCK: An inspection report --

14 DR. MURPHY: An inspection report, okay.

15 MR. BLOCK: Right, and that we believe highlights  
16 the problems that we see existing in the plan at this point.

17 DR. MURPHY: Okay.

18 MR. BLOCK: Thank you.

19 MR. GAD: Your Honors, referring back to what we  
20 said in writing on this one, the Contention A.7 is a little  
21 bit hard to understand. If the concept is that you may not  
22 engage in site classification and may not apply different  
23 approaches based on the classification of survey areas, then  
24 NUREG CR-5849 specifically requires site classification and  
25 the LTP is based on that.



1           The LTP describes the basis for the initial  
2       classifications. It also describes the nature of the  
3       findings that trip you from one class to another.

4           Now the inspection report that is referred to is a  
5       situation in which there was a finding and someone's initial  
6       reaction was to say okay, let's reclassify it, and then it  
7       was determined that it did not meet the criteria for  
8       reclassification. That is to say when you apply the  
9       classification upgrade criteria, the reclassification  
10      criteria, it didn't meet it so this hardly shows something  
11      that is arbitrary. It may be something that you disagree  
12      with, but it hardly shows something that is arbitrary either  
13      in concept or as applied, and certainly the inspection  
14      report doesn't show anything that was arbitrary.

15           The reason for the non-reclassification or, if you  
16      will, jump-down, is that in order to be reclassified you had  
17      to exceed 75 percent of the guideline value. That is in the  
18      LTP. It comes directly from 5849 and in fact I once had a  
19      citation to 5849 here but it got smudged, but in all events  
20      whether you think that is what the criterion ought to be or  
21      not is not the contention. The contention is it is  
22      arbitrary and it is not.

23           MS. MARTZ: The Staff agrees with the Licensee and  
24      we stand on the written submittal on this issue. We have  
25      nothing new to add.

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1 CHAIRMAN BECHHOEFER: Okay. Ms. Katz?

2 MS. KATZ: We are concerned with the methodology  
3 that is being used. The issue of this inspection report and  
4 Oak Ridge being there is that Oak Ridge made recommendations  
5 for the Licensee to follow because they weren't agreeing  
6 with the findings that the Licensee had.

7 We don't have any assurance that these will be  
8 included in the License Termination Plan is the way things  
9 should happen. We don't know that Oak Ridge is going to be  
10 coming back to be doing work, and basically Oak Ridge is  
11 working with the NRC to help create I imagine an eventual  
12 rule on decommissioning, so all of this is in an  
13 experimental phase, and we would really want methodologies  
14 incorporated that make it clear about how they are going to  
15 make these determinations, and it is not clear in the plan  
16 how that will happen.

17 CHAIRMAN BECHHOEFER: Mr. Lovejoy? -- oh --

18 DR. MURPHY: Are there criteria for that in the  
19 NUREG?

20 MS. KATZ: Are there criteria?

21 [Discussion off the record.]

22 MS. KATZ: Yes, there are, but the issue is how  
23 they changed their designation because the original reading  
24 that they got was high, and so it is a basis of concern that  
25 once they had a high reading and they took a number of other

1 readings -- I think this is what this is in reference to --  
2 it lowered it, but we are concerned that there wasn't a full  
3 investigation of the high reading to understand why that was  
4 there to begin with.

5 If there is a high reading in an unaffected area,  
6 we believe it warrants an investigation to understand why  
7 that is there, whether it is a hot particle, how the  
8 contamination wound up in what is supposedly an unaffected  
9 area and then a more thorough investigation to see if there  
10 are other high readings in that area.

11 DR. MURPHY: So you are disagreeing with the  
12 criteria for making the switch from one to the other?

13 MS. KATZ: Yes.

14 CHAIRMAN BECHHOEFER: Okay. Mr. Lovejoy?

15 MR. LOVEJOY: Franklin Regional Council of  
16 Governments doesn't have the expertise at this time to  
17 address this issue. Thank you.

18 CHAIRMAN BECHHOEFER: Okay.

19 MR. BLOCK: The only thing I would add is I think  
20 it seems clear in the quotation that we took out of the  
21 report that what was going on here was that they were  
22 looking at the NUREG 5849 as if it was something greater  
23 than guidance, and when they saw that an individual sample  
24 exceeded the guideline they did this flip-flop, and I think  
25 that it shows that either their sampling is inadequate or

1 else it is not based on a consistent methodology or maybe  
2 both of those things.

3 CHAIRMAN BECHHOEFER: Okay, Mr. Block, A.8.

4 MR. BLOCK: Yes, sir.

5 Again in support of our contention that the  
6 License Termination Plan does not adequately characterize  
7 the site, we say that Yankee has averaged out any high soil  
8 concentrations of radiation that they were finding, and  
9 rather than investigate why a particular sample is high,  
10 Yankee averages the high readings out of existence and this  
11 is what you find in that inspection report that is -- this  
12 is a subsequent one that is cited here, which is 98-03,  
13 which is a June/July report.

14 The Staff seemed to argue that no one has claimed  
15 that averaging is incorrect, but we are wondering whether  
16 the company is going to be able to do anything wrong in the  
17 eyes of the NRC.

18 Not further investigating the high readings  
19 concerns us and that high levels of subsurface contamination  
20 likely remain on the site. Yankee's methods we feel in this  
21 regard are not protective and that we believe it adds  
22 support to the contention that they have not developed an  
23 adequate method of characterizing the site. Thank you.

24 CHAIRMAN BECHHOEFER: And you are saying that what  
25 was done is not consistent with NUREG 5949?

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1 [Discussion off the record.]

2 MR. BLOCK: Yes. We would agree it is not  
3 consistent with the NUREG.

4 CHAIRMAN BECHHOEFER: Well, it is in you  
5 contention.

6 MR. BLOCK: Right. In other words, in one case  
7 they take the guidance and seem to follow it as if it was a  
8 regulation, as if it applied a trip point. In another case  
9 they look at the guidance and they don't seem to follow it,  
10 so the question is how are they -- why aren't they relating  
11 consistently and we feel that that is, you know, relating  
12 consistently to the way in which they use the Staff-provided  
13 material and we think that that is again an inadequacy in  
14 the plan, that it needs to set forth in greater detail the  
15 way in which they will be utilizing the elements of Staff  
16 guidance that they have been provided in the different  
17 NUREGs, how they'll factor in, and what they'll do in  
18 different situations, rather than just allowing for, again,  
19 what seems like a somewhat arbitrary shifting of the data in  
20 order to avoid confronting what it seems to be saying.

21 CHAIRMAN BECHHOEFER: Thank you.

22 DR. ELLEMAN: Mr. Block, on that issue, your  
23 contention reads the Licensee should investigate to  
24 determine the cause of the instrument reading, rather than  
25 simply take additional measurements.

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1 By "the cause" what do you mean? Do you mean just  
2 determining the isotopic composition of that region? What  
3 do we mean by the cause?

4 [Discussion off the record.]

5 MR. BLOCK: Dr. Resnikoff advises that our  
6 understanding is that the way this should be done under the  
7 NUREG, that the guidance there, and I believe that there is  
8 a correction to be made at Number 8 -- it should say 5849  
9 not 4949 -- 5949 -- that they should do the collection,  
10 identify the isotopes, and you do that with all their  
11 samples and then do an averaging, and instead we think what  
12 they are doing is they are just doing the averaging to begin  
13 with and this way they are not following the protocol that  
14 is there, the recommended way of doing things.

15 DR. ELLEMAN: The words "the cause" though mean,  
16 in your interpretation measuring the isotopic composition of  
17 the sample at that point?

18 MR. BLOCK: Correct.

19 DR. ELLEMAN: Okay.

20 CHAIRMAN BECHHOEFER: Now the Applicant or  
21 Licensee claims they are following 5849 --

22 MR. BLOCK: Well, we seem to be in dispute on that  
23 point. I am not sure that is material per se, but we are in  
24 dispute.

25 CHAIRMAN BECHHOEFER: Yes. But what would we tell

1 the Applicant to do? Use 5849?

2 MR. BLOCK: What we would say is you collect the  
3 samples, you measure the isotopic content, then you do your  
4 averaging with all those samples rather than collecting the  
5 samples and doing the averaging, so that high spots  
6 disappear, so that you take cognizance of where the high  
7 spots are, what there are occurring, what kinds of isotopes  
8 are in the hot spots, and that that we believe is the way it  
9 was intended that it be done in order to try to minimize the  
10 kind of averaging that makes the problem go away.

11 [Discussion off the record.]

12 CHAIRMAN BECHHOEFER: Mr. Gad, perhaps you could  
13 address is the Licensee following 5849 --

14 MR. GAD: Exactly.

15 CHAIRMAN BECHHOEFER: Or does what is being  
16 requested go beyond what 5849 requires?

17 MR. GAD: I have no idea exactly what is being  
18 requested, Your Honor. The Applicant is following --

19 CHAIRMAN BECHHOEFER: Well, what he just said --  
20 what Mr. Block just said.

21 MR. GAD: Well, I don't know what it means. Let  
22 me see if I can help you a little bit, all right?

23 This contention is rather hopelessly confused and  
24 you start with its reference to Figure 4.4. This is Figure  
25 4.4.

1 Now in essence --

2 DR. MURPHY: Excuse me, but let's just identify it  
3 for the record.

4 MR. GAD: I am sorry. This is NUREG 5849, Figure  
5 4.4, which appears on page 4.17 -- thank you, sir.

6 Now this talks about the systematic location  
7 within your grid square of soil samples -- not surface scans  
8 but soil samples. Now what happened is that what Yankee  
9 originally intended to do was that if they got a high  
10 reading they would move one of these soil samples over to  
11 that high reading. That would bias in a conservative  
12 direction the results.

13 The Staff came along and said no, no, what we want  
14 you to do is to leave your four systematically situated with  
15 respect to the four corners of the grid square and Yankee  
16 said okay, if that's what you want that's what we'll do, and  
17 then we just added a fifth survey over the high spot.

18 That has nothing to do with averaging. If in  
19 fact -- and this is symptomatic of the vagueness with which  
20 these contentions are pleaded. Now if what we are talking  
21 about is averaging, then I respectfully request the Board to  
22 take a look at sections eight point -- to do all 8.5, start  
23 with 8.5.2 where it gives you the precise equations that are  
24 to be used. It goes through and tells you how to calculate  
25 average levels. It shows you how to do sample expansion if



1 you cannot exclude the possibility that that mean plus two  
2 delta would be over your trip value, and the use of  
3 averaging for deciding whether or not you meet your trip  
4 values is explicit in 5849.

5 Now I read one contention. I am hearing another  
6 contention, but whichever one it is, it is demonstrably  
7 erroneous when it says that the plan -- take the plan in one  
8 hand and the NUREG in the other -- don't gibe.

9 If we are talking about Figure 4.4 and the  
10 location of soil samples, then we cited in our written  
11 materials where in the plan they follow exactly the 4.4.

12 If you are talking about you're not allowed to  
13 take samples -- belay that -- you are not allowed to average  
14 your surface scan readings, then I submit to you that NUREG  
15 says you not only are allowed to average, you are obliged to  
16 average exactly the way we have showed you, with the  
17 equations we have showed you, so there's nothing to  
18 litigate.

19 MS. MARTZ: The Staff believes that the LTP is  
20 saying that they are being consistent with NUREG 5849. On  
21 A.47 of the final status survey plan, they reference 5849,  
22 which contemplates this averaging.

23 The inspection report does note an instance where  
24 at a previous time they were not perhaps consistent with  
25 5849 but it doesn't show a defect in the LTP as far as

1     what -- it's consistency with 5849.

2             CHAIRMAN BECHHOEFER:   Ms. Katz?

3             MS. KATZ:   Well, it seems to be getting very  
4     complicated, but I have read the inspection report as well  
5     and was concerned about it in terms of the issue of  
6     averaging, and I just want to quote from a couple of things  
7     in it, because I mean one of the things that concerned me,  
8     and I don't know -- I am grateful for the NRC Staff being on  
9     site to raise these issues to the Licensee, but one of the  
10    things that we are concerned about in decommissioning is  
11    there is no on-site resident inspector.

12            There are very few inspections that take place,  
13    that go on in this process, and so the oversight during  
14    decommissioning because the NRC has deemed decommissioning  
15    no longer to be a major Federal action means that there's  
16    very limited oversight, so I want to quote from this  
17    inspection report, which I will give you.

18            It's October 1st, 1998 Inspection Report  
19    50-29-9803, in which what it talks about in terms of the  
20    issues of the selection of its survey instrumentation in  
21    these issues, it is not clear that Yankee collects soil  
22    samples corresponding to each ALARA.

23            Further, YNPS has not provided estimates of their  
24    instruments detection sensitivity in terms of the soil  
25    guidelines.   NUREG CR-5849 states that if scanning is not

1 capable of detecting surface areas with soil concentrations  
2 greater or lesser than 75 percent of appropriate soil  
3 guidelines, then additional sampling will be required to  
4 provide confidence that elevated activity has been  
5 identified.

6 It states at other points, however, the  
7 determination of sampling locations is not consistent with  
8 the guidance contained in NUREG 5849 and there are a number  
9 of times that this is raised in this inspection report in  
10 terms of the work that Oak Ridge did.

11 I mean we raised this as well in terms of our  
12 concerns about who is going to watch over this, where is  
13 this going to be put down in the LTP so there is some way of  
14 following it, and considering that this is the only time to  
15 evaluate this and there is no time after this, we want to  
16 make sure that they are doing it right.

17 CHAIRMAN BECHHOEFER: Mr. Lovejoy?

18 MR. LOVEJOY: The Council has nothing further to  
19 add on this point. Thank you very much.

20 CHAIRMAN BECHHOEFER: Mr. Block?

21 MR. BLOCK: I also wanted to point out something  
22 from the inspection report and this is under R.2(b), final  
23 site survey plan.

24 The NRC was also concerned about the Licensee's  
25 philosophy regarding conducting additional investigations/

1 measurements based on review of survey package OB003 data.  
2 When a reading exceeds the guideline value especially for an  
3 unaffected area the Licensee should investigate to determine  
4 the cause of the instrument reading rather than simply take  
5 additional measurements and average the value over a  
6 one-meter area -- and that is the point we referred to and  
7 we thought that that sort of plainly supported what we were  
8 saying. Thank you.

9 I guess I am up again. Number 9 -- Basis Number  
10 9 -- again supporting our contention that the License  
11 Termination Plan does not adequately characterize the site,  
12 we note that Yankee's scan surveys are consistently biased  
13 towards low readings, and here the Staff has argued that  
14 Yankee is aware of the discrepancy and employs a correction  
15 factor.

16 Well, we say yes, that's true that they do, but  
17 the correction factor doesn't appear to do the job according  
18 to the inspection report and again I refer back to the  
19 citation that we provided in here about the low bias and the  
20 correction rate, and neither Yankee nor the NRC ever  
21 determined the basis for the discrepancy in the  
22 measurements. We also are concerned about that and believe  
23 again that it goes back to an inadequate basis for doing all  
24 this, that there is a lack of specificity that is leading to  
25 these problems and that the procedures need to be outlined

1 in a systematic way in order to try to avoid these problems.  
2 Thank you.

3 MR. GAD: Your Honors, I think the contention was  
4 just withdrawn. The contention that was filed was that it  
5 was discovered that it was necessary to use a calibration  
6 factor in order to calibrate Geiger Mueller readings to a  
7 pressurized ion chamber device, to which the response is,  
8 "So what?"

9 To my knowledge, this is the first I have heard  
10 anybody assert, and it is not asserted in the written paper  
11 that the calibration factor that was used is unacceptable.

12 Now the fact of the matter is that NUREG 5849  
13 itself recognizes that the two different detectors will  
14 respond differently at different levels and it tells you  
15 what you must do in order to calibrate one to another.

16 The implicit assumption and the only thing about  
17 this that is implicit is that the pressurized ion chamber  
18 device, which is essentially a lab grade device, is  
19 considered to be authoritative and your field-portable  
20 devices are supposed to be calibrated to it.

21 Now if there is an assertion that the calibration  
22 factor for one particular machine wasn't done right, that is  
23 not a plan issue. The plan says that the machines will be  
24 calibrated to the PIC, NUREG says that the machines shall be  
25 calibrated to the PIC and your calibrations can be done of

1 course after the fact, so if the contention as submitted is,  
2 wow, it turned out you needed a calibration in order to make  
3 one machine read the same as the other, that doesn't raise  
4 anything that is litigable.

5 If today's contention is, the oral contention is  
6 that the calibration factor was done incorrectly, there is  
7 no basis for that and it is not a plan issue.

8 DR. ELLEMAN: Something went by me I think too  
9 fast.

10 Mr. Block, did you allege that the calibration  
11 correction was done incorrectly? I don't think I heard that  
12 part of you commentary.

13 MR. BLOCK: Yes.

14 DR. ELLEMAN: Okay. Excuse me. I had not heard  
15 that.

16 MR. BLOCK: I'm sorry, pardon me, that they  
17 employed a conversion factor and the conversion factor they  
18 used was not right was incorrect.

19 DR. ELLEMAN: By conversion factor, you mean the  
20 calibration factor to correct to the correct reading, I  
21 guess?

22 MR. BLOCK: That's correct.

23 MR. GAD: That, Your Honors, you see, is not a  
24 plan issue. That is an implementation issue.  
25 Implementation is not part of the LTP scope of issues, and

1 as I say that is not the contention we read in the written  
2 material.

3 MR. BLOCK: But we of course would content that  
4 implementation does become an issue when you have a plan  
5 that is not adequate to assure that it would be implemented  
6 in a way that adequately protects public health and safety  
7 as required under the Atomic Energy Act.

8 CHAIRMAN BECHHOEFER: Ms. Martz?

9 MS. MARTZ: Staff agrees with the Licensee. It is  
10 clear that Yankee is using a conversion factor to account  
11 for the differences between these two instruments so I don't  
12 think there is an issue here that is litigable under  
13 2714(b).

14 CHAIRMAN BECHHOEFER: Ms. Katz?

15 MS. KATZ: Well, you know, what we are talking  
16 about is how much Yankee gets to leave behind and how much  
17 our community is affected and I just am going to read again  
18 from the license inspection report 50.29. I don't think  
19 it's been read from yet and it -- sorry, 29/98-03, which is  
20 the inspection report that was done October 1st, 1998, in  
21 which -- and this is again in terms of the work that Oak  
22 Ridge did and I don't know if it is-- Arised is the way they  
23 talk about it, but it says "Arised and Yankee also performed  
24 exposure rate measurements in affected area immediately  
25 outside the radiologically controlled area, RCA. The

1 side-by-side exposure rates are shown in Table 1. The  
2 side-by-side comparison data continue to demonstrate a bias  
3 between the Arised exposure rates and the Yankee PIC  
4 corrected exposure rates. Arised is biased high, about 10  
5 to 20 percent relative to Yankee, particularly at exposure  
6 rates that exceed background. It is recommended that Yankee  
7 re-evaluate the conversion factor used to correct the  
8 energy-compensated GM detector exposure rate to PIC  
9 corrected exposure rates."

10 DR. MURPHY: I understand that is what the  
11 inspection report says. What I don't understand is what has  
12 that got to do with the plan?

13 MS. KATZ: Well, because there is so -- because  
14 the plan is so general. The issue of making sure that  
15 Yankee follows what they commit to doing, we believe it  
16 needs to be put in the plan in a clearer way what are the  
17 acceptable and relevant ways to do this, so that the work is  
18 done.

19 I mean in a certain way if Arised wasn't there  
20 doing this, who would be monitoring the fact that Yankee's  
21 measurements are biased? How would that take place?

22 MS. KATZ: We saw in the inspection report they  
23 were raising this, but how is there accountability in this  
24 process if it isn't committed to in the license termination  
25 plan, the process that's used in specificity?



1 CHAIRMAN BECHHOEFER: Mr. Lovejoy, did you have  
2 anything?

3 MR. LOVEJOY: Nothing further to add. Thank you.

4 MR. BLOCK: At the risk of repeating myself, I  
5 would say that what we're really trying to say is that  
6 carrying out the plan is as important as the plan itself,  
7 and if the plan is weak, if the plan lacks specificity,  
8 lacks adequacy, which is what we're alleging, one of the  
9 things that supports that is showing how when they're  
10 setting about carrying it out, they're running into  
11 problems, and that the problems put them at a discrepancy  
12 with a group of people who have had more experience than  
13 they have.

14 And even after they made their corrections, what  
15 the table in the inspection report that Ms. Katz was  
16 referring to shows is that even after they were corrected,  
17 there was still a discrepancy. And that's why they made the  
18 recommendation in the report. We're just supporting using  
19 this as a basis to support our general allegation of  
20 inadequacy of the plan.

21 Did you have further questions, or I'll move on to  
22 Contention B?

23 Oh, I'm sorry. I was going to skip 10. We  
24 wouldn't want to skip 10, would we?

25 CHAIRMAN BECHHOEFER: Oh, we might.

1 [Laughter.]

2 MR. BLOCK: I think as we approach five, we'll all  
3 become more tempted.

4 [Laughter.]

5 Number 10, and I might add, the last basis in this  
6 group. Yankee has not evaluated scanning sensitivity for  
7 field instruments, and here our argument is based on the  
8 inspection report cited and the NUREG-5849. Yankee  
9 committed to using the values in NUREG-1507, but they  
10 haven't up to the time of the inspection report. And this  
11 is another unsupported promise. Here's a promise; it's not  
12 carried out.

13 And, you know, what this shows is that maybe they  
14 filed this whole thing prematurely, and what they need to be  
15 doing is doing some more work, and then filing it when  
16 they've been able to carry out the surveys without running  
17 into these kinds of errors for a period of time, and they  
18 have some consistency, and maybe by then they would have  
19 built in a new set of revisions, Revision 2 or Revision 3,  
20 that brought them to the point where they had a plan that  
21 you could look at and would provide adequate assurances of  
22 the protection of public health and safety.

23 Thank you.

24 MR. GAD: Your Honor, this is yet another "not  
25 done yet" contention. It has nothing to do with the plan.

1 It has to do with an asserted discrepancy in the plan's  
2 implementation, and that is beyond the scope of an LTP  
3 hearing.

4 DR. ELLEMAN: Mr. Gad, help me out a little bit  
5 here. In the LTP in Table 2.4 is a table called Nominal  
6 Measurement Detection Sensitivities, and the last column of  
7 this table is called Detection Sensitivity, and it gives the  
8 sensitivity for 12 different classes of instruments. And  
9 incidentally, Mr. Block, this is where I got the  
10 five-micro-R-per-hour number that I mentioned earlier,  
11 because that's the quoted sensitivity for gamma exposure  
12 rate for a compensated GM counter. Is not this column the  
13 numbers that are being questioned here as to availability?

14 MR. GAD: I have no idea what's being questioned,  
15 Your Honor.

16 DR. ELLEMAN: Mr. Block, any comments on this  
17 table?

18 MR. BLOCK: Two things. One, what we were saying  
19 before is they could get a better reading, greater  
20 sensitivity using the scintillator, which is sensitive down  
21 to 1 microrad per hour.

22 As for the table in relation to this contention,  
23 what we're saying is that they have not made a proper  
24 determination of the sensitivity of the instrument and that  
25 that remains a problem.

1 DR. ELLEMAN: But these numbers have not been  
2 checked in some way or confirmed in some way?

3 MR. BLOCK: Well, I believe that in the front of  
4 one of the NUREGs there's a protocol, a requirement, an  
5 instrument protocol, and the suggestion would be that  
6 they're failing to follow that protocol.

7 MR. DIGNAN: Dr. Elleman, were you referring to  
8 Table 2.4 or 4.2?

9 DR. ELLEMAN: 4.2.

10 MR. DIGNAN: 4.2.

11 DR. ELLEMAN: Now I'm looking at --

12 MR. DIGNAN: On A-38?

13 DR. ELLEMAN: Maybe it is --

14 MR. DIGNAN: On page A-38?

15 DR. ELLEMAN: A-39, yes.

16 MR. DIGNAN: A-38 and 39; yes.

17 DR. ELLEMAN: On Rev. 0. I hadn't checked Rev. 1  
18 to see if it's in there.

19 MR. GAD: I'm sorry, Doctor, did I leave a  
20 question unanswered?

21 DR. ELLEMAN: No, I guess, though I'm still left  
22 with some confusion in this as to why the values quoted here  
23 as detection sensitivities are not proper and correct  
24 values.

25 MR. GAD: And more importantly, once again, this

1 is implementation of the plan, all right? It is not the  
2 plan itself.

3 DR. ELLEMAN: All right. Well, I'll not pursue --

4 MR. DIGNAN: Doctor, I'm advised by our technical  
5 people that your characterization at the outset of this  
6 questioning was correct of the table, that is, as to what  
7 the significance of this column was.

8 CHAIRMAN BECHHOEFER: Staff, whoever?

9 MS. MARTZ: Our understanding is, based on  
10 everything that's gone on here, is that they are committed  
11 to doing -- to determining the values pursuant to 1507, and  
12 that needs to be done at a time prior to completion of the  
13 final status survey plan. So the fact that they have not  
14 done it yet isn't significant.

15 DR. ELLEMAN: Have not determined the instrument  
16 sensitivities.

17 MS. MARTZ: Right.

18 DR. ELLEMAN: So where did these values come from  
19 that are in Table 4.2? Are they just manufactured values?

20 MS. MARTZ: I'm not sure if they came from 1507.  
21 I don't know if the numbers themselves came from 1507. I  
22 don't know. I guess I'm guessing. You might need to ask  
23 the licensee if they know where they came from, where their  
24 numbers came from.

25 DR. ELLEMAN: Okay. Well, I'll drop the question.

1 CHAIRMAN BECHHOEFER: Well, ask them do they  
2 know --

3 [Laughter.]

4 DR. ELLEMAN: We seem to have a complaint that  
5 instruments -- minimum detection values for instruments have  
6 not been determined. We have the table showing those values  
7 for 12 categories of instruments, and we have a mystery as  
8 to what those values really are, the way it looks to me.

9 MR. DIGNAN: I'm advised by the technical people  
10 that they are determinations which we have made, and we  
11 believe to be correct.

12 DR. ELLEMAN: Okay. And so they presumably answer  
13 the concern raised by the contention.

14 MR. DIGNAN: As I understood the contention to  
15 just be argued; yes.

16 CHAIRMAN BECHHOEFER: Okay. Ms. Katz?

17 MS. KATZ: I don't know what I can add to this at  
18 this point. I think I will let it go in the hope of moving  
19 forward.

20 MR. LOVEJOY: Ditto.

21 CHAIRMAN BECHHOEFER: Mr. Block, do you think that  
22 your concern has been resolved, based on what you've heard?

23 MR. BLOCK: No, I don't.

24 DR. ELLEMAN: Is it correct, Mr. Block, that the  
25 reason for your view is because the NRC inspection report

1 implies some difficulty or some problems with the --

2 MR. BLOCK: That's correct.

3 MR. LOVEJOY: Okay. So it's the report that is  
4 the basis.

5 MR. BLOCK: Yes, and again, it's a basis  
6 supporting the general contention, and again, going to the  
7 fact that when they start to implement, they seem to have  
8 problems. We believe that that means that the plan is not  
9 adequate, and that's why they're having these problems.

10 I think that maybe some of the confusion may come  
11 from the citation. I want to correct this. I believe that  
12 the citation --

13 DR. MURPHY: Excuse me. Where are you at now?

14 MR. BLOCK: Oh, I'm sorry.

15 DR. MURPHY: Are you still back on A-10?

16 MR. BLOCK: Yes. I was -- the two of us were  
17 trying to figure out where the confusion came from.

18 DR. MURPHY: We were off on another subject.

19 [Laughter.]

20 MR. BLOCK: I'm sorry.

21 DR. MURPHY: No, that's all right. I just wanted  
22 to make sure we're paying attention to you.

23 MR. BLOCK: I think our citation at page 13, that  
24 both of these should have been to A-2-4, and that the  
25 citation is under 3.2.1, Selection of Survey

1 Instrumentation. And basically what the inspection report  
2 seems to be saying is it's referring them to 5849 and saying  
3 that they should be using it. That's how we read that.

4 I'm sorry, strike that. It's referring them to  
5 NUREG-1507.

6 DR. MURPHY: Is that it? Are you finished?

7 MR. BLOCK: Yes. Thank you.

8 CHAIRMAN BECHHOEFER: Mr. Block, moving on to the  
9 next series of -- by the way, we'd appreciate not having  
10 flash pictures done during the course of the proceeding, in  
11 any event.

12 Approaching Contention B, I would like to raise a  
13 question, and that is whether all of these under B are not  
14 spent-fuel-pool contentions, which are beyond our  
15 jurisdiction to even consider.

16 MR. BLOCK: I would be certainly willing to  
17 concede that they're there, because it may take review from  
18 a higher authority, and we felt that in the standard  
19 parlance of "raise it or waive it" that we would rather  
20 raise this issue, suggest a means of resolving it, and that  
21 if necessary in the end of this whole proceeding if there  
22 was a need to appeal to the Commission and then to a court  
23 above the Commission, that these are issues that we believe  
24 for the reasons that we've indicated need to be resolved.

25 That said, I have little else to say except that



1 if this isn't raised in this proceeding, when will it ever  
2 be raised? When will these issues get to be litigated? We  
3 went through a Part 1 in this proceeding. We're told wait  
4 for Part 2. And now we're at Part 2, and we're told you  
5 don't get to raise the issue. And I think that there are  
6 some legitimate issues here that we've outlined, and we'd  
7 like to know, you know, when they would be dealt with, if  
8 ever.

9 CHAIRMAN BECHHOEFER: Mr. Gad and whoever's going  
10 to address this for the staff, would you agree with me that  
11 all of the contentions under B are really spent-fuel-pool  
12 contentions which are within the scope of those that the  
13 Commission ruled out?

14 MR. GAD: Absolutely, Your Honor.

15 MS. MARTZ: Yes, staff agrees.

16 CHAIRMAN BECHHOEFER: Yes. And so that if we  
17 denied them on that basis, that we're precluded from  
18 considering them, of course there would be an avenue of  
19 appeal and the NECNP or Citizens Awareness Network could get  
20 to the Commission that way and appeal to the court, for that  
21 matter.

22 MR. GAD: Rescinding from what the -- I'm sorry.

23 CHAIRMAN BECHHOEFER: But I'm not sure we have any  
24 real jurisdiction based on what the Commission said in its  
25 order in this case.

1 MR. GAD: Rescinding from what the implications  
2 may be, Your Honor, I think your instructions were set forth  
3 in CLI 98-21, and I think they do encompass all of B.

4 CHAIRMAN BECHHOEFER: Right. Does staff agree?

5 MS. MARTZ: Yes.

6 CHAIRMAN BECHHOEFER: Okay.

7 Ms. Katz or others?

8 MS. KATZ: Well, we raised it as well in terms of  
9 the litigable -- well, legitimate issues, but to be able to  
10 litigate it. I mean, I just want to make one quote on this,  
11 which was from the first ASLAB in terms of this, and I would  
12 just let you know that Yankee is doing this, I guess, under  
13 the issues of -- I was trying to find my papers under it --  
14 the second process in terms of setting up an independent  
15 fuel storage site which involves the use of a general  
16 license. And we have concerns about this that we would just  
17 like to make clear, which is that in terms of setting it up  
18 under a general license, our understanding, and we may be  
19 wrong, is that that would really hold for operating  
20 reactors, which of course is what Yankee is in, is a Part 50  
21 license, 50.59 at this point.

22 But we're really concerned about this because the  
23 issue of using this for decommissioning reactors is a sort  
24 of frightening thought to us, because for reactors that are  
25 operating to set up a fuel storage facility onsite when

1 there is adequate resident inspectors, when there is a lot  
2 of oversight taking place, is one thing. But to use the  
3 same basis to allow decommissioning reactors, which have  
4 very little oversight going on, because decommissioning is  
5 no longer a major Federal action, we think is a mistake and  
6 there's question about whether there's enough oversight or  
7 environmental assessments that will take place.

8 So we have the experience that the rules are  
9 somehow being cobbled together to allow decommissioning  
10 reactors to decommission under operating licenses, and to do  
11 that, the rules in fact are becoming less specific and less  
12 protective of the public health and safety, and we think  
13 that this is a dangerous prospect in terms of it.

14 And I just want to quote from the last ASLAB,  
15 because I think it's important that it goes in the record,  
16 because when we raised this the last time, they said to us,  
17 you will have your chance to come back to us with this  
18 issue, but it is not ripe at this moment, because this is an  
19 important issue. And what we have found is that when we  
20 attempt to raise it, we are told it's already been decided.  
21 And in fact Yankee in their I think it's response to New  
22 England Coalition's petition says that the decommissioning  
23 plan approval itself is allowing them to go forward, even  
24 though the last time, they said it's up to the DOE and we  
25 have -- the NRC has no purview in this situation.

1 But the ASLAB said, as the staff points out,  
2 Yankee's use of dry-cask storage is subject to the  
3 requirements of 10 CFR Part 72. This would include the  
4 provisions of 10 CFR Part 72.40 as they relate to the  
5 licensing of an independent spent-fuel storage installation.

6 Thus, when and if Yankee chooses to close its  
7 spent-fuel pit and move to dry-cask storage, the choice must  
8 undergo an Agency approval process that provides for, among  
9 other things, consideration of whether there is compliance  
10 with ALARA objectives and a public hearing opportunity  
11 regarding the ISFSI application.

12 DR. MURPHY: Excuse me, what were you quoting  
13 from?

14 MS. KATZ: This is from the Atomic Safety and  
15 Licensing Board decision in the first -- do you know the  
16 number --

17 DR. MURPHY: That doesn't mean anything to me.  
18 Can you tell me --

19 MS. KATZ: It was on the first decommissioning  
20 that we were involved in in front of Judge Bollwerk in 1996.

21 DR. MURPHY: Can you find a cite for us?

22 MS. KATZ: I can find the cite. I don't have it  
23 here, but I can provide you with the cite. But this is what  
24 was promised.

25 DR. MURPHY: I just wanted to make the record

1 clear.

2 MS. KATZ: Right. This is what was promised. And  
3 so we're completely confounded to be back here without the  
4 ability, since the issue of high-level waste being onsite in  
5 untested casks for potentially a long period of time is  
6 central to our community, and we believe germane to any  
7 site-remediation process, we are horrified that it is going  
8 to be beyond the scope of what the ASLAB can do. And we  
9 understand that it's not within your power. But we want to  
10 note our terrible objection to this what we feel is a  
11 violation of our hearing rights in a process in which these  
12 matters vitally affect our community.

13 DR. MURPHY: Thank you.

14 CHAIRMAN BECHHOEFER: Mr. Block, any final  
15 comments on that before we go on to C?

16 MR. BLOCK: No, Your Honor. I'm prepared to move  
17 forward.

18 MR. LOVEJOY: Might I make a short statement, sir?

19 CHAIRMAN BECHHOEFER: Sorry.

20 MR. LOVEJOY: I'd just like to bring up a  
21 practical point that the average person out there is looking  
22 at what's called a license termination plan, and it's  
23 wrapped in 8,000 acronyms and euphemisms, numbers, and  
24 otherwise. But the fact of the matter is, we're talking  
25 about closing a plant from the average person's point of

1 view. It's based on a plan, and part of that plan is that  
2 waste storage is going to stay onsite in a new experimental  
3 however tested kind of manner.

4 Now if you rule against this entire issue of cask  
5 storage, fuel storage, and how it's supposed to be done is  
6 not appropriate to this hearing, we would greatly appreciate  
7 it if you could explain that position in a little bit of  
8 plain English so that when it was published, people aren't  
9 wondering how it is that you can have a license termination  
10 plan with all its elaborate procedure quite open and fair,  
11 and yet one the seemingly most key issues seem not to be the  
12 topic of the hearing.

13 So a great deal of the comment that came to us at  
14 the planning board of the Franklin region revolved around  
15 how can it not be, and so we did include this as part of our  
16 contentions, and we would simply support some sort of plain  
17 English comment to explain to the public how it isn't part  
18 of this proceeding.

19 DR. MURPHY: Well, we'll test our writing skills  
20 and see what we can do.

21 MR. LOVEJOY: Thank you very much.

22 MS. KATZ: I have the reference if you want it in  
23 terms of the ASLAB memorandum and order ASLBP  
24 96-713-01-DCOM, March 1, 1996, pages 30 through 31.

25 DR. MURPHY: '92?

1 MS. KATZ: '96, a very short time ago.

2 DR. MURPHY: Did you get that, Mr. Reporter?

3 THE REPORTER: Yes.

4 CHAIRMAN BECHHOEFER: Could you read the reference  
5 from -- is there a front-cover reference, some number NRC  
6 and then the first page?

7 MS. KATZ: What I have, I have the ASLAB  
8 memorandum and order number, which is 96-713-01-DCOM at --  
9 it was on page 3031.

10 CHAIRMAN BECHHOEFER: Well, is there an LBP  
11 number?

12 MS. MARTZ: It's 43-NRC-621.

13 MS. KATZ: Thank you.

14 MR. BLOCK: Which the Board will find described on  
15 page 26 of the slip opinion version of CLI 98-21.

16 CHAIRMAN BECHHOEFER: Okay.

17 Okay. Why don't we move on to C.

18 MR. BLOCK: Thank you, Your Honor.

19 C, I will concede to Mr. Gad, is the Basis 5 for  
20 Number A walking on its own feet upright, we believe. The  
21 contention asserts that Yankee's site remediation plans are  
22 inadequate, and here I think it necessary to interpolate  
23 that what we mean is inadequate to determine the full volume  
24 extent of radioactive contamination on the site. And we  
25 feel that the issues here dovetail with a lack of any

1 coordinated review of all of the physical changes to the  
2 site over its history. And that it seems to us to be part  
3 and parcel of the lack of an adequate EA or EIS for the  
4 site, that really goes back to the very beginning and brings  
5 everything forward in time, examining where earth was moved,  
6 how it was disturbed, how the draining was changed, et  
7 cetera, et cetera.

8 And that what we see again in terms of the  
9 interaction between the inadequate plan and the inadequate  
10 plan as it's carried forward is pointed out or underlined by  
11 the sampling that we refer to, quoting that their sampling  
12 relies on the first 150 millimeters of the soil, and we  
13 called that a shallow approach, because the NUREGs seem to  
14 indicate that you must be able to make a characterization  
15 down to at least 15 centimeters.

16 Moreover, in places where we note in this  
17 contention borings took place, and that it was found as the  
18 borings went further down that things got hotter, no attempt  
19 was made to really nail down what was going on here in a  
20 systematic way.

21 And through this we conclude that Yankee has not  
22 determined the full volume extent of radioactive  
23 contamination at the site, and we recommend that what is  
24 needed or what we'd like to see happen is that each and  
25 every location that has surface contamination concentrations



1 above guidelines be properly surveyed with core borings to a  
2 depth where the soil concentrations are no more than above  
3 background so that when they hit a spot and they're drilling  
4 down and it gets hotter that they should continue with their  
5 boring until they find that their sample is no more than  
6 background. And that's so -- we felt that that was the  
7 proper way to do it, and what's missing in the plan is that.

8 But I did want to add that that general problem,  
9 that seems to me to imply another way in which this plan  
10 really and the way in which the staff is implementing 50.82,  
11 interpreting it, applying it, really does seem to run afoul  
12 in a number of ways with the intentions of the National  
13 Environmental Policy Act.

14 And I think that if there had been a commitment by  
15 the Agency to really take a hard look at the site over its  
16 life that they wouldn't be running into the kind of problems  
17 that they're running into, and it might well be that again  
18 we wouldn't be standing here. We'd have a plan that was  
19 large enough and detailed enough so that it would provide  
20 the kind of guidance that would avoid mistakes, but it would  
21 also recognize the kind of problems that will exist when  
22 they go to dig up some area to build something and change  
23 their draining and have draining running across the site and  
24 carrying contaminated materials off in some other direction.  
25 And until they really take care of that kind of level of

1 planning, it's not very comforting to see that their surveys  
2 are going to be only limited in great part to 150  
3 millimeters of soil.

4 Thank you.

5 CHAIRMAN BECHHOEFER: Back on the record. We are  
6 now on NECNP Contentions -- F. Mr. Block?

7 [Pause.]

8 CHAIRMAN BECHHOEFER: Mr. Block, F?

9 MR. BLOCK: Thank you. Thank you, Your Honor,  
10 just a moment late, speaking with Dr. Resnikoff for just a  
11 moment.

12 Contention F again dealing with inadequacy and  
13 insufficiency, this time of the ALARA analysis, and here we  
14 were arguing that the ALARA analysis is ad hoc and flawed,  
15 and the Staff has stated of course that we provide no  
16 support, but our support appears both under F and additional  
17 support under Contention H.3.

18 The Staff further argues that we provide no  
19 support for the assertion that the cost calculations should  
20 have been based on disposal costs and Envirocare and that  
21 the disposal costs are 30 times less at Envirocare than  
22 Barnwell.

23 Well, this is the basis. Barnwell is presenting  
24 charging more than \$300 per cubic foot but let's instead use  
25 Yankee's numbers -- \$3,030 per cubic meter, Table 4-1 of the

1 LTP. Envirocare is charging \$225 per cubic meter and that  
2 means that the factor should have been approximately 13.5  
3 and we would still claim that the Staff's numbers are too  
4 low.

5 Regarding the mean life of radionuclides, Yankee  
6 is considering only Cobalt-60 and Cesium-137 -- that is,  
7 direct gamma emitters.

8 They omit other direct gamma emitters such as  
9 Cesium-134. They omit beta and alpha emitters, which  
10 contribute to dose due to ingestion.

11 Further, the argument about one-half person per  
12 100 square meters is unfortunate. If a garden is located  
13 over a 100 square meter plot, several persons could eat out  
14 of the same garden.

15 Therefore, their calculation is not protective,  
16 and I had some additional comments here about -- yes, that  
17 the correct cost for disposal is about 14 times less than  
18 Barnwell, 13.5 times less, but we don't think that they  
19 really mean to be arguing that Envirocare isn't cheaper, and  
20 that was the only comments I had to the two filings at this  
21 point.

22 CHAIRMAN BECHHOEFER: Mr. Gad?

23 MR. GAD: Your Honor, there are two points that  
24 were made in the written submission here.

25 One was that for a specific -- remember, the ALARA

1 analysis says what's the dollars -- what is the cost of  
2 removing one more personrem.

3 We are not talking here about actual exposure and  
4 what Yankee did was to estimate the cost of removing all of  
5 the residual 15 millirem.

6 There are two specific arguments that are made in  
7 the written submission. One is that Yankee got the cost too  
8 high.

9 Well, we have heard it here asserted for the first  
10 time that Envirocare is charging \$225 per cubic meter to  
11 take low-level waste.

12 There are 35, approximately 35 cubic feet in a  
13 cubic meter, and if you do the math you are going to come  
14 down to something like seven dollars a cubic foot. That is  
15 an absurd value and there is simply nothing in the record  
16 that says that you can send this stuff to Envirocare for \$7  
17 a cubic foot.

18 The second half of the assertion was this notion  
19 of mean life or average life, and that in figuring out what  
20 the dose savings that you would get, aggregate dose savings  
21 that you would get for the hypothesized remediation at  
22 Yankee stop at 26 years, and the argument was that there is  
23 more radiation after 26 years and therefore you are  
24 understating the radiological benefit of whatever your cost  
25 is.

1           The problem is that whoever wrote that section did  
2 not understand the term "mean life." Mean life is a period  
3 at which you assume that the isotope is still giving off  
4 dose at its time zero rate -- that is to say, it is not  
5 decaying with time. Mean life is the period of time for any  
6 isotope which when multiplied by its T0 dose rate is the  
7 entire integral under the curve. You could go out for a  
8 million years. You are not going to get any more.

9           Now what Yankee did was, and this is what it says  
10 in the LTP, to be conservative. They assume that the two  
11 largest contributors to dose were split 50-50 and one of  
12 those has a half-life of eight years, one of them has a  
13 half-life of 30 years and if you average the two you get 26  
14 years. This in fact is grossly conservative because we know  
15 that the predominant contributor accounts for 75 percent of  
16 the total dose from the site.

17           Now NECNP has offered no basis for the on its face  
18 improbable value of \$7 a cubic foot for the cost and NECNP  
19 has offered no basis for the assertion, the necessary  
20 assertion, that if you did the calculation for longer than  
21 26 years, for any other longer period of time, you would get  
22 any more dose, so that is why Contention F is  
23 unacceptable -- is inadmissible, and the only point I will  
24 rely on the written materials for and that is that the  
25 Commission has said that with respect to 25 millirems per

1 year TEDE, that value already has -- at least for soil that  
2 value already has been ALARA'd and Yankee's 15 millirems per  
3 year is 40 percent lower. Your Honor?

4 DR. ELLEMAN: Mr. Gad, do you have any comment on  
5 the part of the contention that says Yankee is not  
6 considering all relevant isotopes and Cesium-134 is one that  
7 was specifically mentioned?

8 MR. GAD: Yes, Your Honor. As the LTP says, you  
9 take the two largest, all right? -- you extrapolate them out  
10 for their entire life and then you assume a distribution  
11 that is already tilted more than 50 percent, and that bounds  
12 the radiological savings.

13 Bear in mind that our cost is nowhere near the  
14 2000, all right? It is a couple orders of magnitude above  
15 it. You get to the point where you don't need the precision  
16 of going down to the third contributor, the fourth  
17 contributor, the fifth contributor and so forth.

18 Also bear in mind that if you take a look at the  
19 ALARA methodology that is in 5849, you will see that there  
20 are all sorts of other credits, if you will --

21 DR. MURPHY: Other what?

22 MR. GAD: -- credits, if you will that might be  
23 taken, such as for the exposure to the workers when they are  
24 shoveling out the extra soil, the exposure to the public  
25 when it is being trucked, and the like. There are all sorts

1 of refinements that may take you a few more decimal places.  
2 Yankee elected as a matter of conservatism and also because  
3 it wasn't necessary, because remember this is a binary  
4 analysis. We don't need the value. We need to know whether  
5 or not it is above or below \$2000 and when it isn't even  
6 close, frankly, you no longer go any further because it is  
7 not going to change the results.

8 DR. MURPHY: Well, let me follow up on that, Mr.  
9 Gad.

10 Does the License Termination Plan show that the  
11 cobalt and cesium are the two major contributors to dose?

12 MR. GAD: It reports that.

13 DR. MURPHY: It just reports that.

14 MR. GAD: That is correct, Your Honor. It reports  
15 that the number one accounts for approximately 75 percent --

16 DR. MURPHY: I saw that and I recognize that as  
17 part of the calculation but what I wasn't -- what I am  
18 trying to get at is how did you arrive at those numbers?

19 MR. GAD: I cannot -- the answer is based on the  
20 site characterization and the historical records and knowing  
21 what is out there and knowing what their properties are. I  
22 can't take you through the exact calculation.

23 DR. MURPHY: Does that then suggest that there was  
24 no long-lived, longer-lived isotopes involved in calculating  
25 the dose?

1 MR. GAD: No --

2 DR. MURPHY: And on the basis of some information  
3 that you have?

4 MR. GAD: No. It suggests that, and I believe it  
5 says that if you take into account any of the tertiary or  
6 lower ranking contributors, okay, you are not going to  
7 change the result.

8 DR. MURPHY: I understand that and, you know, I  
9 have no problem with the math. My problem, if it is a  
10 problem, is understanding how you arrive at the statement  
11 that just cesium and cobalt are the two major  
12 contributors -- presumably there had to be some set of  
13 measurements or some set of radiation data or something like  
14 that --

15 MR. GAD: That's correct --

16 DR. MURPHY: -- that in effect made sure that  
17 there were no other isotopes with longer half-lives than  
18 cesium or cobalt because the calculation, the math, is  
19 pretty simple but it is very sensitive to the mean life of  
20 the radionuclide.

21 If there was a really long radionuclide then that  
22 would screw up the calculation.

23 MR. GAD: Okay First of all, the two that were  
24 selected were not based on the shortest half-lives. They  
25 were based on the greatest contributor dose.



1 DR. MURPHY: I understand that.

2 MR. GAD: That is not necessarily a function of  
3 half-life and it doesn't mean that one that has a shorter  
4 half-life will have a greater contribution and the one that  
5 will have a longer life will have a lesser.

6 This was done based on a site characterization and  
7 an inventory of what is out there and the dose consequences  
8 of what's out there based on dose modelling -- or the  
9 properties of the attribute.

10 MR. DIGNAN: Doctor, I am wondering if Section  
11 2.3.1 on page 2-2 of the LTP might at least begin the kind  
12 of discussion I believe you were inquiring for? It is  
13 entitled Radionuclide Distribution and indicates where the  
14 data came from that led to the conclusions that I believe  
15 you and Mr. Gad are discussing.

16 MR. BLOCK: Would you provide the citation again?

17 MR. DIGNAN: Yes. Section 2.3.1 on page 2-2 of  
18 the LTP.

19 MR. BLOCK: Thank you.

20 MR. DIGNAN: And the technical people note to me  
21 that in those discussions you will find references to the  
22 tables and the decommissioning plan where the data is set  
23 forth in somewhat more detail but I don't know if that is  
24 any assistance to you.

25 DR. MURPHY: No, it is. It helps. I have not

1 seen or read the decommissioning plan so maybe that is where  
2 I need to go. Thank you.

3 MS. ZOBLER: Your Honor, the Staff doesn't really  
4 have much more to add to what Mr. Gad said.

5 The misunderstandings of the ALARA analysis were  
6 documented in our response and just to note that it is a  
7 requirement of our regulations that a contention be  
8 supported by an adequate basis and not merely just say I  
9 disagree, and so the Staff's objection on those grounds are  
10 quite valid, and our written documentation as well as the  
11 Licensee's demonstrate that fact -- NECNP's contention here  
12 is not supported.

13 CHAIRMAN BECHHOEFER: Ms. Katz?

14 MS. KATZ: Well, we are concerned, the New England  
15 Coalition is, about the choice that Yankee made in terms of  
16 its limitation of using Cobalt-60 and Cesium-137 which are  
17 major radionuclides that are released during decommissioning  
18 but there are others and the issue of Cesium-134 or the  
19 issues of plutonium are issues that are not calculated into  
20 this process, which we feel would be important to have to be  
21 part of the process and that in some ways the calculation  
22 may not be made until a full site characterization is  
23 developed to see what is on the site.

24 It's sort of like we are dealing with, as Yankee  
25 says, a work-in-progress, but the problem with the

1 work-in-progress is that Yankee is setting down certain  
2 goals, certain conditions about how they are going to make  
3 their evaluations on a work-in-progress, and that doesn't  
4 make sense.

5 If this is a work-in-progress, then the LTP  
6 approval shouldn't take place until they finish the  
7 work-in-progress, and then the methodology and the  
8 guidelines that they have determined have been proven to be  
9 true and they could go ahead and do the work, but they are  
10 using -- their limitations aren't necessarily going to be  
11 accurate depending on what they find once they finish site  
12 characterization and we are concerned with that.

13 CHAIRMAN BECHHOEFER: Mr. Lovejoy? Mr. Lovejoy,  
14 anything?

15 MR. LOVEJOY: Thank you very much.

16 CHAIRMAN BECHHOEFER: Okay.

17 MS. KATZ: You are welcome.

18 CHAIRMAN BECHHOEFER: Mr. Block?

19 MR. BLOCK: A couple of points in rebuttal.

20 We were referring to, as I indicated we were  
21 correcting our figure, and I misspoke. I should have said  
22 cubic yards and the figure of disposal cost of \$225 per  
23 cubic yard comes from the United States Department of Energy  
24 Engineering Evaluation Cost Analysis for the Removal of the  
25 Wayne Site Storage Pile, Wayne, New Jersey, at page 30,

1 which cites to the disposal costs at Envirocare.

2 Second, on the issue that the Licensee thinks is  
3 addressed by 2.3.1, we feel that that paragraph is a good  
4 one to look at because it points up exactly what our problem  
5 is, and that is that they are looking at gamma but they are  
6 not looking at alpha, they are not looking at beta, they are  
7 not looking at inhalation and ingestion pathways here, and  
8 that that is problematic.

9 We think that that is what we are trying to  
10 address in the contention in addition to the other issue  
11 that was raised.

12 MR. GAD: If I may, Your Honor, with this further  
13 correction let us put aside the fact that we are now trying  
14 to support a contention on the basis of something that is  
15 not in the record, but if the figure is \$225 a cubic yard,  
16 then assuming it were accurate, and it is hopelessly out of  
17 date, that works out to \$22 a cubic foot, give or take, and  
18 that is only one-third of the value that Yankee used, which  
19 of course was based on an actual quote, so the cost part of  
20 this has just dropped out of the equation.

21 MR. BLOCK: We get \$9 per cubic foot there.

22 MR. DIGNAN: If you can find somebody who will  
23 take it for \$9 a cubic foot I have got a bunch of clients  
24 who will sign up tomorrow.

25 [Laughter.]

1 MS. KATZ: Should we try to cut a deal here?

2 CHAIRMAN BECHHOEFER: Let's wait till after the  
3 proceeding ends.

4 MS. KATZ: Why don't we call Envirocare --

5 CHAIRMAN BECHHOEFER: Why don't we get back to  
6 whatever the next -- let's see -- Contention G.

7 MR. BLOCK: Are we ready to go forward?

8 CHAIRMAN BECHHOEFER: Yes.

9 MR. BLOCK: Thank you. Contention G, inadequacy  
10 of the remaining decommissioning cost estimate, as required  
11 under 10 CFR 50.82(a)(9), roman II, small (ii).

12 We claim that Yankee has not underestimated the  
13 remaining cost estimates. The Staff does not touch the  
14 issue other than to say that Yankee can pay whatever it  
15 costs so what's the difference? What is the point of a cost  
16 estimate then? Yankee might as well skip this section and  
17 just move right on.

18 We feel that when you are dealing with an overall  
19 basis for providing assurance due to a lack of adequate  
20 calculation of a potentially large number and unspecified  
21 cost, that it is an elevation of form over substance to say  
22 that one objection is not impare materia identical to the  
23 other, and I think that when you are saying that they  
24 haven't taken this into account, that it isn't legitimate to  
25 rely on the fact that whatever they want, FERC is going to

1 give it to them.

2 I think that all things have come to an end, and  
3 that it is not a reasonable thing to have a cost estimate  
4 based on something that is essentially an unknown, and then  
5 say, well, you know, if they need more money they get more  
6 money.

7 MR. GAD: Your Honors, Contention G-1 transgresses  
8 three separate prohibitions. Because it is yet another  
9 spent fuel contention, it transgresses the prohibition of  
10 CLI-98-21.

11 Somewhat more fundamentally, in CLI-96-7 the  
12 Commission held in a proceeding that involved all of these  
13 same parties and indeed the very same cost estimate and of  
14 course the same contention, the Commission held that a  
15 contention that merely says that the cost estimate is wrong  
16 is inadmissible. The contention must say that we lack  
17 reasonable assurance that the costs will be paid else, said  
18 the Commission, if all we're going to do is adjust the  
19 numbers that is an arid exercise, so, number one, this is  
20 spent fuel, number two, this fails to meet the specific  
21 holdings of the Commission as to what you have to plead or  
22 contend with respect to cost estimate.

23 Number three, in CLI-96-7, where we are dealing  
24 with the same parties and the same cost estimate and a bunch  
25 of assertions about why it was wrong including this one, the

1 Commission reviewed the funding mechanism and held that that  
2 funding mechanism, and I quote, ". . . virtually eliminates  
3 all risk" that the costs will not be paid.

4 Now if you pass the standard of "virtually  
5 eliminates all risks" -- okay -- you have way cleared the  
6 standard of reasonable assurance, so we have been through  
7 this before and the Commission has already made a ruling.

8 MS. ZOBLER: I wouldn't add much more to Mr. Gad's  
9 analysis, other than I believe Mr. Block might have  
10 mischaracterized the Staff's response to Contention G, which  
11 was merely to recite the Commission case law on this issue  
12 and why their contention failed to satisfy those  
13 requirements for a decommissioning cost estimate contention  
14 relying on essentially the same Commission case law that Mr.  
15 Gad just recited.

16 Other than that, there is nothing more to add.

17 CHAIRMAN BECHHOEFER: Ms. Katz?

18 MS. KATZ: Well, you know, we have a concern in  
19 this. We are going to be stuck with the spent fuel storage  
20 system on-site for 20 years, 30 years, maybe more. We will  
21 be stuck with the contamination that Yankee gets to leave  
22 behind, and, you know, Yankee's figures are \$365 million for  
23 decommissioning, which somehow I think has to be  
24 acknowledged is just I guess for cutting up what they have  
25 done so far, because remediation is another \$35 million and

1 then the cost estimate at this point just to set up the  
2 storage site is \$86 million. We are close to a half a  
3 billion dollars to decommission a reactor that cost \$37  
4 million to build -- which is sort of mind-boggling to us in  
5 this community anyway.

6 What we have in this is also, and I just want to  
7 use a quote that Yankee gave in response to us, because part  
8 of our concern is that Yankee's position in terms of how  
9 much it is going to clean up the site or who it is going to  
10 see as the average member of the public where concern is in  
11 fact driven by money rather than by health and safety, and  
12 in one sense they should be. They are a corporation, but we  
13 see the NRC as the ones to decide whether they can be driven  
14 as harshly by money as maybe they would like to.

15 One of the things that Yankee says, and I want to  
16 quote it, in response to our issues around using children as  
17 the average member of the public instead of the 250-pound  
18 male that gardens one percent of the time is that the  
19 decision tree on standard-setting is not one-sided. There  
20 are high social costs to be paid for setting a standard that  
21 is so low that the drain it imposes on finite resources is  
22 not worth the benefit.

23 DR. MURPHY: What did you quote from?

24 MS. KATZ: This is from Yankee's response to our  
25 contentions that we submitted, you know, to you on January



1 5th I think it was, so that this was in a footnote, and it  
2 is a concern to us in this that part of the decisions that  
3 are being based are not being based on health and safety  
4 concerns but are really driven by the issue that there are  
5 limited resources, that what we are talking about is close  
6 to a half a billion dollars and that is not necessarily with  
7 an estimate that this may remain on-site forever if the DOE  
8 doesn't come to some agreement about what to do with it.

9 In a certain way, the fact that all of this is  
10 outside the scope of this hearing is sort of mind-boggling,  
11 because who is going to protect us in the long-run? I mean  
12 who is going to say that Yankee is there? Who is going to  
13 say that the DOE is going to do anything? They haven't done  
14 anything much at other sites that have done very well, so we  
15 are really concerned about accountability and responsibility  
16 and financial responsibility, which is not necessary even  
17 Yankee.

18 I mean it is not their fault that the DOE isn't  
19 taking the fuel, but it is our problem and it has to be  
20 acknowledged that the fact that this hearing isn't dealing  
21 with any of that and securing and acknowledging that there  
22 may be a problem is really -- it's difficult for us to  
23 understand, and you may not be able to do anything about it,  
24 but I mean it boggles the mind that we may have this massive  
25 babysitting project and we don't know who is going to really

1 be babysitting it and how much it is going to cost.

2 CHAIRMAN BECHHOEFER: Would this be another of the  
3 ones that we're going to group together and -- with some  
4 comments -- and tell the Commission we have rejected it  
5 because --

6 MS. KATZ: I understand.

7 CHAIRMAN BECHHOEFER: -- that there are concerns  
8 of those who expressed them and that's for you, Commission,  
9 to deal with.

10 MS. KATZ: I understand, but it just needs to be  
11 said out loud. You see, there's something quite  
12 schizophrenic in this process that some of the things that  
13 affect our community the most are outside of the purview of  
14 our being able to comment on them, and it flies in the face  
15 of at least sanity if not the rule.

16 [Laughter.]

17 CHAIRMAN BECHHOEFER: Well, but some of the  
18 guidelines that we're bound to uphold --

19 MS. KATZ: I mean you guys can't do anything about  
20 it, but, you know, it drives us crazy.

21 CHAIRMAN BECHHOEFER: Right. Mr. Lovejoy,  
22 anything more?

23 MR. LOVEJOY: Nothing further.

24 [Laughter.]

25 CHAIRMAN BECHHOEFER: We will include these among

1 those that we --

2 MR. BLOCK: We actually would object.

3 We believe this is a bit different. We think that  
4 the rule pretty clearly contemplated two parts, a fuel cost  
5 and a site remediation cost, and that this is not the same  
6 as what was being spoken of in the first part of the case as  
7 a merely formalistic redraft of the plan and that we believe  
8 that it is a reasonable thing that these concrete  
9 estimations be there and that they be based on, you know  
10 what appears to be the likely course of events, and that  
11 when they are not there that that really does not comply  
12 with the regulation, and that the regulation contemplated  
13 that the fuel and the site cleanup costs would be present,  
14 so I think it is a little different from the others, where I  
15 would agree that our purpose was rather to raise and not  
16 waive. Here I think that we would ask you to take a harder  
17 look at what we are saying.

18 CHAIRMAN BECHHOEFER: Thank you.

19 Well, we get to Contention H, which has several  
20 parts. To the extent that these parts could be included  
21 within the other contentions on similar subjects, you may  
22 want to address whether we should just --

23 MR. BLOCK: We would defer to the Board's wisdom  
24 in that matter, and I would tend to agree that parts of them  
25 may go to other portions of the contention.

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1           However, we did have some specific comments about  
2           the responses to H-3.

3           CHAIRMAN BECHHOEFER:   Okay.

4           MR. BLOCK:   And I would like to pass those on to  
5           the panel and the parties.

6           Focusing on H-3, which regards ad hoc and vague  
7           ALARA analysis in the guideline determination, the staff  
8           doesn't address the issue, just states that we haven't shown  
9           that it's vague and ad hoc.   But we're quoting from the  
10          final site -- I'm losing -- status survey plan.   I finally  
11          came to the acronym -- the senior moment of acronym  
12          problems, acronym overload.

13          We quoted from the plan that stated if the new  
14          radionuclide data is obtained, the GLVs may be reevaluated  
15          and altered, and we ask how?   Yankee does not state how.  
16          Why isn't this, you know, vague?   And I think that the  
17          language that we quoted here being the limit of how they're  
18          going to do it is -- we believe just doesn't cut it.   There  
19          needs to be more, and we don't think that that's an adequate  
20          ALARA analysis.

21          DR. MURPHY:   Can I ask a question?   This is not an  
22          ALARA issue.

23          MR. BLOCK:   Yes, I misspoke.

24          DR. MURPHY:   This goes back to the issue of --

25          MR. BLOCK:   Right.   I was speaking of the -- I

1 misspoke.

2 DR. MURPHY: Calculating guideline values.

3 MR. BLOCK: Right. I misspoke. I went to number  
4 3 instead of number 5, which is where I intended to go.  
5 Please forgive me. The late hour is --

6 DR. MURPHY: Want to start all over again and just  
7 forget about what you just said?

8 MR. BLOCK: We can strike that, and I'll begin, if  
9 you'd just like to strike that last statement. And we'll  
10 say that what we really want to do is just devote our  
11 comments to H-5, Yankee's ALARA --

12 DR. MURPHY: Which is an ALARA, not a guideline --

13 MR. BLOCK: Right. Right. We're going to H-5,  
14 and what we did was we offered the Board the quotation and  
15 said that this is the entire analysis in the final status  
16 survey plan, and the other comments apply that I was making  
17 about the staff response and Yankee not stating how, and we  
18 believe this is vague.

19 Sorry about the confusion in numbering there.

20 DR. MURPHY: That's it?

21 MR. BLOCK: That's it.

22 DR. MURPHY: These additional bases are not  
23 additional bases to the ALARA analysis, they're additional  
24 bases to H? Is that it?

25 MR. BLOCK: Yes, they're additional bases in

1 support of H.

2 DR. MURPHY: All right.

3 MR. BLOCK: Which, going back to H, was the  
4 inadequacies in the final status survey plan.

5 CHAIRMAN BECHHOEFER: Mr. Gad.

6 MR. GAD: Addressing H-5, I submit to Your Honor  
7 that this is a little bit of an exercise in leger de main.  
8 The statement that is quoted, all right, out of the status  
9 survey plan, which is the appendix to the license  
10 termination plan, follows the extended ALARA analysis that's  
11 in section 4 of the license termination plan.

12 Now I gather the contention is that everything  
13 that's in section 4 of the LTP should have been repeated  
14 again in the site survey plan. I can't imagine that that  
15 states an admissible contention as what's there to litigate.  
16 The analysis has been done, it's there on the record, if you  
17 like it, that's fine, if you don't like it, that's fine, but  
18 to say it hasn't been done because it wasn't repeated from  
19 the front of the book to the back of the book is frankly at  
20 the limit.

21 CHAIRMAN BECHHOEFER: Mr. Block, would that affect  
22 your contention, because -- or is there anything different?  
23 Because if the analysis has been done, but it's just  
24 somewhere else --

25 MR. BLOCK: Just a moment more. I'm sorry to

1 delay here.

2 We're going to concede the point.

3 CHAIRMAN BECHHOEFER: It had been our plan to get  
4 through the discussion of NECNP's contentions, and we seem  
5 to have done that. And we were going to leave within like  
6 15 minutes, but is there anything anybody would like to  
7 raise before we adjourn for the day -- or adjourn until the  
8 limited-appearance session, and then we'll come back again  
9 tomorrow obviously.

10 DR. ELLEMAN: Mr. Gad, could I go back over a  
11 statement you made to make sure I really understand? I  
12 believe you said that -- I think you said 90 percent of the  
13 total dose is estimated to come from cesium-137 and  
14 cobalt-60.

15 MR. GAD: I actually didn't put a figure on it.  
16 It comes out of the book, Your Honor.

17 DR. ELLEMAN: Okay. But a very high percentage.

18 MR. GAD: Yes.

19 DR. ELLEMAN: Is that a percentage from external  
20 exposure to the gamma rays, or does that include the  
21 internal exposure from ingestion, inhalation, and other  
22 exposure pathways one might have?

23 MR. GAD: That is an estimate of TEDE, Your Honor.

24 DR. ELLEMAN: Estimate of what?

25 MR. GAD: TEDE -- total effective dose equivalent,

1 which is all pathways.

2 DR. ELLEMAN: All right, and TEDE includes both of  
3 those, it includes an internal exposure and an external.

4 MR. GAD: That is correct.

5 DR. ELLEMAN: Okay. So you are saying that the  
6 site has been able to determine that there are essentially  
7 no internal exposures from strontium-90, from the alpha  
8 emitters, from nickel-63, which is a major isotope cited,  
9 that these determinations have somehow been made at this  
10 point.

11 MR. GAD: With sufficient precision for the ALARA  
12 analysis, yes, Your Honor.

13 DR. ELLEMAN: Okay.

14 MR. GAD: That doesn't mean we finished the whole  
15 job.

16 DR. ELLEMAN: Okay.

17 CHAIRMAN BECHHOEFER: Mr. Block?

18 MR. BLOCK: Dr. Elleman, on the citation that you  
19 were questioning from the LTP section 2.3.1, which Mr. Gad  
20 had referred to before, radionuclide distribution, doesn't  
21 really seem to speak of anything but gamma, and it speaks  
22 about the data indicating that cobalt-60 is the most  
23 significant contributor to gamma activity, approximately 75  
24 percent of total gamma, and that iron-55, nickel-63, and  
25 cobalt-60 comprise approximately 98 percent of the total



1 activity in structures and systems, contamination,  
2 radionuclide distributions for the main coolant system and  
3 the balance of the plant are found in Table 3.1-2 of the  
4 decommissioning plan.

5 So the whole story isn't in the LTP. You'd have  
6 to go back to the D plan to see the table. But I think that  
7 this is essentially a gamma estimation. I don't think this  
8 is an all-pathways number. And I guess I would dispute  
9 that. I'm not sure -- if you could give me -- refer me to  
10 another place where it says that this was intended as all  
11 pathways.

12 MR. GAD: What I can do is to say that when Your  
13 Honor asked the question, I looked to the expert. The  
14 expert said to me TEDE.

15 DR. ELLEMAN: TEDE. And TEDE does include  
16 internal.

17 MR. GAD: Absolutely.

18 DR. ELLEMAN: So you're in effect saying it  
19 includes --

20 MR. GAD: Yes, absolutely.

21 DR. ELLEMAN: Internal dose.

22 MR. GAD: Absolutely, unless there's another TEDE  
23 running around that I'm not aware of.

24 DR. ELLEMAN: I understand what you're saying.

25 CHAIRMAN BECHHOEFER: Absent anything further,

1 we'll adjourn for the formal sessions of the hearing, but  
2 we'll presume seven o'clock in this same room for limited  
3 appearances, and we'll be back here tomorrow at 9 a.m. for  
4 starting with Citizens Awareness Network contentions and  
5 other matters before us.

6 MR. DIGNAN: Your Honor, as a matter of planning,  
7 is it the Board's anticipation to finish tomorrow?

8 CHAIRMAN BECHHOEFER: It's our hope. I don't know  
9 if it's our anticipation.

10 We would like to ask Citizens Awareness by the way  
11 when we get to your contentions tomorrow to consider which  
12 of yours would be encompassed in those that we've already  
13 heard about, if any.

14 MS. KATZ: I mean, that was one of the things that  
15 was coming up in terms of thinking about this, because we  
16 felt that we responded a lot to the issues that came up,  
17 which covered a lot of what we had to say, and in fact we  
18 took it that we weren't sure that we were coming back so  
19 that what we usually do with the NRC is try to say all that  
20 we have to say up front, so that it's a position we've  
21 learned to take, so that we have covered a lot of the ground  
22 we would cover in terms of what we would present. And I'm  
23 not sure that there is much or anything that we haven't  
24 covered already today in our responses and in our agreement  
25 with New England Coalition.

1 DR. MURPHY: Are you saying then that you don't  
2 feel a need to --

3 MS. KATZ: Well, I don't know why -- I need to  
4 think it over and see, but maybe there's a way --

5 DR. MURPHY: Okay. Well, why don't you do some  
6 homework and then --

7 MS. KATZ: Okay.

8 DR. MURPHY: With the idea of trying to keep your  
9 discussion --

10 MS. KATZ: Okay.

11 DR. MURPHY: To those things that are going to be  
12 new to us.

13 MS. KATZ: Okay. I'll check it out and see --

14 DR. MURPHY: And within the scope of your --

15 MS. KATZ: Maybe we'll have a very short day and  
16 everyone will be happy.

17 DR. MURPHY: That would be fine.

18 MR. LOVEJOY: I like that comment everybody's  
19 going to be happy.

20 CHAIRMAN BECHHOEFER: Okay. With that, we'll --  
21 as I say, we'll adjourn the prehearing conference, the  
22 formal session. We'll be back for limited appearances, same  
23 room, seven o'clock.

24 [Whereupon, at 4:50 p.m., the prehearing  
25 conference was recessed, to reconvene at 7:00 p.m., this

1 same day, for limited appearances.]  
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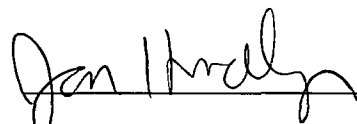
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A handwritten signature in cursive script, appearing to read "Jon Hundley", is written over a horizontal line.

Jon Hundley

Official Reporter

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