

**Official Transcript of Proceedings**  
**NUCLEAR REGULATORY COMMISSION**

Title: Entergy Nuclear Operations, Inc.  
Indian Point Units 2 and 3

Docket Number: 50-247-LR and 50-286-LR

ASLB Number: 07-858-03-LR-BD01

Location: Tarrytown, New York

Date: Monday, December 10, 2012

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY AND LICENSING BOARD PANEL

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HEARING

-----x Docket Nos.

In the Matter of: : 50-247-LR and

ENTERGY NUCLEAR OPERATIONS, INC.: 50-286-LR

(Indian Point Generating Units 2:

and 3) : ASLBP No.

-----x 07-858-03-LR-BD01

Monday, December 10, 2012

DoubleTree by Hilton Hotel Tarrytown

Westchester Ballroom

455 South Broadway

Tarrytown, New York

BEFORE:

LAWRENCE G. McDADE, Chair

MICHAEL F. KENNEDY, Administrative Judge

RICHARD E. WARDWELL, Administrative Judge

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1 T A B L E O F C O N T E N T S

2	<u>Exhibits</u>	<u>Marked Rec'd</u>
3	NYS Exhibit 000466	3283
4	NYS Exhibit 000467	3284
5	Entergy 000246	3287
6	Entergy 000595-000601	3302
7	New York 000468-000471	3302
8	Entergy Revision 3 to 000372 and 000373	3302
9	Entergy Revision to 000246	3302
10	Staff revisions to 15 and 16	3302
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## P R O C E E D I N G S

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9:02 a.m.

JUDGE McDADE: On the record. The hearing will come to order.

We're here in the matter of Entergy Nuclear Operations Inc., Indian Point Nuclear Generating Units 2 and 3, Docket No. 50-247-LR and 50-286-LR. And it's a hearing and continuation of the hearing on the renewal of the license for the Indian Point Units 2 and 3.

For the record, let's go down. Who is representing Entergy here today. Ms. Sutton.

MS. SUTTON: Yes, Your Honor. This is Kathryn Sutton on behalf of the Applicant. And here today is Paul Bessette, Brad Fagg and Martin J. O'Neill. In addition, we will be having a representative from Entergy's in-house Office of General Counsel here today, William Dennis.

JUDGE McDADE: Okay. Thank you. From New York, Mr. Sipos.

MR. SIPOS: Good morning, Your Honor. John Sipos for the State of New York. With me today is Assistant Attorney General Janice Dean. And we also have Assistant Attorney General Kathryn Liberatore with us as well.



1 JUDGE McDADE: Thank you. From  
2 Riverkeeper.

3 MR. MUSEGAAS: Good morning, Your Honor.  
4 Phillip Musegaas for Riverkeeper.

5 JUDGE McDADE: Are you going to be here  
6 alone today, Mr. Musegaas?

7 MR. MUSEGAAS: I believe Ms. Brancato was  
8 coming in, but she may be running late. I apologize,  
9 Your Honor. Thanks.

10 JUDGE McDADE: No problem. And the Staff,  
11 Mr. Turk.

12 MR. TURK: Good morning, Your Honors.  
13 Sherwin Turk for the NRC Staff. To left, Beth Mizuno  
14 from the NRC Staff and also in the audience, Mr. David  
15 Roth.

16 JUDGE McDADE: Okay. Thank you.  
17 From Clearwater.

18 MS. RAIMUNDI: Good morning, Your Honor.  
19 Karla Raimundi.

20 JUDGE McDADE: And from the Town of  
21 Buchanan or Village rather.

22 MAYOR MURRAY: Sean Murray, Mayor of  
23 Buchanan. Good morning.

24 JUDGE McDADE: We do not appear to have  
25 any of the other Interested Government Agencies

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1 present here, but let's get started at this point.

2 Before we get started on the questioning  
3 of the witnesses, there are a few housekeeping matters  
4 that I wanted to take up. First of all, with regard  
5 to rebuttal exhibits and testimony relating to New  
6 York 38 that we are not going to rule on that. We are  
7 going to wait until after the January deadline for  
8 motions in limine and answers to motion in limine.  
9 Those will be January 7th and 13th respectively.

10 One thing I do want to note. We had  
11 mentioned that with regard to exhibit lists that we  
12 weren't going to continue to admit new exhibit lists.  
13 But that doesn't mean that it's not necessary for you  
14 to file revised exhibit lists when you file revised or  
15 additional exhibits. That way we will have a current  
16 version of the exhibit list available. Although we're  
17 only going to wait until the end of the proceeding  
18 before we then admit a final exhibit list rather than  
19 just adding them and then striking them and adding  
20 them and striking them.

21 At the November 28th session, there was an  
22 issue with regard to New York State 000466. That was  
23 a press release relating to New York Contention 37.  
24 At that point, it was marked for identification  
25 purposes only. And we stated that we would hear any

1 objections to our receiving it at the beginning of the  
2 December hearing.

3 Does Entergy have any objection to our  
4 receiving New York 000466?

5 MS. SUTTON: No objection, Your Honor.

6 JUDGE McDADE: Does the Staff?

7 MS. MIZUNO: No objection, Your Honor.

8 The exhibit then is received.

9 (Whereupon, the above-referred  
10 to document marked previously  
11 for identification as New York  
12 State Exhibit No. 000466 was  
13 received into evidence.)

14 On December 3rd, New York filed a letter  
15 stating that it did not object to the introduction of  
16 Entergy 591 to 594. So those exhibits do remain  
17 admitted.

18 New York filed a response of affidavit to  
19 New York State 000467 or labeled New York 000467. Is  
20 there any objection to the admission of New York  
21 000467 from Entergy?

22 MR. BESSETTE: Your Honor, is that  
23 additional declaration from Mr. Sheppard?

24 JUDGE McDADE: Yes.

25 MR. BESSETTE: Your Honor, we believe

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1 that's supplemental testimony and that there wasn't --  
2 We do believe there was for a request of supplemental  
3 testimony. So, yes, we do object to it, but we did  
4 not file an objection.

5 JUDGE McDADE: Okay. Does the Staff have  
6 any objection to it?

7 MS. MIZUNO: No objection, Your Honor.

8 JUDGE McDADE: Okay. New York 000467 is  
9 admitted.

10 (Whereupon, the above-referred  
11 to document marked previously  
12 for identification as New York  
13 State Exhibit No. 000467 was  
14 received into evidence.)

15 I would note that New York needs to file  
16 a new exhibit list that contains 000465, 000466 and  
17 000467. New York State's new exhibit list needs to  
18 include also 000468 through 000471. There's no need  
19 to do that now. But just the next time you file a  
20 revised exhibit list, please include that.

21 Now next I wanted to mention we received  
22 a plethora of filings towards the end of last week on  
23 December 6th and December 7th. These put both the  
24 Board and the other parties in a difficult position.  
25 I guess you could say it's better late than never, but

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1 better early than late.

2           When we get revised testimony and revised  
3 statements of position in at such a late period of  
4 time, it is difficult for opposing parties to adjust  
5 to it. So we would urge in the future that you submit  
6 as early as possible particularly given the fact that  
7 this particular case has gone on for a considerable  
8 period of time. And the original statements of  
9 position were submitted a significant period of time  
10 ago.

11           What we are going to do with those recent  
12 submission is this. They are going to be marked for  
13 identification, but they are not going to be received  
14 at this point in time.

15           We are going to be asking questions based  
16 on the statements of position and the testimony that  
17 was received earlier during the course of this  
18 proceeding. We will allow the witnesses if they feel  
19 it appropriate to refer to those new exhibits.  
20 Obviously, if it's a situation where they believe  
21 something has changed, their previous testimony is  
22 erroneous, it's necessary for them to be accurate and  
23 up to date.

24           But, for example, if we call up a question  
25 on a particular exhibit, we are going to be calling up

1 the earlier testimony. Now the testimony that is come  
2 in is relatively limited in scope. And we will be as  
3 I said calling up the exhibits based on the testimony  
4 that is previously been submitted.

5 There are going to be some changes in  
6 pagination with the additional testimony that's come  
7 in. What we are going to allow is opposing parties to  
8 submit any objections to the new exhibits or the new  
9 testimony

10 Specifically, we have revised Entergy  
11 000372 Statement Position. On page 21 and page 37 of  
12 that, there are some changes. The NRC Staff filed  
13 revised 000015 and revised 000016. And again on page  
14 20 and 45 of that document, we have various changes  
15 which are going to affect the pagination of the  
16 exhibits that we've already received.

17 So I hope you all understand how we're  
18 going to be doing it. The exhibits that show up will  
19 not be the revised one when we ask Mr. Welkie to pick  
20 them up. And in January where we have previous  
21 exhibits or deadlines for motions in limine, if  
22 opposing parties either to the Staff or to Entergy,  
23 meaning the Intervenors, having any objection to what  
24 has been recently filed, they can file it by the  
25 January 7th deadline. And if we do not receive any

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1 objections by that point in time, we will make a  
2 decision to admit or not to admit the revised.

3 Okay. We have also an Entergy exhibit  
4 000246. In that particular exhibit, it's just simply  
5 noted that in the previous version of it three pages  
6 were missing. I take it that there's no objection to  
7 our receiving the revised version of 000246 which is  
8 complete. Am I correct?

9 MR. SIPOS: John Sipos for the State of  
10 New York. That is correct, Your Honor.

11 JUDGE McDADE: And Mr. Turk?

12 MR. TURK: I don't have it in front of me,  
13 Your Honor. I really can't comment. I don't have a  
14 position for it.

15 JUDGE McDADE: Okay. But you're not  
16 objecting. So Entergy 000246 is received.

17 (Whereupon, the above-referred  
18 to document marked previously  
19 for identification as Entergy  
20 Exhibit No. 000246 was received  
21 into evidence.)

22 Okay. One last thing we wanted to point  
23 out was that Entergy's revised exhibit list -- this is  
24 revision 10 -- has the exhibit name for Entergy 000598  
25 and 000599 switched. The exhibits there, they're just

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1 described differently.

2 Okay. Next what I wanted to do is to talk  
3 a little bit about the potential Track 2 issues and  
4 get a general idea from the parties either now or  
5 certainly by the end of our hearing this week of when  
6 we might be able to proceed with the Track 2 issues.

7 With regard to New York 26 and New York  
8 38, those contentions should be ready for hearing  
9 after the answers to motions for cross come in in  
10 February. Is there anything else from any of the  
11 parties that needs to come in with regard to New York  
12 26 or 38 before we would be able to proceed with a  
13 schedule towards a hearing on that?

14 And again if you're not ready to answer  
15 right now, what I'd like you to do is just jot it down  
16 and by the end of the week to come back and revisit  
17 these. Would you like to respond now, Ms. Sutton?

18 MS. SUTTON: No, Your Honor. We would  
19 like to defer to the end of the week.

20 JUDGE McDADE: Okay. So that's sort of  
21 Item No. 1 and I'll put that to all of the parties  
22 just with regard to those. Is there anything else?

23 Next, concerning Riverkeeper Environmental  
24 Contention 8, the Staff indicated that the FSEIS will  
25 be completed this month or in January of 2013. And

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1 what we're looking for is a more specific statement  
2 from the Staff of when they anticipate that actually  
3 will be published.

4 Pursuant to our July 2010 scheduling  
5 orders, the parties will then have 30 days to file new  
6 or amended contentions based on the FSEIS. And what  
7 we would ask the Staff to be able to address by the  
8 end of the hearing this week is (1) are there going to  
9 be any significant differences in the Staff's view  
10 between the DEIS and the FSEIS such that New York or  
11 any other party would need a significant period of  
12 time to review those additional changes. And then (2)  
13 having had an opportunity to review the DEIS, does New  
14 York, if there are no significant changes anticipated  
15 between the two, anticipate filing any new or amended  
16 contentions or does Riverkeeper anticipate filing any  
17 new or amended contentions similar to Environmental  
18 Contention 8 that's currently pending, you know, based  
19 on the FSEIS?

20 Next, with regard to New York 25, in its  
21 December 2012 status report, it was indicated that the  
22 Safety Evaluation Report Supplement should be filed in  
23 early 2013. And what we would be looking for is a  
24 better idea of what early entails. Are we talking  
25 about January? Are we talking about May? And also

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1 will that be a draft or final version of the document?

2           And then the final thing that I wanted you  
3 to consider is this. With regard to certain of the  
4 Track 2 contentions 25, 26 and 38, we have a  
5 significant number of proprietary filings which could  
6 potentially affect how the hearing will be conducted.  
7 And the question is whether or not from the standpoint  
8 of the parties the proprietary aspect the proprietary  
9 aspect of those can be easily segregated or whether or  
10 not those given the proprietary nature of some of it  
11 it would be necessary to have the hearing on those  
12 closed to the public.

13           And that then leads to the next question.  
14 If significant portions were going to be closed to the  
15 public and it doesn't make any sense to have five  
16 minutes have the public enter, five minutes have the  
17 public exit. The then question is if a significant  
18 portion was going to be closed, should we have the  
19 hearing here or should we have the hearing on those  
20 down at the Rockville hearing facility given if public  
21 access would not be available?

22           Those are the issues with regard to the  
23 Track 2 issues that we would like the parties to be  
24 able to address. And we'll revisit this just very  
25 briefly before we break on Friday afternoon here.

1           Also if there are any other issues with  
2 regard to the Track 2 contentions and hearing on the  
3 Track 2 contentions we would ask the parties to bring  
4 that to our attention as early as possible during the  
5 course of the week so that other parties would be  
6 aware of it. And then we can discuss that at the  
7 close of the hearing on Friday.

8           Are there any questions about anything  
9 that I've gone over so far from Entergy?

10           MS. SUTTON: No, Your Honor.

11           JUDGE McDADE: New York?

12           MR. SIPOS: No, Your Honor.

13           JUDGE McDADE: Riverkeeper?

14           MR. MUSEGAAS: No, Your Honor.

15           JUDGE McDADE: Staff?

16           MR. TURK: Not to break precedent, Your  
17 Honor, but yes. A few things. First of all, let me  
18 address the most recent comments that you had about  
19 Track 2.

20           JUDGE McDADE: Yes.

21           MR. TURK: The Staff will be publishing  
22 the FSEIS and the SER Supplement later than I had  
23 indicated to you in the last status report. In the  
24 status report of December 1 I believe, I was holding  
25 to the original publication or the earlier publication

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1 dates.

2 With respect to the FSEIS, the consultants  
3 with NMFS have been extended into January. I believe  
4 they close January 13 or 15. So the FSEIS Supplement  
5 will be delayed until February.

6 JUDGE McDADE: Okay. As far as sort of  
7 the details, what I do want to do is move forward with  
8 questioning these witnesses and not have them just  
9 wait around. So I would like to take that up again at  
10 the conclusion of the hearing. I do appreciate it.

11 MR. TURK: Later this week I will talk  
12 about the SER Supplement also then. But with respect  
13 to Contention New York 5 which we're here to hear  
14 evidence on, the additional testimony that the staff  
15 filed, the revised testimony and statement of position  
16 that the Staff filed, dealt with the question of  
17 underground piping.

18 In a nutshell, Entergy had previously said  
19 they do not have underground piping within the scope  
20 of license renewal at Indian Point. They later  
21 determined based upon a new reading of the I believe  
22 Staff's ISG, Interim Staff Guidance document, that  
23 they do have some limited areas of underground piping  
24 that meet the definition.

25 That's why they submitted new testimony

1 and an SOP. And that's why we addressed that new  
2 information in our revised testimony and SOP.

3 So I think if you go back and look at what  
4 the new testimony addresses, it's that limited issue.  
5 And I wanted to point out that I do have extra copies  
6 of the Staff's revised testimony and revised SOP as  
7 well as additional paper copies of the redlined  
8 versions of those documents if the Board or any  
9 parties so wish to get a paper copy while we're here  
10 today or later this week.

11 JUDGE McDADE: Okay. Does New York need  
12 a paper copy of it?

13 MS. DEAN: No, Your Honor.

14 JUDGE McDADE: Riverkeeper?

15 MR. MUSEGAAS: No, Your Honor. Thank you.

16 JUDGE McDADE: Clearwater?

17 MS. RAIMUNDI: No, Your Honor.

18 JUDGE McDADE: Buchanan?

19 MAYOR MURRAY: No, Your Honor.

20 JUDGE McDADE: What about Entergy?

21 MS. SUTTON: No, Your Honor.

22 JUDGE McDADE: Okay. And we were able to  
23 print off the copies that were sent on Friday evening.

24 MR. TURK: Thank you.

25 JUDGE McDADE: So we don't need a paper

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1 copy. Anything else, Mr. Turk, before we get started?

2 MR. TURK: No, Your Honor.

3 JUDGE McDADE: Clearwater, anything  
4 further?

5 MS. RAIMUNDI: No, Your Honor.

6 JUDGE McDADE: Buchanan?

7 MAYOR MURRAY: No, Your Honor.

8 JUDGE McDADE: Okay. We're going to get  
9 started here.

10 MR. SIPOS: Excuse me, Your Honor. I'm  
11 sorry. It's John Sipos.

12 JUDGE McDADE: Yes.

13 MR. SIPOS: I did have a brief  
14 housekeeping issue to raise with the Board concerning  
15 the schedule for this week. The State was wondering  
16 and we've discussed it with Entergy and NRC Counsel  
17 whether or not the Board could shed any light on how  
18 it anticipates the schedule rolling out this week  
19 especially with respect to Contention New York 8 which  
20 is the transformer one.

21 And the State was wondering. Would it be  
22 appropriate or is it possible to project this morning  
23 that New York 8 would not start before Wednesday  
24 morning? And I ask for scheduling reasons.

25 JUDGE McDADE: I think that that is an

1 extremely safe assumption.

2 MR. SIPOS: Thank you, Your Honor.

3 JUDGE McDADE: I think it's also a safe  
4 assumption that it won't start Wednesday afternoon.  
5 By the time we get through 5, 6 and 7, I think we're  
6 going to be looking at least Thursday.

7 MR. SIPOS: Okay. Thank you, Your Honor.  
8 That's very helpful.

9 JUDGE McDADE: As far as I assume it's an  
10 issue with regard to witness availability and getting  
11 witnesses here.

12 MR. SIPOS: And hotel rooms.

13 JUDGE McDADE: Yes.

14 MR. SIPOS: More logistics, yes. Thank  
15 you.

16 JUDGE McDADE: Okay. Anything further?

17 (No verbal response.)

18 Okay. With regard to the witnesses, we're  
19 going to get started here in a couple of minutes. The  
20 first thing we're going to do is to swear you in as  
21 the testimony you give here has to be under oath.  
22 Would you please all raise your right hand?

23 Do you swear that the evidence you'll give  
24 here today will be the truth, the whole truth and  
25 nothing but the truth?

1 (Chorus of yeses.)

2 Okay. Thank you. Now let me explain a  
3 little bit about the way this is going to operate.  
4 This is basically a dialogue between you and us.

5 We are going to be asking you questions.  
6 You're going to be answering those questions. We are  
7 going to address our questions to you. You are going  
8 to address your answers to us.

9 There will be circumstances I'm sure where  
10 witnesses for one party will significantly disagree  
11 with the witnesses for another. That's not at all  
12 uncommon.

13 But you don't argue back and forth between  
14 each other. You address your comments directly to the  
15 Board. And then the Board will have an opportunity to  
16 ask questions of the witness from the opposing parties  
17 to give their view on it. So it's a dialogue back and  
18 forth.

19 If Counsel have an objection, they will be  
20 able to state their objection. If there is an  
21 objection by Counsel, hold your answer until after the  
22 objection is ruled on. If any of the Counsel does  
23 have an objection, just stand in place until we rule.

24 Next, if for any reason you feel that you  
25 need a recess, don't sit there and suffer in silence.

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1 Make sure you let us know. If for some reason you  
2 can't catch the attention if we're looking at our  
3 notes and being engrossed in them, catch the eye of  
4 the Counsel who represents you or whose testimony  
5 you're proffering. They will stand up and not be shy  
6 and ask us for a brief recess.

7 Are there any questions from any member of  
8 the witness panel before we get started?

9 (No verbal response.)

10 Okay. Apparently not. Judge Wardwell.

11 JUDGE WARDWELL: Thank you, Mr. Chair.

12 It's been our tradition at this hearing is to  
13 summarize a bit what the contention deals with and  
14 where our areas of concern are. And so I'll start out  
15 by just reading the contention.

16 The aging management -- This is New York  
17 State 5 dealing with buried pipes. And the contention  
18 reads that the Aging License Renewal Application  
19 violated 10 CFR Sections 54.21, 54.29(a) because it  
20 does not provide adequate inspection and monitoring  
21 for corrosion or leaks in all buried systems,  
22 structures and components that may convey or contain  
23 radioactively contaminated water or other fluids  
24 and/or may be important for plant safety.

25 That's the contention as we discussed in

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1 our Board decision of July 31, 2008. That's LBP-08-  
2 13. As far as we were concerned, there is still a  
3 question as to whether the License Renewal Application  
4 provides an adequate aging management plan for buried  
5 pipes, tanks and transfer controls that contain  
6 radioactive fluid that meet 10 CFR 54.4(a) criteria.

7 In addition, the License Renewal  
8 Application is not clear whether an AMP for IP1 buried  
9 systems, structures and components that are being used  
10 by IP2 and 3 exists and whether the LRA is adequate if  
11 it does not exist.

12 We really have grouped our questions into  
13 seven different categories. We have quite a few  
14 questions to deal with. The first one is just the  
15 scope of the AMP. We then want to talk a little bit  
16 about the intended functions of buried pipes and the  
17 applicability of Entergy's AMP for buried pipes.

18 Then we'll discuss in far amount of detail  
19 the buried pipe TIP program, the BPTIP. I'm sure  
20 there's a fancy way that people call it. But whether  
21 it's BPTIP or whatever, we'll have some questions on  
22 that. Get into more details of the AMP. And then  
23 finish up talking about corrosion potential, the  
24 cathodic protection and then discuss a little bit  
25 about these license commitments.

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1           That's the kind of framework of where  
2 we're going. As I mentioned, we do have quite a few  
3 questions. It will probably take a good part of one  
4 or two days to get through all of this I would  
5 imagine.

6           In regards to that, I would encourage all  
7 witnesses in their answer to be as concise as  
8 possible. Please do not get on long dialogues if you  
9 can avoid it unless the question just forces it.

10           Do not be discouraged or dismayed if I  
11 interrupt you and stop you from answering. It's  
12 probably not your fault. It's probably that I'm not  
13 clear on my question which is the majority of the  
14 time. But I will stop you if you do get off-track  
15 from what I'm anticipating because otherwise we may  
16 never get through asking questions about this.

17           So I just don't want you to be shocked if  
18 I do interrupt you. I'm not trying to be rude. I'm  
19 just trying to do it for the sake of expediting our  
20 needs.

21           And that's what we're here for. We're  
22 here to clarify questions that we have on the  
23 testimony. This is not a game of trying to trick you  
24 into saying something you don't want to say. So it's  
25 a gotcha later on. It is truly just to clarify the

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1 testimony.

2 I really don't know necessarily which  
3 witnesses may end up spending most of the time  
4 answering questions. Often times, lots of the  
5 witnesses don't say anything because they're not asked  
6 anything in regards to their testimony.

7 What that means is if you aren't asked a  
8 question, it's your testimony was pretty darn clear.  
9 So congratulate yourself. But don't again be  
10 discouraged or think that we haven't read your  
11 testimony. We are challenging what that testimony  
12 says.

13 Often times, we do end up spending most of  
14 the time historically with the Staff and with the  
15 Applicant. And I just say that because that's how we  
16 tend to do it. And it seems like we're focusing on  
17 it. But they have to -- We are challenging them to  
18 defend items that were brought up in the testimony.  
19 And that's why you tend to end up spending a bit more  
20 time with those witnesses than others.

21 When you are answering, if it is a yes/no  
22 question, really make it a yes/no answer. If you want  
23 to elaborate, ask if you can elaborate and we'll make  
24 a decision on whether or not we want to do it then.  
25 Often times, we may not allow that because later on I

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1 know that my subsequent questions will allow you to  
2 get to other matters that you need to address. I just  
3 don't necessarily want to do it right at that point  
4 because it may not be as clear in regards to the  
5 questions that are asked later in regards to any  
6 amplification.

7 But if you do have a burning desire, ask  
8 and then I'll make a decision. If I decide or any of  
9 the other judges decide they don't want you, don't  
10 take that as a rebuff. Hopefully, we'll get to that  
11 later on. And then there's always an opportunity keep  
12 in mind as we have when we were here in October.  
13 There will be a chance for your own counsel to allow  
14 you to elaborate on any cross that they might have for  
15 you at the end of when we're through asking questions  
16 on this. So you can jot yourself a note and then  
17 bring it up with them to make sure they get back to a  
18 point that you really wanted to make and didn't have  
19 the opportunity to make.

20 With that as an introduction --

21 JUDGE McDADE: Before you start asking the  
22 questions, if I could just very briefly and just for  
23 housekeeping for Mr. Welkie, I mentioned certain  
24 exhibits were marked for identification, but not  
25 received. And I just wanted to note them by number

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1 that those are the new exhibits, Entergy 000595-000601  
2 and New York 000468-000471. And Entergy Revision 3 to  
3 000372 and the revision to 000373 and Entergy Revision  
4 to 000246 and the Staff revisions to 15 and 16. Thank  
5 you.

6 (Whereupon, the above-referred  
7 to documents were marked as  
8 Entergy 000595-000601, New York  
9 000468-000471, Entergy Revision  
10 3 to 000372, Entergy Revision  
11 to 000373, Entergy Revision to  
12 000246 and Staff revisions to  
13 15 and 16 for identification.)

14 Judge Wardwell.

15 JUDGE WARDWELL: Thank you. And maybe the  
16 first set of questions, we can go right to the  
17 questions now if we can bring those up. I will  
18 generally try to reference a cite in the testimony.  
19 And whenever I do I just want to note for here that  
20 when I'm referencing it noting that we did have the  
21 testimony has been augmented and revised just  
22 recently.

23 But my references are always going to  
24 refer for New York's witnesses, it's going to be the  
25 6/29/2012 testimony. For Entergy's it will be the May

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1 9, 2012. And for Staff's it will be the March 29,  
2 2012. So when I'm referencing a page number and  
3 either a question or an answer number, that's what my  
4 references would be.

5 I would like to ask either the witnesses  
6 from each party or maybe it's better for the Counsel  
7 to do it. I don't know who would be able to answer  
8 this. But let me start off with Entergy.

9 Do you know in your latest revision  
10 whether any of the answer numbers have changed in the  
11 testimony?

12 MR. O'NEILL: Your Honor, this is Martin  
13 O'Neill for the Applicant. None of the answer numbers  
14 have changed. We made a deliberate effort to avoid  
15 that issue.

16 JUDGE WARDWELL: Thank you.

17 New York?

18 MS. DEAN: The State didn't submit any  
19 revisions, Your Honor. So our testimony is the same.

20 JUDGE WARDWELL: Okay. Thank you.

21 The Staff.

22 MR. TURK: Your Honor, I do not believe  
23 so. But just to be clear with your permission I will  
24 hand to the Staff's witnesses the previous versions of  
25 their testimony so that they will be on the same page

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1 as you.

2 We did submit the original testimony as  
3 Your Honors noted on March 29th. We had a revision  
4 dated August 23rd and then most recently a revision  
5 submitted this past week on December 7th.

6 JUDGE WARDWELL: I don't think the August  
7 was a problem. I spot-checked that. But I certainly  
8 couldn't handle any of the revisions that came in in  
9 October or certainly the ones that came in this week.  
10 I could not go back and check for it.

11 I have 44 pages of questions. I could not  
12 go back and correct those cites. So I just wanted to  
13 make sure.

14 MR. TURK: All right. I think the Staff's  
15 witnesses indicate that they do have the March version  
16 of their testimony with them. So it won't be  
17 necessary for me to --

18 JUDGE WARDWELL: And my attempt here as  
19 you'll see on the board is I'm going to cite it. And  
20 you'll be able to see the cite that I'm referring to  
21 up on the board. You don't necessarily have to find  
22 it for yourself.

23 If you do want to see more of the context  
24 of which this particular thing was extracted, just let  
25 me know and we'll call up the fuller version of it.

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1 But any of these given sites are going to be the heart  
2 of what I'm addressing in the questions and usually  
3 you don't necessarily have to even see this portion to  
4 understand the question I'm asking.

5 But if you do need to see more from your  
6 original testimony and you can't call it up, we can  
7 call it up here. And it's probably just as easy to do  
8 that so everyone can see the context if you need to  
9 look at it.

10 That's the method of attack. And we're  
11 already through the first group here, the new  
12 testimony. So we're charging right ahead into the  
13 first group of questions.

14 And these first group of questions I am  
15 going to touch upon a little bit about this  
16 underground pipes and what the difference is. Because  
17 that has come up earlier in this proceeding and we may  
18 be able to clarify lots of the issues.

19 But again, I'm not trying to resolve that  
20 issue in regards to the testimony that was filed this  
21 week. I personally have not read it and I'm not  
22 planning on reading it until we get through this  
23 hearing because we have too much to cover this week.

24 If I do have extra questions or if any  
25 other Board members have extra questions, we'll either

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1 send them off in writing or if need be we will have to  
2 reconvene. But we'll deal with that later beyond the  
3 ones that I ask here.

4 Having said that, Staff, in your testimony  
5 at 000016, your original testimony on page 7, answer  
6 7, you state that among other things and New York  
7 State 5 contends that the AMP "is inadequate in that  
8 there is no adequate program to replace buried  
9 systems, structures and components that convey or  
10 contain radioactive leak, contaminated water or other  
11 fluids before a leak occurs."

12 And I think my first question for Staff  
13 is, and anyone from Staff that wishes can answer,  
14 could you just quickly explain what the difference  
15 between a buried pipe and an underground pipe is.

16 MR. HOLSTON: This is William Holston from  
17 the Staff. Buried piping is piping that is below  
18 grade that is exposed on its external surfaces to soil  
19 or concrete. In contrast, underground piping is also  
20 below grade, but is typically exposed to an air  
21 environment. It's in a channel that has limited  
22 access.

23 JUDGE WARDWELL: Why would some of the  
24 buried pipes be surrounded by concrete?

25 MR. HOLSTON: Sometimes buried piping

1 penetrates into a building. At that point, it is  
2 exposed to concrete. In other cases, applicants have  
3 chosen to embed the piping in a concrete slurry that  
4 provides better corrosion protection.

5 JUDGE WARDWELL: Do you know if any of  
6 your buried pipes are under floor slabs or  
7 inaccessible due to the fact that they're covered by  
8 a building? Are all your buried pipes accessible from  
9 the outside?

10 MR. HOLSTON: I believe I'd have to defer  
11 to Indian Point or to Entergy to answer that. But I  
12 believe more than likely some of it is below building  
13 slabs.

14 JUDGE WARDWELL: That's right. And I  
15 shouldn't have said your pipes because they ain't your  
16 pipes. Are they?

17 MR. HOLSTON: Right. Yes, sir.

18 JUDGE WARDWELL: Sorry about that. Would  
19 someone from Entergy like to answer that while I'm on  
20 that question?

21 MR. AZEVEDO: Good morning. This is  
22 Nelson Azevedo for Entergy. Yes, we do have some  
23 pipes that are below floor slabs.

24 JUDGE WARDWELL: Okay. Thank you. Back  
25 to the underground issue with Staff if I might. Are

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1 all underground pipes -- Let me rephrase that. What,  
2 if any, of the underground pipe systems do fall under  
3 aging management review?

4 MR. HOLSTON: The systems that fall under  
5 aging management review are service water piping, fuel  
6 piping and I'll have to check my notes. There is one  
7 other but.

8 MR. AZEVEDO: There is city water pipe.

9 MR. HOLSTON: Thank you.

10 JUDGE WARDWELL: Say it again, Mr.  
11 Azevedo.

12 MR. AZEVEDO: City water.

13 JUDGE WARDWELL: City water. Thank you.

14 JUDGE McDADE: And certainly at this stage  
15 of the proceeding, the court reporter isn't familiar  
16 with all of you yet. So when you do speak to give  
17 your name immediately before so that it gets  
18 attributed to the correct person. Please continue.

19 JUDGE WARDWELL: Mr. Holston from Staff,  
20 could you briefly describe which of the buried pipes  
21 fall under license renewal application and require  
22 aging management review?

23 MR. HOLSTON: Yes, sir. I'm going to --  
24 Just so I give you a complete listing here, there is  
25 service water piping. There's city water piping,

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1 auxiliary feedwater piping, fuel piping, fire  
2 protection piping, containment isolation piping.  
3 That's containment isolation support piping. And  
4 plant drains and riverwater.

5 JUDGE WARDWELL: And is there a generic  
6 reason that's more specific than what's stated in the  
7 regulations that you could enlighten us on why these  
8 happen to fall in that or does each one have a unique  
9 characteristic that would require aging management  
10 review?

11 MR. HOLSTON: I don't think I understand.  
12 This is William Holston. I don't think I understand  
13 your question, sir.

14 JUDGE WARDWELL: Maybe I should start off  
15 with a question. Is there any other buried pipes  
16 there at the plant that you are aware of that don't  
17 fall under aging management review?

18 MR. HOLSTON: Yes, sir. This is William  
19 Holston. The Licensee has auxiliary steam piping, for  
20 example, that is buried and does not fall under the  
21 rule because it does not support one of the intended  
22 functions that place it in the scope of license  
23 renewal. Would you like me to describe those intended  
24 functions?

25 JUDGE WARDWELL: No, I think we'll either

1 touch upon it or we're familiar enough with it.

2 MR. HOLSTON: Yes, sir.

3 JUDGE WARDWELL: I'll go to New York. Do  
4 you have any disagreement with the representation of  
5 the underground pipes that are required here for aging  
6 management review at Indian Point that was relayed by  
7 Mr. Holston?

8 DR. DUQUETTE: Duquette representing the  
9 State of New York. No, I don't think there's anything  
10 else.

11 JUDGE WARDWELL: Have you provided any  
12 testimony that talks about the deficiencies of the  
13 aging management review for underground pipes covered  
14 by this contention?

15 DR. DUQUETTE: Duquette, New York. No,  
16 sir. We have not. If I might add, we just received  
17 the changes on the underground pipe system I think  
18 last week.

19 JUDGE WARDWELL: I didn't think that you  
20 got it any earlier than we did. So I understand and  
21 we can go under that assumption, understand that those  
22 might still come into play. But as far as your  
23 original testimony and your rebuttal you had nothing  
24 there dealing with underground pipes. Is that  
25 correct?

1 DR. DUQUETTE: Yes, sir. That's correct.

2 JUDGE McDADE: And one thing let me know.

3 It may be possible for you to answer questions with  
4 regard to the new information during the course of the  
5 hearing today or tomorrow. If it isn't, just as there  
6 may be objections filed by the other parties, likewise  
7 there would be an opportunity to move to supplement  
8 the record by having a declaration of additional  
9 direct testimony if it was needed to address that.  
10 But that would be done by motion by the January  
11 deadline.

12 Please continue.

13 JUDGE WARDWELL: Entergy, do you have any  
14 disagreements with what was portrayed by the Staff in  
15 regards to the underground piping systems that are  
16 involved? You told most of them. So I guess you  
17 shouldn't have too much disagreement.

18 MR. AZEVEDO: No, Your Honor. This is  
19 Nelson Azevedo for Entergy. No.

20 JUDGE WARDWELL: How about those for the  
21 buried pipes that he brought up and made a list?

22 MR. AZEVEDO: This is Nelson Azevedo again  
23 for Entergy. The only thing I'd say is we also have  
24 some circ water piping that falls within the scope.  
25 And I didn't hear that mentioned. That's the only

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1 comment I'll make.

2 JUDGE WARDWELL: And sorry. Say that  
3 again.

4 MR. AZEVEDO: We have some circulating  
5 water system piping that also falls within the scope  
6 of license renewal and I didn't hear that being  
7 mentioned.

8 JUDGE WARDWELL: Let me move on. Looking  
9 at your screen now, here are the list of symptoms that  
10 fall within the scope of license renewal that are  
11 listed in B.1.6 of your license renewal application on  
12 page B.27. Is that a good summary of those lists that  
13 were brought? And where would those circulating water  
14 system fall within that list that you brought up under  
15 B.27 if I might for Entergy?

16 MR. COX: Your Honor, this is Alan Cox for  
17 Entergy. That was the list that was in the  
18 application. We've made some changes, RAI responses  
19 then. So I believe the latest version of that section  
20 also includes the circulating water piping.

21 JUDGE WARDWELL: And the latest version  
22 would be found in the responses to the RAIs.

23 MR. COX: Yes, that's correct.

24 JUDGE WARDWELL: Thank you. Entergy, in  
25 your testimony on page 66, answer 88, you say,

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1 "Therefore the details of the ten element NUREG-1801  
2 program XI.M34" and that's dealing with GALL 1, the  
3 exhibit, you can see my exhibit number is a little bit  
4 different. You'll see this in all my notes that I  
5 shortened it up. And it's New York 146 exhibit. So  
6 when you see those types of shortened things that's my  
7 notation of how I've kept track of the testimony.  
8 Anyhow, "the descriptions were incorporated by  
9 reference into the IPEC License Renewal Application.  
10 Those details include among other things inspection  
11 methods, acceptance criteria, corrective actions."

12 My question to Entergy whoever would like  
13 to answer that is do you consider GALL to be an AMP or  
14 is it a description of attributes that must be  
15 addressed in a plant-specific AMP? That is those  
16 attributes that really need to address the mail to  
17 assure that you've covered the items that are needed?

18 MR. COX: This is Alan Cox for Entergy.  
19 We consider the GALL a program to be an aging  
20 management program described in terms of the ten  
21 elements that are specified in the standard review  
22 plan.

23 JUDGE WARDWELL: Is it your opinion that  
24 it stands on its own as an AMP?

25 MR. COX: Yes, that's correct.

1 JUDGE WARDWELL: Then why is there any  
2 need to do any more work? Why would any plant for  
3 license renewal have to do anything? Would have to do  
4 anything? It's already done, isn't it, if that was  
5 correct?

6 MR. COX: I'm not sure that I follow you.  
7 I mean we obviously would have to do -- We would have  
8 to have implemented procedures to implement those  
9 elements of that GALL program.

10 JUDGE WARDWELL: How do you define  
11 implement? You mean implementing the GALL program.  
12 But that's not implementing an aging management  
13 program, is it?

14 MR. COX: Yes. I believe it is. I mean  
15 the GALL program is an aging management program of  
16 implementing procedures that implement those key  
17 elements that describe that program are what we refer  
18 to as implementing procedures.

19 JUDGE WARDWELL: How, if GALL is an AMP,  
20 do you demonstrate that an AMP is achieving the  
21 management of aging through the license renewal period  
22 through the period of extended operation without more  
23 details and what's existing in GALL?

24 MR. COX: Could you ask that question  
25 again? I'm not sure I understand it.

1 JUDGE WARDWELL: I'll ask it a different  
2 way. In your license renewal application, how have  
3 you demonstrated that your AMP for buried pipes is  
4 consistent with GALL and just not a repeat of GALL?

5 MR. COX: I guess if it was consistent  
6 with GALL or a repeat of GALL would be consistent with  
7 GALL. In other words, if it was a repeat of GALL that  
8 would say that our program has each of those key  
9 elements that are defined the GALL report. So I think  
10 that -- We take the GALL report as being -- it  
11 documents the Staff's review of that program which has  
12 been found effective throughout the industry in terms  
13 of operating experience to be able to manage the  
14 effects of aging that it's designed to manage.

15 By showing that we have or even citing the  
16 same program, that's a demonstration that we used to  
17 say would be an effective program. It's the same  
18 program that's been found effective at other sites in  
19 other license renewal application reviews.

20 JUDGE WARDWELL: When I asked you about  
21 whether or not GALL is an AMP, you said it is, but  
22 that you would have to develop implementing procedures  
23 for that. Is that correct?

24 MR. COX: Yes, that's correct.

25 JUDGE WARDWELL: Are those implementing

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1 procedures required to be in your license renewal  
2 application?

3 MR. COX: No, license renewal applications  
4 to my knowledge have never included implementing  
5 procedures.

6 JUDGE WARDWELL: So where are they  
7 generated? I'm back to my original question. Could  
8 not a license application then merely be one sentence  
9 in regards to addressing aging management for all of  
10 the aging management issues, not just buried pipes?  
11 Do you believe it could be one sentence application  
12 that says "We will do everything consistent with GALL"  
13 and that would be adequate?

14 MR. COX: There's a little more involved  
15 in that in the fact that we have to do the aging  
16 management review to see what components are subject  
17 to aging management review. We have to look at those  
18 to see what aging effects are applicable to those  
19 components. And once we've done that if we see that  
20 that aging effect is addressed by the GALL program,  
21 then yes. The GALL program, saying that we're going  
22 to use the GALL program to manage that aging effect  
23 would be a demonstration that we will effectively  
24 manage the aging effect for that particular component  
25 and environment.

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1 JUDGE McDADE: Mr. Cox, when you say "the  
2 GALL program" in his testimony, Dr. Duquette basically  
3 describes both the GALL program and your aging  
4 management plan as conceptual, as aspirational in  
5 nature, as not really containing direct commitments.  
6 Why is that not a valid criticism?

7 MR. COX: Well, the commitment is to  
8 implement the program that's described in the GALL  
9 report. I mean when you say the GALL report doesn't  
10 include commitments, I mean it's commitments because  
11 we say we're going to do that. That makes it a  
12 commitment.

13 JUDGE McDADE: But isn't it necessary in  
14 order to demonstrate that you have sufficient details  
15 so that we not only know what it is you intend to do  
16 but how you intend to do it so that we can make a  
17 determination as to whether or not that will be  
18 adequate?

19 MR. COX: I think it does have those  
20 details. If you go to the GALL report that tells you  
21 what kind of inspections to do for buried piping, for  
22 example, it says you're going to do a visual  
23 inspection. You've got to dig up the piping and do a  
24 direct visual inspection of the piping and the coating  
25 that's applied to that piping.

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1 JUDGE McDADE: But it doesn't tell you how  
2 many visual inspections, what percentage of the piping  
3 you need to look at, how often you need to do it or  
4 exactly what are the acceptance criteria, does it?

5 MR. COX: It addresses the acceptance  
6 criteria. It says that acceptance criteria is there  
7 is no degradation of the coating. If there is, then  
8 you would enter that into your corrective action  
9 program. The other elements that you've mentioned you  
10 know we refer to the GALL report.

11 But since the GALL report or since the LRA  
12 was written, we've had a number of revisions to that.  
13 We've had RAIs that the industry knowledge is advanced  
14 on buried piping. We've augmented that initial  
15 submittal with a lot of details that includes  
16 identifying the number of inspections and many of the  
17 things that you mentioned there.

18 JUDGE McDADE: So your testimony is not  
19 just simply a commitment to comply with GALL, but  
20 rather that you believe that your program as  
21 documented demonstrates not only the aspirational  
22 aspect but also the how it is going to be  
23 accomplished. And that in your view that's adequate  
24 to demonstrate compliance. Am I correct?

25 MR. COX: Yes. I believe that's correct.

1 The GALL report or the LRA referenced the GALL Report  
2 Rev 1. There was many changes to that to get into a  
3 number of details about inspections. The number of  
4 required inspections was increased significantly from  
5 what was in the GALL Rev 1.

6 There is more in there about other issues,  
7 cathodic protection and backfills. So a lot of that  
8 has been incorporated after the LRA through the RAI  
9 process.

10 JUDGE McDADE: In response to your answer  
11 to Judge Wardwell, I had thought you indicated that  
12 just simply a promise to comply with GALL would be  
13 adequate. What you're saying is that Entergy has  
14 supplied significantly more than that though.

15 MR. COX: Yes. I guess my reference to  
16 that was more with a program that is not evolved and  
17 changed as much as -- You know, buried piping is an  
18 evolving issue. There has been a lot of changes in  
19 the industry. There are other GALL programs that are  
20 pretty well established.

21 Flow accelerated corrosion program would  
22 be a good example where that GALL program description  
23 defines the program. And the NRC staff has reviewed  
24 that and they've said, "Yes, that's an effective  
25 program." And commitment to do what's in the GALL

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1 report does ensure that you have an effective program  
2 to manage flow accelerated corrosion.

3 JUDGE WARDWELL: But at the time you  
4 submitted the license application, you felt that your  
5 description of your aging management plan as presented  
6 in B.1.6 which we're going to go over in detail in a  
7 few minutes was adequate at that time. Is that  
8 correct?

9 MR. COX: Yes, that is correct. Again,  
10 that program was not based on a specific number of  
11 inspections. It was based primarily on doing what we  
12 called opportunistic inspections. We said the  
13 condition of the coating is the key thing here. So  
14 when you dig up a pipe for any reason, for maintenance  
15 or whatever, you're going to do an inspection and  
16 confirm that the coating is still in good condition.  
17 And that was the premise of the GALL Revision 1  
18 program.

19 JUDGE WARDWELL: Staff, if I may turn to  
20 you. In your testimony on page 11-12 on answer 8,  
21 managing the effects of aging "is documented in a  
22 series of NRC approved AMPs described in the GALL  
23 report." And that's again referring to -- And you  
24 said, "For example, AMP XI.M20, open cycle cooling  
25 water system, and AMP XI-M30, fuel oil chemistry, and

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1 AMP XI.M34, buried piping and tanks inspection." Are  
2 these sections that you're referring to sections of  
3 GALL? Or is it Indian Point's aging management  
4 program?

5 MR. HOLSTON: This is William Holston.  
6 The parenthetical examples that I cite there are the  
7 aging management programs from the GALL report. And  
8 those consist, each of those aging management programs  
9 consist, of ten elements which are recommended actions  
10 that the applicant can take to create a program at the  
11 site that would provide reasonable assurance that the  
12 aging effect that's being addressed by that aging  
13 management program would be reasonably -- The intended  
14 functions we met throughout the period of extended  
15 operation.

16 And I can -- Would you like me to  
17 elaborate a little bit?

18 JUDGE WARDWELL: No, not just now.

19 MR. HOLSTON: Okay.

20 JUDGE WARDWELL: That's one of those cases  
21 where you can write down what you think you're going  
22 to be able to elaborate on it because I'm going to  
23 pull up GALL and I'm going to pull up B.1.6 and we're  
24 going to talk about them in detail.

25 MR. HOLSTON: Certainly.

1 JUDGE WARDWELL: If that's where you were  
2 going as I anticipated where you were going.

3 I'm curious about the first two. Are  
4 those considered AMPs for buried pipes at the time of  
5 the license renewal application?

6 MR. HOLSTON: The AMP XI.M20, open cycle  
7 cooling water system, would address the internal  
8 surfaces of the service water system for example and  
9 the circulating water system. The AMP XI.M30, fuel  
10 oil chemistry program, would address the internal  
11 surfaces of buried fuel oil pipe. And it also  
12 addressed the internal surfaces of above ground fuel  
13 oil pipe.

14 JUDGE WARDWELL: But it seems to me most  
15 of the testimony revolved around and I guess you  
16 referred to it as a XI.M34, the buried pipes. Is  
17 there a reason why none of the other two have been  
18 referenced in any of the testimony that was submitted  
19 even before GALL was revised?

20 MR. HOLSTON: This is Holston again. Yes,  
21 sir. They were just provided as examples. But for  
22 the contention which is the external surfaces of  
23 buried piping, that is contained wholly within XI.M34  
24 and with GALL Revision 2, XI.M41.

25 JUDGE WARDWELL: In your opinion, are

1 these approved AMPs in GALL or are they approved  
2 attributes that an acceptable AMP must possess?

3 MR. HOLSTON: An AMP within the GALL  
4 report such as AMP XI.M34 is an approved set of  
5 recommended ways to manage the aging. An applicant  
6 does not have to comply or be completely consistent  
7 with those recommendation.

8 JUDGE WARDWELL: Let's assume they are.

9 MR. HOLSTON: Okay. If they are  
10 consistent, then that means that they met each of the  
11 program elements. The Staff then confirms that during  
12 AMP audits. Because as you are well aware from  
13 looking at the application itself, it contains very  
14 little details if the program is consistent.

15 JUDGE WARDWELL: Okay. And how do they --  
16 Don't they have to demonstrate that consistency prior  
17 to be granting a license renewal application?

18 MR. HOLSTON: Again, this is Holston.  
19 Yes, sir. They do.

20 JUDGE WARDWELL: And how is that  
21 demonstration achieved if there isn't more in the  
22 license renewal application or are they just saying  
23 "Fine. We'll do it as part of the RAI process"? Why  
24 isn't it just done as part of the license renewal  
25 application?

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1 MR. HOLSTON: Well, I can't answer the why  
2 it isn't done because that's our process.

3 JUDGE WARDWELL: Have you ever required  
4 them to do it as part of a license renewal  
5 application?

6 MR. HOLSTON: We do in that we do an AMP  
7 audit. And an aging management program audit where  
8 the Staff goes to the site for a week or longer if  
9 necessary and reviews all of the implementing  
10 procedures that will implement that aging management  
11 program.

12 So if I can provide an example, one of the  
13 recommendations at AMP XI.M41 is to risk rank your  
14 piping inspection locations. When I conduct the AMP  
15 audit, I go to the site and review their implementing  
16 procedures to determine if they have an adequate risk  
17 management scheme of checking to have risk from both  
18 the perspective of the potential for corrosion and the  
19 consequences of corrosion.

20 If they don't have those available, then  
21 I would write a request for additional information.  
22 If they're available and I can review them and they're  
23 adequate, then that resolves the issue of consistency.  
24 And we write an audit report which documents where  
25 they're consistent or where there are gaps.

1 JUDGE WARDWELL: Why shouldn't they  
2 provide a general description of those in their  
3 license renewal application to show that in fact those  
4 exist and here's what's in those particular documents  
5 that you just described that you call implementing  
6 procedures?

7 MR. HOLSTON: This is Holston again. I  
8 can only answer that because that's the way we built  
9 the process. We built the process with the  
10 application submitted, with the level of consistency.  
11 The applicant identifies exceptions which are places  
12 where they don't want to meet or be consistent with  
13 the AMP.

14 They provide enhancements which are we're  
15 going to be consistent with the AMP, but we have to do  
16 something to our implementing -- We have to revise our  
17 implementing procedures to bring it up to consistency.  
18 And we review that during the AMP audit.

19 I would be presuming that the reason we  
20 don't have all of that detail built into the license  
21 renewal application is it would be a huge document.  
22 For example, when I do an AMP audit at a plant, I'm  
23 probably reviewing about for a program of this nature  
24 two to three to maybe -- yes, 200 to 300 pages of  
25 procedures and reports.

1 JUDGE WARDWELL: But couldn't a  
2 description of what's in those, a condensed version,  
3 executive summary if you will, of what's in there be  
4 done and submitted with a license renewal application?  
5 There would be some more definitive information there  
6 available that one could look at and say "Yes. Okay.  
7 They have done what GALL is asking them to do."

8 MR. HOLSTON: This is Holston. I would  
9 have to answer yes.

10 JUDGE WARDWELL: There's nothing  
11 technically that prevents them from doing that, is  
12 there?

13 MR. HOLSTON: I'm not aware of anything  
14 that would technically prevent them from doing that.  
15 That's correct.

16 JUDGE WARDWELL: In your phraseology, and  
17 that may be part of the problem that I have noticed,  
18 both you and Entergy use a phrase "implementing."  
19 That to me sounds more like development of the  
20 procedures of GALL to reflect the Indian Point  
21 situation or conditions.

22 When I think of implementing, I think of  
23 boots on the ground. Now we're doing it. And so  
24 don't be surprised that every time you bring up the  
25 word "implementing" I may refer to say that I

1 understand what you're saying in the context of  
2 developing the program rather than implementing.

3 Did you want to raise something else? You  
4 raised your finger.

5 MR. HOLSTON: Yes. This is Mr. Holston.  
6 Just to clarify. I agree with you. The term  
7 "implementing procedure" is a term used throughout the  
8 industry. It doesn't mean you're developing. It  
9 doesn't mean you're in the process of implementing.

10 It means a procedure that is boots on the  
11 ground. This is the procedure how we'll do risk  
12 assessment. This is the procedure for what we will do  
13 when we examine coatings.

14 JUDGE WARDWELL: Interrupt right there so  
15 I can fix the point.

16 MR. HOLSTON: Okay.

17 JUDGE WARDWELL: The procedure to do  
18 something like a risk assessment could be described in  
19 a license renewal application, correct?

20 MR. HOLSTON: (Nodding head.)

21 JUDGE WARDWELL: You nod your head.

22 MR. HOLSTON: No, I was just -- I wanted  
23 to make sure you were finished with your question.  
24 Yes, sir.

25 JUDGE WARDWELL: And couldn't one

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1 interpret implementing meaning performing the risk  
2 assessment. There's a difference, isn't there?

3 MR. HOLSTON: This is Holston. Yes, sir.  
4 Implementing means the procedure to perform the risk  
5 assessment.

6 JUDGE WARDWELL: In your parlance.

7 MR. HOLSTON: In our parlance, yes, sir.

8 JUDGE WARDWELL: And I have troubles with  
9 that because I always think of it as performing the  
10 risk assessment. And technically you agree there's  
11 nothing to stop an applicant from describing those  
12 implementing procedures in a condensed version so that  
13 someone reading it would understand that, yes, there  
14 is going to be risk assessment and it's generally  
15 going to cover whatever that is.

16 That's far short of 200 pages of the  
17 details of how a risk assessment should be done. And  
18 it's certainly far and away just from actually  
19 performing a risk assessment. Is that correct?

20 MR. HOLSTON: This is Holston. That is  
21 correct, sir.

22 JUDGE WARDWELL: Thank you.

23 JUDGE McDADE: Mr. Holston, a criticism of  
24 Dr. Duquette of the program is that the kind of  
25 details that you've just described that you look at in

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1 your AMP audit, the 200 or 300 pages of documents, are  
2 somewhat ephemeral. They can be changed at any time.  
3 They're not part of the license application itself.  
4 They're not subject to prior review and approval for  
5 alterations by the NRC. Why does that not undercut  
6 the assurance that the agency has that aging  
7 management will be adequate?

8 MR. HOLSTON: This is Mr. Holston. We  
9 take the most critical aspects of the program and  
10 ensure that they are in a document that requires the  
11 applicant to take licensing action. And that's the  
12 Updated Final Safety Analysis Report. So all of the  
13 details of the program, you are correct. The  
14 applicant can revise certain features.

15 But, for example, in the case of buried  
16 pipe, they have to do a risk assessment. They have to  
17 test the soil. The number of inspections that must be  
18 done are in the UFSAR in other details. So that's how  
19 we assure that going forward into the period of  
20 extended operation those most important  
21 characteristics of the program are controlled. And  
22 the Staff is aware if they are changed.

23 JUDGE McDADE: But isn't it important not  
24 only that they do a risk assessment, but how they do  
25 the risk assessment? And isn't that subject to change

1 without prior approval by the agency?

2 MR. HOLSTON: This is Holston. The key  
3 aspects that are the importances is that you are risk  
4 assessed for both the potential for corrosion to occur  
5 and the consequences of that corrosion to occur if the  
6 corrosion occurs. That concept is captured in the  
7 documents.

8 There are wide ranging ways of  
9 implementing that and implementing those  
10 satisfactorily. Some plants might go as complex as  
11 doing a probabilistic risk assessment and drive those  
12 numbers to a core damage frequency. Some plants and  
13 most plants in the case of buried pipe because EPRI  
14 and the Nuclear Energy Institute of provided guidance  
15 have a rating system for susceptibility of corrosion  
16 for the consequences. And then that rating system  
17 drives where the risk is whether it's a high, medium  
18 or low risk or consequences are high, medium or low.

19 But in summary for the Staff as long as  
20 they're analyzing the corrosion risk and analyzing the  
21 consequences, we're satisfied that there's adequate  
22 industry guidance again through EPRI and I apologize.  
23 It's the Electric Power Research Institute and NEI  
24 guidance to the industry.

25 JUDGE WARDWELL: Moving on, Entergy's --

1 and this is at the top of the page that you see on the  
2 screen -- testimony 000373, answer 40 on page 23, they  
3 state that "An applicant may reference NUREG-1801 of  
4 the license renewal application to demonstrate that  
5 the programs at the facility correspond to those  
6 reviewed and approved by the NRC Staff in NUREG-1801."  
7 And I'll go back to Staff again.

8 Has the Commission stated that all an  
9 applicant needs to do is reference GALL and promise to  
10 do a program later consistent with GALL? Or have they  
11 in fact asked that the demonstration for consistency  
12 needs to be there?

13 MR. HOLSTON: This is Holston. We via the  
14 AMP audit ensure that the demonstration that the  
15 program is consistent and that the procedures at the  
16 site demonstrate that consistency are present. And  
17 again --

18 JUDGE WARDWELL: So the applicant doesn't  
19 have to demonstrate. You're going to do the  
20 demonstration with your audit. Is that what you're  
21 testifying?

22 MR. HOLSTON: This is Holston. No. They  
23 demonstrate it. We go and review their documents. We  
24 review what inspections they've done. We interview  
25 the staff at the station. We do walkdowns to look at

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1 the condition.

2 JUDGE WARDWELL: Where is that  
3 demonstration shown in the license renewal  
4 application? Presented? Where is that demonstration  
5 by the applicant presented in the license renewal  
6 application?

7 MR. HOLSTON: In each -- In the license  
8 renewal application, each of the AMPs.

9 JUDGE WARDWELL: For buried pipe.

10 MR. HOLSTON: For buried pipe.

11 JUDGE WARDWELL: Is that B.1.6 of their  
12 application?

13 MR. HOLSTON: I believe that's the number.  
14 Yes, sir.

15 JUDGE WARDWELL: Okay. Thank you.

16 JUDGE McDADE: Dr. Duquette, why does that  
17 not resolve the issues that you've raised and the  
18 concerns that you've have that the plan would be  
19 appropriately monitored and enforced?

20 DR. DUQUETTE: Duquette, New York State.  
21 I still don't hear anything from the Staff that gives  
22 me anything but a good feeling that the Staff will  
23 attempt to monitor what the plant is doing. The plant  
24 can do whatever it wants. There is no pre -- Nothing  
25 that says that it has to submit something to the Staff

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1       beforehand if they're going to change anything that  
2       they're doing.

3                   And so I still feel that there should be  
4       something more definitive. I don't feel. It's my  
5       opinion that there should be something more definitive  
6       as to exactly what the plant is going to do to manage  
7       the buried pipe situation.

8                   And I'm sure my testimony will come up  
9       later on. But I think there are a number of issues  
10      that have been raised in the last few minutes that  
11      make me uncomfortable as to what the plant intends to  
12      do in the long run. And unless the NRC Staff is going  
13      to have someone almost permanently assigned to look at  
14      this particular problem and maybe they do, then I  
15      still don't feel that there is an appropriate aging  
16      management plan in place.

17                   JUDGE McDADE: Are you drawing a  
18      distinction between what the facility, what the plant,  
19      intends to do and what it's required to do? And that  
20      you don't see in the documentation that kind of  
21      requirement long term throughout the period of  
22      extended operation?

23                   DR. DUQUETTE: Yes, Your Honor. That's  
24      exactly right. I think what the plant proposes to do  
25      in my opinion is not very definitive. And I don't

1 think that they have -- I'm concerned that there are  
2 no strong requirements in place as to what they have  
3 to do to have an aging management program in place for  
4 what is already an old plant.

5 JUDGE McDADE: Mr. Holston, if down the  
6 road, if five years, ten years, into the period of  
7 extended operation, the applicant decided to change  
8 the manner in which he was doing his risk assessment,  
9 what would the NRC's options be as far as a review of  
10 that? Would it know about it? And if it believed  
11 that the new manner was inadequate, what would the  
12 agency be able to do about it?

13 MR. HOLSTON: This is Mr. Holston  
14 responding. If five years down the line -- I'll use  
15 an example -- the licensee decided to stop risk  
16 ranking based on consequences and they only wanted to  
17 look at the risk of corrosion, they would have to  
18 follow a process in 10 CFR 50.59. 10 CFR 50.59  
19 requires the licensee to answer seven questions. And  
20 through answering those seven questions, they  
21 determine whether the change they're making requires  
22 prior review by the Nuclear Regulatory Commission. If  
23 it does not require prior review by the Nuclear  
24 Regulatory Commission -- because it's the other pretty  
25 well answers your question -- then they have to revise

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1 their Updated Final Safety Analysis Report. And on a  
2 refueling outage interval they submit to the Staff all  
3 of the changes that have been put into their Updated  
4 Final Safety Analysis Report.

5 At that point, we have Staff that can  
6 review those changes and determine whether they don't  
7 believe that that was adequate. And then we could  
8 pursue questions to the applicant or licensee -- I'm  
9 sorry -- at that point.

10 JUDGE McDADE: So it's the Staff's view  
11 that there are sufficient details in the Final Safety  
12 Analysis Report that the Staff is able to feel  
13 sanguine that the aging process will be adequately  
14 managed. And there are under 50.59 adequate controls  
15 that you have that preclude the applicant from  
16 reducing the efficiency of the program.

17 MR. HOLSTON: This is Mr. Holston. Yes,  
18 that's correct.

19 JUDGE KENNEDY: Mr. Holston, this is Judge  
20 Kennedy. Just to put that in a different set of  
21 words, do I take away from what you just testified  
22 that the risk ranking methodology based on  
23 consequences in this example is embedded in the UFSAR  
24 Supplement as it reads today?

25 MR. HOLSTON: This is Mr. Holston. And I

1 will check that, Mr. Kennedy. But I am --

2 JUDGE KENNEDY: I'm looking for the hook  
3 that drives the 50.59 evaluation. Where would the  
4 Staff place that hook? And using the consequence  
5 methodology or the risk ranking methodology since  
6 we've been working on this part of the puzzle for a  
7 while, if you could use that as a specific example, it  
8 would be useful.

9 MR. HOLSTON: I'm just pausing a moment to  
10 verify what's in the UFSAR update to make sure I  
11 answer your question accurately. Apparently, I used  
12 a wrong example. That is not in the UFSAR Supplement  
13 at this time. And where I got mixed up on that is the  
14 interim staff guidance that was issued in August 2, we  
15 will be doing a gap analysis between what's in the  
16 interim staff guidance and what the applicant has  
17 documented in their documents. And that is one of the  
18 topics that will be brought up in our request for  
19 additional information.

20 JUDGE KENNEDY: Thank you. So just to  
21 continue that example, would you like to rephrase your  
22 testimony about what process controls would be  
23 involved in changing the risk ranking methodology for  
24 buried piping inspections?

25 MR. HOLSTON: Currently, they would not



1 have to perform a 50.59. But as I stated to ensure  
2 consistency with the ISG, we as the Staff are going  
3 through each of the current applicants and evaluating  
4 them against the interim staff guidance. So even  
5 though we've issued a safety evaluation report  
6 already, we're going to be issuing a supplemental  
7 safety evaluation report.

8 We've already written the request for  
9 additional information for two of the stations.  
10 Resolved at one. Didn't need it. Indian Point is  
11 next in line. And that will be one of the items where  
12 we'll issue a request for additional information to  
13 have that clarified. And just as I believe it was  
14 around July 2011 we had a request for additional  
15 information where they added the number of inspections  
16 that they would be doing into the UFSAR Supplement to  
17 ensure there's adequate detail.

18 JUDGE KENNEDY: So as of today -- and I  
19 understand this is a developing story -- that process  
20 change could be made by a plant procedure change type  
21 process and not involve the agency, the NRC.

22 MR. HOLSTON: This is Holston. That is  
23 correct, sir.

24 JUDGE KENNEDY: All right. Thank you.

25 JUDGE WARDWELL: Back to your discussion

1 of this supplemental SER that's going to be prepared  
2 in regards to this risk ranking, is that what you were  
3 stating? And that's in the process.

4 MR. HOLSTON: This is Mr. Holston. Yes,  
5 that is correct, sir.

6 JUDGE WARDWELL: And is this process far  
7 enough along that it will be in the -- I believe there  
8 is a supplemental SER that's going to be submitted  
9 next year, early next year. Will this be part of it?  
10 Or will this be another supplemental SER?

11 MR. HOLSTON: This is Mr. Holston. It is  
12 my intent and I believe my management's intent that  
13 that will be in this SER that is issued early in 2013.

14 JUDGE WARDWELL: Thank you.

15 MR. TURK: Your Honor, just for the  
16 record, sorry to interrupt. One of the things I was  
17 going to tell you early on today is that the SER  
18 supplement date will slip. It probably will be mid  
19 2013 at this point. Just I don't want you to believe  
20 it's going to be coming out in the immediate future.

21 JUDGE WARDWELL: Thank you.

22 New York's testimony 000164, page 16  
23 discusses the license renewal application B.1.6 as  
24 your AMP and that it is alleged that this AMP is  
25 consistent with GALL XI.M34. And I'd like to kind of

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1 go through that and ask some questions of -- it looks  
2 like it would be primarily Entergy in regards to that.

3 But at the top of B.27, I've pulled that  
4 out so that we don't have to pull it up. This is what  
5 the license renewal application says. Under program  
6 description which is the first element and I think  
7 people have been alluding to the elements of GALL, but  
8 this is the first element in the license renewal  
9 application. The program description says that "the  
10 buried piping and tanks inspection program is a new  
11 program that includes (a) preventive measures to  
12 mitigate corrosion and (b) inspections to manage the  
13 effects of corrosion on the pressure retaining  
14 capability of buried carbon steel, gray cast iron and  
15 stainless steel components."

16 And I would like Entergy to address this  
17 as where are the specific descriptions of the  
18 preventive measures in (a) or the inspection to manage  
19 the corrosion described in (b) as in applied to the  
20 Indian Point facility.

21 MR. COX: This is Alan Cox for Entergy.  
22 I believe the specifics would be in the GALL report if  
23 you go on down further into the Section B.1.6. It  
24 says that the program is consistent with the NUREG-  
25 1801(m) (34) with no exceptions. And I believe there's

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1 a section in (m) (34) that is entitled "Preventive  
2 Actions" that would specify those preventive measures.

3 JUDGE WARDWELL: But doesn't this say that  
4 this program includes these? And I'm asking where can  
5 I find those preventive measures to mitigate  
6 corrosion. Let me back up a bit. This buried piping  
7 and tanks inspection program, has that been submitted  
8 with -- Was that submitted with the license renewal  
9 application?

10 MR. COX: The Appendix B that you are  
11 referring here, that is part of the license renewal  
12 application. That defines the program. So if you  
13 want to know what preventive measures were applied,  
14 you would go to the reference to GALL report M.34 and  
15 look under the section for preventive measures. And  
16 it specifies that you have a protective coating.

17 JUDGE WARDWELL: So you're saying GALL has  
18 those.

19 MR. COX: Right.

20 MS. DEAN: Your Honor, Janice Dean for the  
21 State. If I could raise an objection to Mr. Cox's  
22 answer as non-responsive. I believe the Court's  
23 question was or the Board's question was was the  
24 Buried Piping and Tanks Inspection Program submitted  
25 with the LRA. Mr. Cox responded with an answer

1 concerning the LRA Appendix B. I believe you were  
2 asking about a different document.

3 JUDGE WARDWELL: I'm aware of that. But  
4 we'll get back to that.

5 MS. DEAN: Thank you.

6 JUDGE WARDWELL: I have enough trouble  
7 managing my own questions. And to have parties tell  
8 me whether or not I'll be completely lost in regards  
9 to where I am at. So I appreciate the input.

10 MS. DEAN: Thank you, Your Honor.

11 JUDGE WARDWELL: But I'd like me to decide  
12 or each of the respective judges to decide to the  
13 degree we want to pursue questions that may not be to  
14 on point in regards to where we're at. Thank you.

15 Where would you consider to be the  
16 demonstration that will manage the effects of  
17 corrosion on buried pipes as referenced by this  
18 program description?

19 MR. COX: I would consider the  
20 demonstration to be the fact that we've committed to  
21 implement the program. We would have to go to our  
22 commitments. It says we're going to do a program  
23 that's consistent with the GALL M.34. The commitment  
24 also includes some of the additional actions that  
25 we're committed to do. They go above and beyond what

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1 was in M.34 and GALL Rev 1.

2 I think the commitment is what I would say  
3 demonstrates that we're going to meet and effectively  
4 manage the effects of aging.

5 JUDGE WARDWELL: In your testimony on  
6 answer 41, page 23 says "As stated in the license  
7 renewal application B.1.6, this BPTIP" -- Do you  
8 pronounce some other way so that I use the cool  
9 pronunciation of it and not seem like quite an  
10 outsider?

11 MR. COX: You could probably say BPTIP.

12 JUDGE WARDWELL: BPTIP.

13 MR. COX: Yes.

14 JUDGE WARDWELL: All right. I thought  
15 that might have even been the case. "...The BPTIP  
16 described in the April 2007 license renewal  
17 application was consistent with the program attributes  
18 described in NUREG-1801, XI.M34, Buried Pipe and Tanks  
19 Inspection, without exception." Your testimony also  
20 on question 34, page 17 where you state that "New  
21 York's discussion of the level of detail in the  
22 license renewal application fails to acknowledge the  
23 most critical details of the BPTIP program  
24 description."

25 I'll go back to this. What do you

1 consider to be your BPTIP?

2 MR. COX: I consider to be the BPTIP  
3 program to be the program that's described in the  
4 latest version of section B.1.6 of the LRA.

5 JUDGE WARDWELL: And I'm not talking the  
6 latest version. I'm talking about this was at the  
7 time -- All this reference here is at the original  
8 license renewal application. I'm separately out that  
9 from when GALL 2 came out so that we can not get them  
10 convoluted. So in regards to when you submitted your  
11 license renewal application, what did you consider to  
12 be the BPTIP?

13 MR. COX: The BPTIP program at the time  
14 again was what we described in the LRA section B.1.6.

15 JUDGE WARDWELL: Of which we just  
16 discussed just the program description so far. We'll  
17 get through the rest of the section or some of the  
18 other sections.

19 MR. COX: Right. And that included -- It  
20 has a section that called "Program Description." It  
21 also has a section that addresses the consistency with  
22 the GALL report.

23 JUDGE WARDWELL: And we're going to call  
24 up GALL 1 also and look at that.

25 MR. COX: And it talks about any

1 exceptions to the GALL report.

2 JUDGE WARDWELL: And we're going to call  
3 up GALL and I don't see a BPTIP in either of those  
4 two. When we get to those sections, point me to where  
5 this BPTIP is. Is it a single document?

6 MR. COX: Well, BPTIP, that's a site  
7 document that we use to implement the program that we  
8 described in the LRA. I think we call the program in  
9 the LRA the BPTIP as well. I'm not real sure what  
10 you're asking, but the program description is the  
11 Appendix B of the LRA.

12 And like I said, we have an implementing  
13 procedure. We call that the BPTIP. And we have an  
14 implementing procedure that addresses the details of  
15 that.

16 JUDGE WARDWELL: So you do have a single  
17 document called the BPTIP.

18 MR. COX: I don't want to say that because  
19 I believe we have the site procedure that's actually  
20 broader than that. The site procedure that implements  
21 the requirements that we described in the Appendix B  
22 actually covers systems that are not within the scope  
23 of license renewal. It's a broader procedure that  
24 covers the NEI initiative and all the actions that  
25 were taken in response to that NEI initiative. So the

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1 definition of the BPTIP is Appendix B of the LRA.

2 JUDGE WARDWELL: That sounds like circular  
3 reasoning to me. Doesn't section B.1.6 mention the  
4 BPTIP as a new program? Well, I'll go back to it.  
5 Yes, the program description B.27 says that Buried  
6 Pipe and Tanks Inspection Program is a new program  
7 that includes these things.

8 And then you're saying that's what the  
9 BPTIP is. Well, that's saying it's a new program that  
10 exists out somewhere else and includes for instance  
11 preventive measures and inspections.

12 MR. COX: When we use the term "new  
13 program" we're saying we don't even have -- At the  
14 time we submitted the application was 2007. And much  
15 of the work that was done in developing the  
16 implementing procedures and the overall program to  
17 address the NEI initiative was done after that.

18 So in 2007 we were saying we are going to  
19 develop a new program. When we say a new program,  
20 that doesn't mean that we have it right then. The  
21 commitment is that we have to have that program in  
22 place.

23 JUDGE WARDWELL: So it's very new because  
24 it doesn't exist yet.

25 MR. COX: It exists.

1 JUDGE WARDWELL: At the time of the  
2 license renewal application was submitted.

3 MR. COX: I guess that's probably why this  
4 is confusing is because the program that was going to  
5 be implemented, the new program, is the program that's  
6 described in the GALL report. There's no site  
7 procedure that says this is your BPTIP program. We're  
8 making a commitment as part of the license renewal  
9 application to implement the program that described in  
10 B.1.6 which by reference incorporates the elements of  
11 the GALL program. So we're making a commitment that  
12 says that will be our new Buried Pipes and Tanks  
13 Inspection Program as it's described in the GALL  
14 report.

15 JUDGE WARDWELL: Okay. So am I to feel  
16 comfort that once we get to the GALL report that I'm  
17 going to see a description of this and for instance  
18 some preventive measures and discussion of the  
19 inspections to demonstrate that the effects of aging  
20 management will be achieved for the buried pipes?

21 MR. COX: Right.

22 JUDGE WARDWELL: Okay. Thank you.

23 JUDGE McDADE: I'm a bit confused.  
24 Without reference to the site procedures, could New  
25 York or the Board know how you would manage the

1 effects of aging?

2 MR. COX: I believe they would go to the  
3 GALL report and read the inspection methods. The  
4 details are in the GALL report. We're essentially  
5 committing to say that that is going to be our  
6 program. During the period of extended operation, we  
7 intend to do everything that's defined by those ten  
8 elements as described in the GALL report.

9 JUDGE McDADE: Okay. But again going back  
10 to a question that I had earlier, aren't those ten  
11 elements really aspirational? This is what the  
12 program has to do. It has to accomplish these  
13 particular tasks. This is what needs to be done. But  
14 that your site procedures explain how you're going to  
15 do that. And without knowing exactly how you're going  
16 to do it, how can we be sanguine that aging will be  
17 adequately managed?

18 MR. COX: I think we'd have to talk about  
19 specific details. I don't see that when you say  
20 aspirational in nature when it doesn't define what to  
21 do, I don't see it that way. The inspection method,  
22 for example, it's a visual inspection and that's  
23 spelled out in the GALL report. So I'm not sure what  
24 more you would need to see to say how are you going to  
25 do a visual inspection.

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1 JUDGE McDADE: Well, does it specify, for  
2 example, what percentage of the piping needs to be  
3 visually observed?

4 MR. COX: There was no --

5 JUDGE McDADE: Is it one percent? Ninety-  
6 one percent? One half of one percent?

7 MR. COX: There was no requirement in the  
8 GALL report in Rev 1 to specify a certain number of  
9 inspections or a percentage of inspections.

10 JUDGE WARDWELL: Did it say you did not  
11 have to do that?

12 MR. COX: No, it did not address  
13 percentages.

14 JUDGE WARDWELL: So it's silent on that.

15 MR. COX: That's correct.

16 JUDGE WARDWELL: Thank you.

17 JUDGE McDADE: But that's what's troubling  
18 me is that GALL refers to certain things and, for  
19 example, such as a visual inspection. But we have to  
20 look at and the Staff in its AMP audit looked at the  
21 site procedures in order to determine whether or not  
22 the way you implement GALL will be adequate to manage  
23 the effects of aging.

24 But yet at this point those Staff  
25 procedures aren't subject to a 50.59 review. And if

1 that's the case, how can we say make a finding that  
2 the aging will be adequately managed over a period of  
3 the next 20 plus years?

4 MR. COX: I think I have to take you back  
5 to 2007. At that time, there was the amount of  
6 industry operating experience pointing to issues that  
7 buried piping was obviously less than it is today.  
8 That program in 2007 was a program that was based on  
9 the concept that the piping is all essentially coated  
10 with the same material and as long as you do  
11 opportunistic inspections -- let's say you do a  
12 handful of inspections prior to the period of extended  
13 operation -- then you've had an opportunity to assess  
14 the condition of that coating.

15 There's no reason to believe that you  
16 needed to go look at a certain percentage of piping to  
17 be able to say that my coating was installed when the  
18 plant was built is performing its function and it's in  
19 good condition. That was the kind of backdrop in  
20 2007. The standard of the guidance of the GALL  
21 report, it specified opportunistic inspections only.  
22 It didn't give a number or percentage or anything else  
23 about how much pipe you need to inspection.

24 The state of knowledge of the industry has  
25 evolved tremendously in the last several years.

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1 JUDGE WARDWELL: Okay. But again we're  
2 focusing now on just the license renewal application.  
3 If we can keep that clean break because then we'll go  
4 onto and talk about GALL 2 and how you've adhered to  
5 that and how have you gotten a program. Now we're  
6 talking about the license renewal, when you submitted  
7 your license renewal application.

8 MR. COX: Okay. So to answer Judge  
9 McDade's question, in 2007 the guidance didn't specify  
10 that you do more than opportunistic inspections. It  
11 didn't give a lot of the details that you're saying  
12 are not in procedures. I mean the programs that we  
13 would have implemented based on GALL report once we  
14 developed the implementing procedure, it would not  
15 have provided a lot of those details because those  
16 were not considered essential elements of that program  
17 the way it was described in 2007.

18 JUDGE WARDWELL: We'll take a look at  
19 those in a minute. We'll pull out GALL.

20 Just back to the license renewal  
21 application, B.28, Operating Experience, "the IPEC  
22 program is based on the program description in NUREG-  
23 1801 which in turn is based on industry operating  
24 experience." Where is the write-up of the Indian  
25 Point operating experience in the license renewal

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1 application?

2 MR. COX: I think you're looking at it.  
3 You're reading from it there. Again, it was a new  
4 program. So there was no operating experience that  
5 would show -- The operating experience section there  
6 was focused on what kind of operating experience can  
7 we provide here that shows that this program has been  
8 effective.

9 JUDGE WARDWELL: Let me interrupt. It  
10 says under Operating Experience "the IPEC program is  
11 based on NUREG-1801." That's GALL which in turn is  
12 based on industry operating experience. So what  
13 you're saying is we have to turn to GALL and look at  
14 industry operating experience.

15 And where do you say that yours is  
16 consistent with that and not just based on it? Where  
17 have you considered that industry operating experience  
18 and based your program on that?

19 MR. COX: Again, I'm going to take you  
20 back to say this was a new program. So we did not  
21 have a program in place that we could look at and say,  
22 "Hey, what's the operating" --

23 JUDGE WARDWELL: But you were developing  
24 one, correct?

25 MR. COX: We submitted --

1 JUDGE WARDWELL: To address this in your  
2 license renewal application, you had to have an aging  
3 management program, correct?

4 MR. COX: We had a commitment to implement  
5 that was described in the GALL report.

6 JUDGE WARDWELL: You provided a commitment  
7 to do what's described in the GALL report.

8 MR. COX: That's correct.

9 JUDGE WARDWELL: Under operating  
10 experience though to address GALL, you have to say  
11 something about your operating experience. You say  
12 it's based on the industry operating experience. That  
13 doesn't say anything about your operating experience.  
14 Did you have any operating experience with buried  
15 pipes? Did any buried pipes leak before you submitted  
16 your license renewal application?

17 MR. COX: I don't believe any of them that  
18 were within the scope of license renewal had shown any  
19 leaks. We did have one leak.

20 JUDGE WARDWELL: Did any pipes leak?:

21 MR. COX: We had a leak on a auxiliary  
22 steam piping that occurred in the time frame. I'm not  
23 sure if it was before or after we submitted the  
24 application. But my point was going to be that the  
25 purpose of that section from my understanding of how

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1 to submit the license renewal application, we were  
2 looking for operating experience that would show that  
3 that program has been effective.

4 In our case, it was a new program. We  
5 could not point to any operating experience at IPEC  
6 that said we've been doing this for the last five  
7 years and it's an effective program. It was a new  
8 program that hadn't been implemented.

9 JUDGE WARDWELL: So it's your testimony  
10 that this operating experience that GALL asked for is  
11 only operating experience with a program, not with a  
12 problem.

13 MR. COX: That is the -- That was the way  
14 that we were looking at this in 2007 when we developed  
15 the application.

16 JUDGE WARDWELL: Thank you. B.28  
17 conclusion says that "the Buried Pipes and Tanks  
18 Inspection Program will be effective for managing  
19 aging effects. It will incorporate proven monitoring  
20 techniques, acceptance criteria, corrective actions  
21 and administrative controls." What are the proven  
22 monitoring techniques, acceptance criteria, corrective  
23 actions and administrative controls that will be  
24 incorporated into the Indian Point aging management  
25 program?

1 MR. COX: Those are elements that are  
2 defined in the GALL report. Under Detection of Aging  
3 Effects, it talks about doing visual inspections. The  
4 acceptance criteria specifies that there's no  
5 degradation of the coating.

6 There is a section that addresses  
7 corrective actions. I believe it refers to the  
8 plant's corrective action program. And there's also  
9 a section in the GALL report that touches on  
10 administrative controls. So those are the elements  
11 that we're referring to there for the program which  
12 are the elements that are described in the GALL  
13 report.

14 JUDGE WARDWELL: In this regard, is any of  
15 the BPTIP -- See, I can't be cool all the time. I  
16 slip back -- by reference or directly a license  
17 commitment?

18 MR. COX: The license commitment is to  
19 implement the program described in LRA Section B.1.6  
20 which by reference to GALL Section M-1.34 makes those  
21 ten elements of that program a license renewal  
22 commitment.

23 JUDGE WARDWELL: How would you see the  
24 Staff enforcing the aspects of the BPTIP? Or what  
25 actions would you take also in regards to that if you

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1 have to do in some of your self-regulatory actions  
2 that are needed?

3 MR. COX: What we would do to verify that  
4 we were meeting that commitment, we would go take each  
5 element of the GALL report and develop a procedure and  
6 implement a procedure that ensured that we followed  
7 whatever action was specified by that GALL element.  
8 We would do that for each of the ten elements to make  
9 sure that we had appropriately implemented the  
10 commitment.

11 And we would expect the NRC to come in  
12 during their license renewal audits and basically look  
13 over our shoulders the same thing.

14 JUDGE WARDWELL: What happens in the  
15 future if, in fact, you didn't follow one of those  
16 during what I consider to be the real implementation  
17 phase when you actually go out there and started  
18 looking at pipes or testing for pipes or determining  
19 leakage, etc.?

20 MR. COX: Well, we're going to develop  
21 procedures to implement that commitment. If we didn't  
22 follow that, the NRC could find that we had not met  
23 our commitment. They could find that if we didn't  
24 change the procedure to do something different they  
25 could say you're not following your procedure. If you

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1 change the procedure and you didn't appropriately  
2 address the commitment, you could get a violation for  
3 that way you changed the procedure and avoided  
4 implementing the commitment. So I think there are  
5 controls.

6 We would put references in the procedure  
7 to the commitment so that it was not inadvertently  
8 changed. It would require an engineering review and  
9 a 50.59 review to make any of those changes.

10 JUDGE WARDWELL: Thank you, Mr. Cox.

11 Mr. Holston, how do you believe you would  
12 enforce those aspects of the BPTIP?

13 MR. HOLSTON: This is William Holston  
14 answering. There are two aspects. One aspect prior  
15 to the entrain of the period of extended operation  
16 there is a specific inspection that's conducted over  
17 in multiple phases by the regional staff. The  
18 inspection is an Inspection Procedure 71003.

19 Although given that Indian Point doesn't  
20 have the renewed license yet, there's a temporary  
21 inspection which is called or temporary instruction  
22 which is TI 2516. The purpose of both of those is to  
23 go and look in the implementing procedures to ensure  
24 that all changes have been incorporated as committed  
25 in each of the commitments in the license renewal

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1 application.

2 If a licensee has not -- Well, licensee at  
3 this point, has not implemented those actions, they're  
4 subject to findings and violations.

5 JUDGE WARDWELL: What do you mean by  
6 implementing now? Developing procedures or actually  
7 executing them?

8 MR. HOLSTON: Okay, sir. I am sorry. I  
9 used that term again.

10 JUDGE WARDWELL: Yes.

11 MR. HOLSTON: For instance, if one of the  
12 commitments was to -- keeping with my example --  
13 incorporate risk ranking that the procedure that the  
14 utility, the licensee, uses to evaluate risk is in a  
15 procedure that they must comply with at that station.  
16 That's what the regional inspection team verifies.

17 Now, of course, we also verify during the  
18 AMP audit. But in some cases there are future changes  
19 that have to go in place. So that's how the NRC  
20 captures both sides, the AMP audit and then where  
21 commitments are made, those are checked prior to them  
22 going into the period of extended operation by that  
23 inspection.

24 JUDGE WARDWELL: What would happen if they  
25 had proposed a monitoring technique that they then

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1 didn't follow when they actually put boots on the  
2 ground?

3 MR. HOLSTON: This is Mr. Holston. If  
4 they used an alternative inspection methodology that  
5 the NRC has not endorsed, then that also -- And their  
6 procedure that executes that inspection procedure  
7 would have been reviewed by the Staff and that would  
8 be subject to violation just as I stated.

9 JUDGE WARDWELL: Thank you.

10 JUDGE KENNEDY: Just one follow-up  
11 question. You used the word "violation" and again  
12 this is against the commitment to implement, in this  
13 case, a particular GALL program. I think we're all --  
14 I think the Board is a bit hung up on where the hooks  
15 lie as to what the process controls are.

16 I think we understand the inspection  
17 process. But what is that team using to inspect  
18 against? I mean, what is their baseline when they go  
19 just taking this AMP? Are they -- If it's  
20 inconsistent with GALL AMP, are they armed with the  
21 knowledge of what GALL's laid out as a program and  
22 they're now in the implementing procedures looking for  
23 all those attributes?

24 MR. HOLSTON: Yes. This is Mr. Holston.

25 JUDGE KENNEDY: I'm sorry. I was looking

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1 at -- Yes, it was for you.

2 MR. HOLSTON: That is correct, sir. What  
3 happens is when a regional member goes out on that  
4 inspection they review a license renewal application,  
5 the safety evaluation report. They review the  
6 commitments. They review the Updated Final Safety  
7 Analysis Report.

8 And their job when they go to that  
9 specifically for that inspection is to verify that  
10 each of those commitments have been put into  
11 procedures. I'm trying to stay away from that  
12 implementing word.

13 JUDGE WARDWELL: Thank you.

14 MR. HOLSTON: But put in place in  
15 procedures at the station. If they haven't been, then  
16 the team will look at that gap and put it through the  
17 reactor oversight process. Is that a -- I see you  
18 nodding.

19 JUDGE KENNEDY: That works for me.

20 MR. HOLSTON: Okay. Yes, it goes through  
21 the reactor oversight process to determine the  
22 severity of any finding or violation.

23 JUDGE WARDWELL: And if a promise to avoid  
24 the word commitment is reflected in the UFSAR and that  
25 is a mechanism for you to use for comparison to what

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1 is actually taking place in order to determine whether  
2 or not it is taking place according to the promise or  
3 if it isn't to take some other further action?

4 MR. HOLSTON: This is Mr. Holston. During  
5 the 71003, not only is it that the UFSAR but it's a  
6 list of all the commitments that are in as part of the  
7 Final Safety and Evaluation Report that's issued.  
8 Those are all checked.

9 Twenty years from now, it would be all  
10 those commitments had been implemented. I think  
11 that's -- Put in procedures and that 71003 inspections  
12 then. So, say, 20 years from now, that would be done  
13 through looking at the UFSAR to determine whether the  
14 applicant has deviated from that.

15 JUDGE WARDWELL: But if the applicant  
16 promises to do something that didn't happen to make it  
17 into a commitment, but did make it into the UFSAR,  
18 then that could be a mechanism to provide further  
19 review and correction of that. Is that a fair  
20 assessment?

21 MR. HOLSTON: Yes, this is Holston. Yes,  
22 sir. That is correct.

23 JUDGE WARDWELL: Thank you.

24 JUDGE KENNEDY: Mr. Holston, this is Judge  
25 Kennedy. I guess I'm -- Do I need to think of this in

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1 terms of there's a commitment either embedded in the  
2 UFSAR or in a specific numbered commitment that says  
3 something like "The licensee will implement a program  
4 consistent with GALL"? Is that a sufficient hook to  
5 allow the inspection team to go forward and review the  
6 implementing or the station procedures to enact that  
7 process?

8 MR. HOLSTON: This is William Holston.  
9 That is correct, sir. Yes. And several times  
10 enhancements will just go to that level of detail that  
11 we will implement the procedures necessary to have the  
12 -- I'm trying to stay away from the word implement.  
13 I'm sorry. Let me see if I can rephrase that.

14 The enhancement would state something like  
15 "Procedure revisions will be put in place to ensure  
16 that the program is consistent with the GALL report."  
17 Often the commitments are a lot more detailed because  
18 they get into actually what the gaps are and --

19 JUDGE WARDWELL: To help you on that, from  
20 now on if you just say implementing procedures we'll  
21 know what you say. I don't want to interrupt you.  
22 And you coddling me, I can make the description. I  
23 just wanted to clarify what is is that you were  
24 talking about initially when you said implementing  
25 procedures.

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1 I'm comfortable now. You can move ahead  
2 with that. And I will interrupt if you said something  
3 about implementation like you did earlier to correct  
4 which is that. Are you doing something real or are  
5 you just writing stuff on a piece of paper?

6 Another follow-up. No, I'll wait until we  
7 discuss GALL.

8 JUDGE McDADE: Do you want to take a short  
9 break?

10 JUDGE WARDWELL: Yes. I don't need to but  
11 it is a good point to break. Ten minutes or?

12 JUDGE McDADE: It's almost 11:00 a.m. and  
13 it may be an appropriate time to take a short break.  
14 I propose ten minutes. I've got ten minutes of 11:00  
15 a.m. If we break until 11:00 a.m., is that enough  
16 time for Entergy?

17 MS. SUTTON: Yes, Your Honor.

18 JUDGE McDADE: New York?

19 MR. SIPOS: Yes, Your Honor.

20 JUDGE McDADE: Riverkeeper?

21 MR. MUSEGAAS: Yes, Your Honor.

22 JUDGE McDADE: Clearwater?

23 MS. RAIMUNDI: Yes, Your Honor.

24 JUDGE McDADE: The Staff?

25 MR. TURK: Yes, Your Honor.

1 JUDGE McDADE: Buchanan?

2 MAYOR MURRAY: Yes, Your Honor.

3 JUDGE McDADE: Okay. We'll take a brief  
4 recess. We'll stand in recess for ten minutes. We  
5 are in recess. Off the record.

6 (Whereupon, the foregoing matter went off  
7 the record at 10:53 a.m. and went back on  
8 the record at 11:04 a.m.)

9 MR. TURK: Your Honor, the Staff would --  
10 I believe Mr. Holston has a correction that he would  
11 like to make to some prior testimony that he gave. If  
12 he may start with that.

13 JUDE McDADE: Sure.

14 MR. HOLSTON: Yes, in regard to risk  
15 ranking being in the UFSAR, when I was answering your  
16 question I looked at -- the page I had flipped to was  
17 an earlier version of the UFSAR. And during the break  
18 we were able to confirm that in fact risk ranking is  
19 already addressed in the UFSAR. Had it not been, it  
20 would be exactly the answer I gave, which would be  
21 that when we are doing the gap analysis between the  
22 ISG and what is currently in the program, we would  
23 have addressed it in an RAI. But in this case, that  
24 would not be necessary.

25 JUDGE WARDWELL: So you thought you made

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1 the first mistake of your life and come to find out,  
2 you haven't.

3 MR. HOLSTON: Yes, correct.

4 (Laughter.)

5 JUDGE WARDWELL: Is that it?

6 MR. HOLSTON: Yes, sir.

7 JUDGE WARDWELL: Thank you for that.

8 Moving on to take a look at the infamous  
9 GALL 1, which is XI.M34, and it is New York State  
10 Exhibit 000146, program description from XI.M34 and it  
11 is at page XI.M-111 of GALL 1.

12 The program description says, "This  
13 program is an acceptable option to manage buried  
14 piping in tanks, except further evaluation is required  
15 for the program element attributes of detection of  
16 aging effects regarding the inspection frequency and  
17 operating experience."

18 My question to Staff is, where in the  
19 License Renewal Application has Entergy incorporated  
20 this further evaluation that is required for detecting  
21 aging effects and summarizing operating experience  
22 into Entergy's AMP for buried pipes at Indian Point?

23 MR. HOLSTON: The Aging Management  
24 Program, when it is compiled, now this is the  
25 Applicant's Aging Management Program, not the GALL

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1 Report Aging Management Program, will look at  
2 operating experience; however, most applicants, if it  
3 is an existing program, they will provide examples of  
4 operating experience. If it is a new program, they  
5 will state that they will do so when they implement  
6 the program.

7 And when the Staff goes on the AMP audit,  
8 we go and look at their corrective action database,  
9 which contains all of their operating experience and  
10 were provided either a five-year or a ten-year I am  
11 going to say dump -- that is kind of the word we use  
12 -- but an output of all of the corrective actions that  
13 have been written. We then review that operating  
14 history to see if they have issues with their buried  
15 piping that would not have made it acceptable to use  
16 AMP XI.M34.

17 So if they had applied late in 2009, after  
18 the auxiliary feedwater or the condensate return  
19 piping line had been discovered, then we would have  
20 addressed that with the applicant and said well you  
21 had leakage that didn't affect the intended function  
22 of the piping but you did have leakage because you  
23 have had some backfill that damaged some of the  
24 coatings.

25 However, since it was submitted in 2007

1 and the AMP audit was conducted then, at that time  
2 they didn't have any in-scope operating experience  
3 that showed that they had leakage.

4 JUDGE WARDWELL: Did they have leakage  
5 from any pipes?

6 MR. HOLSTON: I believe that the aux steam  
7 line was in the vicinity -- or not in the vicinity,  
8 physical vicinity -- but was in about that time frame.  
9 So I don't recall looking at the date, whether it was  
10 just before or just after the application.

11 But the aux steam line, the Staff was  
12 aware of the leakage in the aux steam line, even  
13 though that was out-of-scope piping.

14 JUDGE WARDWELL: And does in-scope and  
15 out-of-scope piping able to -- anything unique in  
16 regards to those types of pipes that they differ such  
17 that the corrosion from in-scope might be different  
18 than the corrosion from out-of-scope?

19 MR. HOLSTON: Yes. We look at the  
20 operating experience. And so first we will know here  
21 is a leak. But what happens is that the most critical  
22 item is the backfill quality. And there are portions  
23 of the site typically where you have safety grade  
24 backfill quality. That is where systems like service  
25 water, auxiliary feedwater, condensate return are

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1 buried. The backfill would probably be a little bit  
2 better than if you had another portion where there  
3 wasn't power block piping.

4 So if in this non-power block piping they  
5 used a different specification for backfill that was  
6 not as rigorous on the controls of the materials that  
7 went in it and that caused a leak and the Applicant  
8 could demonstrate via their specifications that where  
9 the in-scope piping was they had better controls, we  
10 would use that to mitigate that operating experience.  
11 That is about the only example I have for you,  
12 although I have seen that at several plants.

13 JUDGE WARDWELL: Thank you.

14 MR. COX: Judge Wardwell, on this specific  
15 piping, on this aux steam piping -- this is Alan Cox  
16 for Entergy -- there are some other differences. This  
17 was a steam pipe. My understanding is that it was  
18 insulated, so it was not the typical coal tar epoxy  
19 coating that you see for most underground pipings. In  
20 this case, it would not be indicative of what you  
21 would expect to find on the buried piping that is  
22 within the scope of license renewal.

23 JUDGE WARDWELL: Okay, thank you.

24 Staff, again if I look at the words of  
25 GALL that are up there on the screen, it says that

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1 "further evaluation is required for the program  
2 elements/attributes" -- they even use that phrase --  
3 "of detection of aging effects regarding inspection  
4 frequency and operating experience."

5 I still am not clear where in the License  
6 Renewal Application is that further evaluation? If it  
7 is to be consistent with GALL, doesn't it need to  
8 address that further evaluation?

9 MR. HOLSTON: Yes, sir. The further  
10 evaluation would be documented in the operating  
11 experience program element discussion in the License  
12 Renewal Application.

13 JUDGE WARDWELL: Okay. And as we look at  
14 that, here it is. "B-28, operating experience. The  
15 IPEC program is based on a program description in  
16 NUREG-1801, which in turn is based on industry  
17 operating experience." I don't see any evaluation of  
18 the program elements/attributes of the detection of  
19 aging effects regarding inspection frequency and  
20 operating experience in that description.

21 MR. HOLSTON: When I read the words that  
22 are in the application, what those words mean to me is  
23 that the Applicant looked at their corrective action  
24 database, did not find any leakage and, therefore,  
25 they are consistent with the industry operating

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1 experience.

2 In contrast, if they had had multiple  
3 leaks at the station in in-scope piping or out-of-  
4 scope as we did before if it had very similar  
5 environment, very similar wrappings, we would use that  
6 as equally valid operating experience. They would not  
7 be able to make that statement.

8 And then like I also said, the Staff  
9 verifies the accuracy of that statement. We go in and  
10 look to see if they have had operating experience that  
11 maybe they didn't notice.

12 JUDGE WARDWELL: Are you saying that the  
13 industry operating experience for buried pipes is one  
14 that shows that isn't much of a problem or it has  
15 other plants had more of a problem with buried pipes  
16 than Indian Point?

17 MR. HOLSTON: At the time of the writing  
18 of the GALL Report, Rev 1, which was in 2005 as I  
19 recall, there was not a significant amount of industry  
20 --

21 JUDGE WARDWELL: In regards to when a  
22 License Renewal Application was submitted is what I am  
23 of interest in.

24 MR. HOLSTON: Okay. Well even in 2007,  
25 even at the point of 2007, there really wasn't any

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1 significant buried pipe operating experience. It was  
2 -- that really evolved over the 2009 early 2010 time  
3 frame when we realized that there was an uptick in the  
4 frequency of detection of leakage. And that was one  
5 of the reasons why GALL, Rev 2 we overwrote,  
6 basically, the two programs that were in the GALL  
7 Report and developed AMP XI.M41 with a much higher  
8 level of detail.

9 JUDGE WARDWELL: Thank you. Let's see if  
10 I have any more.

11 MR. HOLSTON: If I could supplement the  
12 further evaluation, but it is not on something you  
13 would see in that screen. But in the Standard Review  
14 Plan, Table 3.3-1, there are multiple line items that,  
15 for instance I will just take line item 19. This is  
16 for steel pipe with or without coating or wrapping,  
17 piping components and piping elements exposed to soil.  
18 And it is the aging effect is loss of material. That  
19 requires the Applicant in Section 3.3.2.2.8 of the  
20 application to discuss operating experience related to  
21 their buried pipe. And that is in the further  
22 evaluation. The specific words are: "Further  
23 evaluation recommended." So that is not in the AMP  
24 part of the License Renewal Application. It is in the  
25 Aging Management Review line item portion of the

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1 application.

2 JUDGE WARDWELL: And so are you saying  
3 that that is where that explanation is? And what is  
4 the reference for that?

5 MR. HOLSTON: Yes, sir. Again, it is the  
6 Standard Review Plan for License Renewal Table --

7 JUDGE WARDWELL: Well, no. In that  
8 Standard Review Plan that you quoted, you referenced  
9 someplace where this was discussed.

10 MR. HOLSTON: Oh. Yes, Section 3.3.2.2.8.  
11 And there are several other -- there are at least a  
12 couple others where we addressed buried piping.

13 JUDGE WARDWELL: Now Mr. Cox, is that a  
14 section of your License Renewal Application that we  
15 are able to pull up?

16 MR. COX: No, the SRP is not a --

17 JUDGE WARDWELL: No, no. This section  
18 that they referred to in the SRP.

19 MR. COX: Oh, I'm sorry. Yes, it should  
20 be.

21 JUDGE WARDWELL: And if we take the time  
22 and effort to do that, is it going to show us this  
23 further evaluation that is requested by GALL 1?

24 MR. COX: Yes, I believe it will. There  
25 is a number of sections where we address items that

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1 are flagged for further evaluation that in that same  
2 section.

3 JUDGE WARDWELL: Okay. In GALL it then  
4 moved after the program description onto evaluation  
5 and technical basis. And first is the scope of the  
6 program. The scope of the program covers buried  
7 components that are within the scope of license  
8 renewal for the plant. And the question is for Staff.

9 Has the Applicant provided, in its License  
10 Renewal Application, any identification and  
11 categorization of the pipes and tanks that are within  
12 the scope of its AMP as applied to Indian Point? Have  
13 you done that review in order to say these are the  
14 pipes here at Indian Point that fall under this  
15 program?

16 MR. HOLSTON: Yes, sir. They do that in  
17 two locations in the License Renewal Application --  
18 well actually multiple but two general locations. In  
19 the AMP itself, they listed the systems that had  
20 buried in-scope piping.

21 In addition --

22 JUDGE WARDWELL: Excuse me.

23 MR. HOLSTON: Yes, sir?

24 JUDGE WARDWELL: In the AMP itself. The  
25 AMP is B.1.6? That is what I was told.

1 MR. HOLSTON: Yes. Yes, sir.

2 JUDGE WARDWELL: That is what I  
3 understood.

4 MR. HOLSTON: Yes, I am going off memory  
5 there but I am pretty sure I remember seeing a list of  
6 the systems.

7 JUDGE WARDWELL: Oh, of the systems.

8 MR. HOLSTON: Of the systems, yes.

9 JUDGE WARDWELL: Okay.

10 MR. HOLSTON: Now --

11 JUDGE WARDWELL: You mean just what I  
12 asked right at the very beginning. The feedwater  
13 system and --

14 MR. HOLSTON: Yes, sir.

15 JUDGE WARDWELL: It is clearly a list of  
16 those six systems.

17 MR. HOLSTON: Yes, sir.

18 JUDGE WARDWELL: Okay.

19 MR. HOLSTON: In addition, the Aging  
20 Management Review tables which contain the list of all  
21 of the components in the plant that are being managed  
22 for aging, and it lists them by material, environment,  
23 aging effect, and program, we do a cross-reference  
24 check across that to ensure that each system has its  
25 own table. So if the AMP says we have auxiliary

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1 feedwater piping that is buried, we go look at those  
2 Aging Management Review tables and see that yes, here  
3 in fact there is piping and that piping is exposed to  
4 soil and it is being managed by the Buried Pipe  
5 Program.

6 So that is why I say there is two --

7 JUDGE WARDWELL: But there is not a table  
8 under B.1.6 that then calls out from those other  
9 tables just those potential SSCs, i.e., the buried  
10 pipes that are under the Buried Pipe Program.  
11 Correct?

12 MR. HOLSTON: Correct. The AMP just lists  
13 the systems. But the tables, the AMR tables, Aging  
14 Management Review tables list every component type.

15 JUDGE WARDWELL: It is not sorted by AMP.

16 MR. HOLSTON: It's not -- it can be sorted  
17 by AMP. The tables themselves --

18 JUDGE WARDWELL: Isn't sorted by AMP.

19 MR. HOLSTON: It is not sorted by AMP.

20 No, sir.

21 JUDGE WARDWELL: But it could be with the  
22 click of a button.

23 MR. HOLSTON: Yes, sir.

24 JUDGE WARDWELL: I won't be repetitive  
25 with my thought.

1 Under preventive actions, under the  
2 evaluation technical basis in GALL, it says, "In  
3 accordance with industry practice underground piping  
4 and tanks are coated during installation with a  
5 protective coating system such as coal, tar, enamel,  
6 fiberglass wrap, and a Kraft wrap outer wrap, a  
7 polyolefin tape coating or fusion-bonded epoxy coating  
8 to protect the piping from contacting the aggressive  
9 soil elements."

10 Have all the existing pipes, as far as you  
11 are aware of, Staff, received protective coating?

12 MR. HOLSTON: Yes, sir. And I would just  
13 like to clarify that the underground that is referred  
14 to in GALL, Rev 1 did not differentiate between  
15 underground and buried and should be interpreted as  
16 buried piping. But yes, all the buried piping is  
17 coated at Indian Point.

18 JUDGE WARDWELL: Thank you.

19 Is there any way to tell that from that  
20 component list that you were talking about that every  
21 one of those pipes are in fact coated?

22 MR. HOLSTON: No, sir. We have to verify  
23 that when we do the AMP audit.

24 JUDGE WARDWELL: Is there any technical  
25 reason that an applicant could not have submitted that

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1 -- let me back up. Mr. Cox, at the time of your  
2 license submittal, was your plant aware of the  
3 coatings that were intended to be installed for all of  
4 your buried pipes?

5 MR. COX: Yes, the plant was.

6 JUDGE WARDWELL: Mr. Holston, is there any  
7 technical reason that you know that that summary of  
8 those pipes and their potential coatings could not  
9 have been submitted as part of the license  
10 application?

11 MR. HOLSTON: There is no reason why they  
12 couldn't but could I elaborate?

13 JUDGE WARDWELL: Sure.

14 MR. HOLSTON: When a Standard Review Plan  
15 is a topical report issued by the Staff, the GALL  
16 Report -- I'm sorry, the GALL Report is. And the  
17 industry and the Staff have an understanding that when  
18 there is a topical report issued, if the Applicant is  
19 consistent with that topical report, then the level of  
20 detail and applications doesn't have to -- has to be  
21 in the application.

22 Now, the material has to be there, and Ms.  
23 Green help me out here with the standard --

24 JUDGE WARDWELL: Let me interrupt and I  
25 will let you go back to that later.

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1 MR. HOLSTON: Yes, sir.

2 JUDGE WARDWELL: But isn't the burden that  
3 we have to deal with here is demonstrating that they  
4 are consistent with GALL? It is not merely them  
5 saying they are consistent. There is a need to  
6 demonstrate consistency.

7 MR. HOLSTON: Yes, sir. That is --

8 JUDGE WARDWELL: Wouldn't something like  
9 that help that it shows that it is demonstrating that?

10 MR. HOLSTON: It would help it but I would  
11 still need to see it in the documents at the station.  
12 So for example a document that I would look at at the  
13 station to verify that is the coating specifications  
14 for those pipe and we ensure that it is applicable to  
15 those systems and that environment. We verify --

16 JUDGE WARDWELL: Let me interrupt.

17 MR. HOLSTON: Yes.

18 JUDGE WARDWELL: Are you aware that -- are  
19 you the only person, are you the only party, are you  
20 the only organization, is Staff the only person that  
21 is interested in the demonstration of the AMP in  
22 regards to being consistent with GALL?

23 MR. HOLSTON: I would say that would not  
24 be the case, based upon reviewing all of this  
25 testimony and the contention and the hearing.

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1 JUDGE WARDWELL: Thank you very much. Now  
2 move on to where you were going with what you wanted  
3 to say.

4 MR. HOLSTON: Okay. Where the -- I'm  
5 reading from the Standard Review Plan page 3.02. It  
6 is the second paragraph down. The first paragraph is  
7 a partial paragraph.

8 "If an Applicant takes credit for a  
9 program in the GALL Report, it is incumbent on the  
10 Applicant to make sure that the plant program contains  
11 all of the elements of the referenced GALL Report."  
12 In addition, the conditions that the plant must be  
13 bounded -- the above -- I'm kind of paraphrasing a bit  
14 here. The above verifications must be documented on-  
15 site in an auditable form. And that is the key words  
16 I wanted to get out there. And that is what we do  
17 during the audit.

18 So I agree with you it would be helpful  
19 for other people to see that. But anything that is  
20 written, I am going to need to go verify when I get to  
21 the site on the design documents.

22 JUDGE WARDWELL: Dr. Duquette, are you  
23 interested in seeing a demonstration that the Aging  
24 Management Program is consistent with GALL?

25 DR. DUQUETTE: Yes, sir, most definitely.

1 JUDGE WARDWELL: I just wanted to make  
2 sure you realized we knew you were still here. That's  
3 all.

4 (Laughter.)

5 JUDGE WARDWELL: Keep in mind if I ask you  
6 a question, it is going to be challenging something.  
7 So you have got to be happy. And it will come. It  
8 will come.

9 I think we are on to detecting aging  
10 effects. GALL's next section is detecting of aging  
11 effects that I want to talk about. I forgot what  
12 Section 3 was but it wasn't very interesting.

13 Inspections performed confirmed that the  
14 coating and wrapping are intact are an effective  
15 method to ensure that corrosion of external surfaces  
16 has not occurred and the intended function is  
17 maintained.

18 And it goes on on the next page. That was  
19 on page M-11. And then on page M-12 it goes on to say  
20 prior to entering the period of extended operation the  
21 Applicant is to verify that there is at least one  
22 opportunistic or focused inspections performed within  
23 the past ten years.

24 Staff, did Entergy commit to doing this in  
25 its License Renewal Application?

1 MR. HOLSTON: Yes, sir. They did commit  
2 to do the one inspection prior to the period of  
3 extended operation.

4 JUDGE WARDWELL: And they did that by  
5 what, by saying that it is consistent with GALL? It  
6 didn't do it specifically?

7 MR. HOLSTON: That is correct, sir.

8 JUDGE WARDWELL: It would have been pretty  
9 easy just to say to parrot that back wouldn't it, that  
10 that is what they are going to do?

11 MR. HOLSTON: Yes. And I believe, and I  
12 am going off of memory here, that their License  
13 Renewal Application in the program description talked  
14 about the opportunistic inspections. I can verify  
15 that on a break. So there was that statement.

16 But given that if they were consistent  
17 that is what would be expected to occur.

18 JUDGE WARDWELL: Mr. Cox, did you say this  
19 statement earlier on, the text of the application that  
20 wasn't included in B.1.6., is that right?

21 MR. COX: My recollection is that this  
22 would be the commitment. This is the commitment when  
23 we say we are going to be consistent with GALL, we say  
24 that we are going to do what GALL says. It says here  
25 that we are going to do an inspection. We are going

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1 to verify that we have at least one inspection prior  
2 to the PEO and that is what we would expect to have to  
3 do.

4 JUDGE WARDWELL: And is this one  
5 inspection on every pipe?

6 MR. COX: No, sir. It is one inspection.

7 JUDGE WARDWELL: So you are saying the way  
8 you are reading this is that GALL is asking for just  
9 one look at one pipe somewhere on the whole plant.

10 MR. COX: That was the recommendation in  
11 the GALL report, yes.

12 JUDGE WARDWELL: Pretty onerous, huh? We  
13 will get into your current program later on to show  
14 how.

15 We learned a lot between GALL 1 and 2,  
16 didn't we? You are nodding your head yes, Mr. Cox.

17 MR. COX: Is that a question for me?

18 JUDGE WARDWELL: It goes on to say that  
19 any credited inspection should be performed in areas  
20 where the highest likelihood of corrosion problems and  
21 in the areas with a history of corrosion problems. So  
22 ha-ha, we have got at least one caveat here.

23 Staff, do you know any place where Entergy  
24 has shown in its License Renewal Application that its  
25 AMP is consistent with GALL by documenting and ranking

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1 the relative corrosion problems of its buried  
2 pipelines at Indian Point and demonstrated that future  
3 inspections will take place in an area that has the  
4 highest likelihood of corrosion problems in an area  
5 with a history of corrosion?

6 MR. HOLSTON: Yes, sir. The Applicant in  
7 July of 2009 revised its program --

8 JUDGE WARDWELL: This is at the time of  
9 License Renewal Application.

10 MR. HOLSTON: Oh. I apologize.

11 JUDGE WARDWELL: Again, don't get nervous.  
12 We are going to get into all of that later on. I want  
13 to establish what we had before at the License Renewal  
14 Application stage.

15 MR. HOLSTON: I do not believe that detail  
16 was documented in the License Renewal Application. It  
17 was implied by the consistency statement.

18 JUDGE WARDWELL: But we don't know that in  
19 fact there is -- they hadn't gone and actually  
20 determined where our suitable locations for any  
21 demonstration that this in fact is going to be carried  
22 out.

23 MR. HOLSTON: At the time of application,  
24 that would be correct.

25 JUDGE WARDWELL: Thank you. Monitoring

1 trending results of the previous inspections are used  
2 to identify susceptible locations. Where has Entergy  
3 documented in its License Renewal Application previous  
4 results and identified susceptible locations that  
5 demonstrates its consistency with GALL in this area?

6 Sorry, as far as you observed.

7 MR. HOLSTON: Yes, I did not read that in  
8 the specifics, in the License Renewal Application.

9 JUDGE WARDWELL: The application criteria  
10 states that any coating and wrapping degradations are  
11 reported and evaluated according to site corrective  
12 action procedures.

13 Do you know, Staff, what their site  
14 corrective action procedures are and where is that  
15 presented in the License Renewal Application?

16 MR. HOLSTON: We are aware of the  
17 corrective action procedures. We review those during  
18 the AMP audit. Those details are not in the License  
19 Renewal Application.

20 JUDGE WARDWELL: Thank you. Under 7 --  
21 I'm jumping ahead here.

22 Corrective actions, does it cite  
23 Corrective Action Program, QA assurance procedures,  
24 site review and approval process and administrative  
25 controls are implemented in accordance with the

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1 requirements of 10 CFR Part 50, Appendix B.

2 Where are the potential site corrective  
3 action procedures described in the License Renewal  
4 Application?

5 MR. HOLSTON: You know, I did not review  
6 this portion. So I am somewhat going out on a limb.  
7 There is generally an Appendix B, maybe a one- or two-  
8 paragraph description of the administrative controls  
9 Quality Assurance Program, Corrective Action Program.  
10 It is clearly not the level of detail that is in the  
11 implementing procedures but it is certainly a little  
12 bit more than just that statement of consistency.

13 JUDGE WARDWELL: Mr. Cox, would you mind  
14 guiding us towards any additional information you  
15 might be able to provide in this area?

16 MR. COX: Well, Your Honor, I think you  
17 have to put this in the perspective of this is a  
18 program, these are the elements that the program will  
19 have once it is implemented.

20 So basically we are saying under  
21 corrective action that if we find something that  
22 doesn't meet the acceptance criteria, we have to enter  
23 that into the Corrective Action Program in accordance  
24 with the requirements of 10 CFR 50, Appendix B.

25 These are things that once the procedures

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1 are developed to implement the program that is  
2 described here, these have to be elements of those  
3 procedures.

4 JUDGE WARDWELL: So there are no further  
5 explanations in a license renewal application of  
6 these. It is to be part of the implementing  
7 procedures?

8 MR. COX: There is nothing specific to the  
9 Buried Piping Program. There is a section, I believe,  
10 that talks about the corrective actions and  
11 administrative controls in another section of the  
12 application but it is generic. It applies to all  
13 programs.

14 JUDGE WARDWELL: But it does apply to all  
15 programs. And you know, can you remember where it  
16 might be?

17 MR. COX: I believe it as at the beginning  
18 of Section B, Appendix B.

19 JUDGE WARDWELL: Thank you. Then lastly,  
20 the operating experience. The operating experience  
21 shows that the program described here is effective in  
22 managing corrosion of external surfaces of buried  
23 steel piping and tanks. However, because the  
24 inspection frequency is plant-specific, it depends on  
25 the plant operating experience. The Applicant's

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1 plant-specific operating experiences is further  
2 evaluated for the extended period of operation.

3 I will stay with you, Mr. Cox. Where in  
4 your License Renewal Application have you summarized  
5 the plant-specific operational experience presented in  
6 the LRA and how will it continue to be evaluated  
7 during the period of extended operation?

8 MR. COX: Well first let me say that my  
9 understanding of that sentence when it refers to  
10 evaluation of plant-specific operating experience, it  
11 takes you back to the detection of aging effects on  
12 the floor. Then that element it talks about you have  
13 to review your plant operating experience when you  
14 enter the period of extended operation to ensure that  
15 you have performed an inspection. So I believe that  
16 is the review and the further evaluation that is being  
17 referred to here for operating experience.

18 JUDGE WARDWELL: And why do you believe  
19 that?

20 MR. COX: Based on my experience in the  
21 programs that have been provided in other applications  
22 prior to Indian Point.

23 JUDGE WARDWELL: Thank you. Let's now  
24 start talking about from whence we came to where we  
25 are now. And part of that will be some questions on

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1 GALL 2 and then we will get further into the program  
2 as we get into that.

3 But starting off, Entergy in your  
4 testimony -- that is Exhibit 000373 to remind  
5 everyone, answer 41 on page 23. It says speaking of  
6 Gall 2, Entergy states that as it relates to  
7 Contention New York State 5, NUREG-1801, Rev 2  
8 combines a previous Buried Pipe and Tank Surveillance  
9 Program, Section XI.M28 and a Buried Piping and Tanks  
10 Inspection Program, Section XI.M34 to create a new  
11 program and that is Section XI.M41, Buried and  
12 Underground Piping and Tanks that incorporates aspects  
13 of both prior programs.

14 Just for consistency, Staff, can I ask you  
15 again that you consider Gall 2 to be an AMP, or is it  
16 merely a list of required program elements that must  
17 be addressed in the Applicant's AMP?

18 MR. HOLSTON: The GALL, Rev 2 contains  
19 XI.M41, which is a set of program elements that if the  
20 Applicant states that they are consistent with those  
21 programs, it is a program that will provide reasonable  
22 assurance that buried piping will meet its intended  
23 function, in this case, buried and underground piping.

24 JUDGE WARDWELL: So you agree with your  
25 same position that you had on GALL 1?

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1 MR. HOLSTON: Yes, sir.

2 JUDGE WARDWELL: Which version of GALL  
3 should we be discussing when judging the adequacy of  
4 the AMP in this proceeding? Which do you consider to  
5 be? Let me rephrase that.

6 What do you consider to be the one that  
7 you used in judging the Applicant's application and  
8 subsequent documentation?

9 MR. HOLSTON: The Staff initially  
10 evaluated against AMP XI.M34. That is because the  
11 Applicant came in and submitted their program to GALL,  
12 Revision 1. With the issuance of GALL, Revision 2, we  
13 did a gap analysis between GALL, Revision 2 and GALL,  
14 Revision 1, as you can imagine, there is a lot more  
15 detail in GALL, Rev 2, and submitted requests for  
16 additional information. So we evaluated the Applicant  
17 in the Supplemental SER against GALL, Revision 2.

18 JUDGE WARDWELL: Thank you. Staff, in  
19 your testimony on page 12 through 13, answer 8, you  
20 say an Applicant can take credit for a program  
21 described in the GALL Report such that its AMP would  
22 be found acceptable in one of three ways. And you go  
23 on and provide three paragraphs quoting a description  
24 of the three ways on pages 12 through 13. And they  
25 paraphrase and include the program completely

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1 consistent with GALL as one. Number two is one that  
2 is consistent with the GALL Report with the exception  
3 but only with enhancements that may expand but not  
4 reduce the scope. And three, develop a completely  
5 plant-specific program.

6 My question for you is what is the  
7 reference for these three ways. Where do those three  
8 ways of developing an acceptable AMP come from?

9 MR. HOLSTON: Those are in the Standard  
10 Review Plan for License Renewal in the general  
11 description.

12 JUDGE WARDWELL: And is there any place  
13 that I might be able to look at, any site-specific  
14 components of Entergy's Aging Management Plan for  
15 Buried Pipes that meets the attributes of GALL 2 as  
16 applied to Indian Point be found?

17 MR. HOLSTON: Can you restate that  
18 question?

19 JUDGE WARDWELL: Yes, I will try to  
20 restate it.

21 MR. HOLSTON: Okay.

22 JUDGE WARDWELL: Where might the site-  
23 specific components of Entergy's AMP for Buried Pipes  
24 that meets the attributes of GALL 2 as applied to  
25 Indian Point be found?

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1 MR. HOLSTON: I believe the most concise  
2 location would be in the response to the three  
3 Requests for Additional Information that the Staff  
4 processed and the Applicant responded to. And then  
5 the summary of that is in the Supplement Safety  
6 Evaluation Report.

7 JUDGE WARDWELL: And which three? Do you  
8 remember off the top of your head which three of those  
9 RAIs? Are they all in what they designate as NL  
10 letters, NL dash something?

11 MR. HOLSTON: Yes, sir. And if you give  
12 me a moment, I can give you the specific --

13 JUDGE WARDWELL: It would be worthwhile  
14 getting those, just so we know which ones you consider  
15 to be the three key ones.

16 MR. HOLSTON: Okay. There is a July 14,  
17 2011 letter and that is NL-11-074. And a side note,  
18 it is New York State Exhibit 000152.

19 There is a July 27, 2011 letter, it is NL-  
20 11-090 and I believe that is New York State Exhibit  
21 000153.

22 And I gave you that slightly out of order.  
23 I apologize for that. There is a March 28, 2011  
24 letter, NL-11-032. And that is New York State Exhibit  
25 000151.

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1                   Now that does not include the significant  
2 response or the -- the significant changes first  
3 occurred in the program in 2009 letters. But these  
4 are the specific ones for comparison to GALL, Rev 2,  
5 the three I cited for you.

6                   JUDGE WARDWELL: And you say there were  
7 others? I'm sorry I lost track. I thought I knew  
8 what you were saying and then you confused me at the  
9 very end. What was the very first part of that?

10                  MR. HOLSTON: Well, the Applicant greatly  
11 increased the depth of their program in 2009 after the  
12 auxiliary feedwater condensate return line. And that  
13 was the July 11th -- it might take me a little bit  
14 longer to find that -- July 2009 letter. That  
15 implemented much greater number of inspections. It  
16 implemented risk-ranking as at least described in the  
17 RAI response at that time, for example. But that was  
18 not --

19                  JUDGE WARDWELL: Was that the Entergy's  
20 NL-09-106, July 27, 2009? Is that what you are  
21 referring to?

22                  MR. HOLSTON: That could be it. I am  
23 looking to -- I probably would be better off giving  
24 you that after a break, if that is all right.

25                  JUDGE WARDWELL: Okay, that's fine.

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1 MR. HOLSTON: Okay.

2 JUDGE WARDWELL: And do you believe that  
3 these supersede that July 2009, whichever one it is?

4 MR. HOLSTON: They supplement the July  
5 2009 letter. That is the best way, I would say. If  
6 you took the original license renewal application,  
7 look at the changes that Indian Point came forward  
8 with in 2009, based upon their operating experience,  
9 the original SER, then the three RAI letters I  
10 referenced to you, and then the supplemental SER, they  
11 give you the continuum of that evaluation of that  
12 program as it went from being consistent with AMP  
13 XI.M34 to the greatly enhanced AMP it is nowadays.

14 JUDGE WARDWELL: Thank you.

15 MR. HOLSTON: I have the -- it is July 27,  
16 2009, NL-09-016, State Exhibit 000203.

17 JUDGE WARDWELL: A sidebar. Mr. Cox, what  
18 is a NL stand for?

19 MR. COX: I don't know.

20 MR. AZEVEDO: This is Nelson Azevedo.  
21 That is a site designation. I believe it stands for  
22 nuclear licensing. It is the name the of the  
23 department that issues the letter.

24 JUDGE WARDWELL: Usually I guess when I  
25 see these but I could not fathom what that meant. And

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1 I forget what it confuses me with whenever I saw that.  
2 I think I thought it was an NRC letter first before I  
3 got trained. Thank you.

4 On page 12 of Staff's testimony, answer 8  
5 again going on to another, just a specific quote out  
6 of there. It said recently in GALL Report, Revision  
7 2 issued in December 2010, and that is Staff's -- I  
8 mean, that is New York's Exhibit 000147, the Staff  
9 added that AMP XI.M41 for buried underground tanks --  
10 for buried and underground piping and tanks. That is  
11 New York Exhibit 000147 A through D, you state in a  
12 footnote that the Staff, through a series of RAIs (see  
13 the response in question 16) evaluated the Applicant's  
14 AMP against key elements of XI.M41 and the draft  
15 Interim Staff Guidance for AMP XI.M41. And you say  
16 for example, the number of inspections, soil sampling,  
17 and the use of plant-specific operating experience.

18 My question to you, Staff, did you find  
19 Entergy's AMP consistent with GALL 2?

20 MR. HOLSTON: When the RAIs were responded  
21 to, I would not say that it was consistent with GALL.  
22 There were some minor details that we chose to not  
23 pursue at that time because we focused -- this wasn't  
24 done just in the vacuum of Indian Point. We had  
25 about, I am going to say, nine to eleven applications

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1 in-house. So we evaluated the GALL, Rev 2, AMP XI.M41  
2 against, based upon the operating experience we had  
3 seen, what were those attributes that we needed to  
4 ensure going forward and causing all those applicants  
5 to revise their programs, even though many of them had  
6 already had those programs approved by the Staff. So  
7 that is what we did.

8 But an example is, GALL, Rev 2, AMP XI.M41  
9 had no provisions for a plant without cathodic  
10 protection, except for the ten year period prior to  
11 extended operation. So we didn't evaluate Indian  
12 Point against that. And we recognize they didn't have  
13 cathodic protection and we knew that we were going to  
14 be developing and that became the Interim Staff  
15 Guidance document that is referred to in our testimony  
16 for recommendations for plants without cathodic  
17 protection.

18 So that is an example of one the things  
19 where it wouldn't have been consistent with GALL, Rev  
20 2 AMP XI.M41. It is consistent with the Interim Staff  
21 Guidance.

22 JUDGE WARDWELL: Thank you.

23 This NL-09-111 Amendment 2 of New York  
24 Exhibit 000171, Attachment 1, page 1 and Attachment 2,  
25 item 3, which is page 2 of 18, requires a commitment

1 to include in the Buried Piping and Tanks Inspection  
2 Program described in the License Renewal Application  
3 section B.1.6 a risk assessment of in-scope buried  
4 piping and tanks that includes consideration of the  
5 impacts of buried pipes and tank leakage and of  
6 conditions affecting the risk for corrosion. And it  
7 requires under that to classify the pipe segments and  
8 tanks as having a high, medium, or low impact, and it  
9 goes on and says determine corrosion risks through  
10 consideration of piping or tank material, and it goes  
11 on; establish an inspection priority and frequency for  
12 periodic inspections, and it goes on; perform  
13 inspections using qualified inspection techniques with  
14 demonstrated effectiveness.

15 Short of performing the actual  
16 inspections, don't these items as described here in  
17 that letter provide kind of a nice summary of what  
18 really is needed to provide a site-specific AMP that  
19 truly demonstrates consistency with GALL? The first  
20 AMP -- sorry.

21 MR. HOLSTON: Yes. Yes, this level of  
22 detail provides exactly what we would we look for in  
23 the implementing procedures in which we did  
24 subsequently verify that the Applicant had that. That  
25 level of detail is available in New York State

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1 exhibits because it is corporate procedures that  
2 defines how risk ranking is conducted. It is a site  
3 procedure. I can't remember the number of that site  
4 procedure off the top of my head, where you can look  
5 at that and it lists all of the piping segments.

6 JUDGE WARDWELL: Are you referring to SEP-  
7 UIP-IPEC?

8 MR. HOLSTON: Yes, I am getting a nod from  
9 the Entergy staff. Yes, sir. So those are publicly  
10 available for people beyond just myself who went on  
11 the inspection to verify.

12 JUDGE WARDWELL: If New York was  
13 submitting their application now for license renewal,  
14 would you be looking to see, under the equivalent  
15 B.1.6 of their application, descriptions of the  
16 general results of these activities, short of the  
17 actual inspections, i.e., the classification of the  
18 pipe segments, the determining of corrosion risk,  
19 those types of things in their AMP?

20 MR. HOLSTON: I would not see it in the  
21 application but I would see it in a document called  
22 the -- typically called the plant -- the program basis  
23 document. Some plants call it something different but  
24 that is a document we review when we go out on the AMP  
25 audit and it expounds on the level of detail that is

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1 in the application. So the application --

2 JUDGE WARDWELL: How thick is that  
3 document?

4 MR. HOLSTON: They vary from, I am going  
5 to say, 20 to 30 to 40 pages.

6 JUDGE WARDWELL: And was that -- oh, never  
7 mind. It wasn't submitted with the application  
8 because the application was submitted under GALL 1 was  
9 the answer to my question. Good answer. Thank you.

10 JUDE McDADE: Okay, let's, at least for my  
11 purposes, go back a second.

12 You are talking about the degree of  
13 specificity here but yet it talks about classifying  
14 pipe segments as having high, medium, or low impact of  
15 leakage. But it doesn't define what high is, what  
16 medium, what low is. Couldn't that be in the eye of  
17 the beholder? What one person viewed as high another  
18 person would view as low if you don't have specific  
19 criteria for that?

20 MR. HOLSTON: The corporate procedure  
21 defines the criteria for that. So for example, when  
22 I am looking at the hazards posed by the fluid  
23 contained in the piping, that corporate procedure  
24 breaks that down and provides examples and rating  
25 factors for that, for each of those. So it is

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1 proceduralized.

2 So now, there is no industry-wide  
3 procedure for that. EPRI provides a program that you  
4 can use to do that. But at least we are confident  
5 from reviewing the site procedure that each person at  
6 the Indian Point site, it would be pretty tough to  
7 have anybody interpreting it differently, that I  
8 believe there is level enough detail in that corporate  
9 procedure for each of those ratings.

10 JUDE McDADE: Okay and the corporate  
11 procedures are documented where?

12 MR. HOLSTON: What do you mean by  
13 documented?

14 JUDE McDADE: If I am looking for those  
15 corporate procedures, where do I find them?

16 MR. HOLSTON: If you were -- for this  
17 case, they are New York State exhibits. I know that.  
18 For they are normally, if we weren't having a hearing,  
19 they would be available at the site to review. And  
20 the Staff reviews those when we go to the site.

21 JUDE McDADE: Okay but again wouldn't they  
22 be subject to change at any time without going through  
23 the 50.59 procedure?

24 MR. HOLSTON: The details could be changed  
25 without going through 50.59. The fact that risk

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1 ranking is occurring based on corrosion risk and  
2 consequent risk could not be changed without a 50.59.

3 JUDE McDADE: Okay.

4 MR. HOLSTON: For instance, if they assign  
5 a rating factor of ten to some level of soil  
6 resistivity, they could change that rating to eight  
7 without a 50.59.

8 JUDE McDADE: Okay. Can you scroll back  
9 to where you were on that?

10 MR. COX: Judge McDade, this is Alan Cox.  
11 Could I interject? I would like to clarify that point  
12 on procedures.

13 The procedures are all screened. There is  
14 no procedure change without screening to see if it  
15 meets the criteria that would require reporting under  
16 50.59. There may be a change in procedure that may  
17 not affect the description of the program in the SAR  
18 but we still have to go through that screening process  
19 to make sure that is the case.

20 Every procedure gets a screening to see if  
21 further evaluation under 50.59 is necessary.

22 JUDGE WARDWELL: But you perform that and  
23 you make the decision whether or not, right? There is  
24 no -- you don't ask for Staff's concurrence with your  
25 position. Is that correct?

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1 MR. COX: That is correct. The process is  
2 defined in the Entergy procedures that are approved  
3 on-site.

4 JUDGE KENNEDY: Mr. Cox, is that an  
5 example of an administrative control that is reference  
6 in GALL element nine or is that yet something else?

7 MR. COX: That would be an element of the  
8 administrative control and also as part of the  
9 Corrective Action -- sorry. That would be the  
10 administrative control. Yes, you are correct.

11 JUDGE KENNEDY: Is there anything in the  
12 License Renewal Application that provides additional  
13 information as to what is behind GALL elements seven,  
14 eight, and nine? I think we heard a reference to  
15 something in Appendix B.

16 MR. COX: I think at the beginning of  
17 Section B there is a brief discussion of those three  
18 elements that is generically applicable to all of the  
19 programs in Appendix B.

20 JUDGE KENNEDY: Is there some reason that  
21 is done so briefly? It just seems to be, as we keep  
22 going around these issues that there is just a lack of  
23 knowledge as to what is implied by those statements in  
24 those GALL elements, at least. I will put myself as  
25 a member of the public. It just seems hard to

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1 comprehend what is envisioned there. Yet, as we have  
2 had all this discussion here today, it seems to be  
3 important to the process.

4 Is there other places where we could be  
5 looking to enlighten us as to what is behind all of  
6 that?

7 MR. COX: This is Alan Cox again. I don't  
8 know that there is other places specifically but I  
9 mean as far as the reason for why it is the way it is,  
10 that is kind of how it has evolved over the years.  
11 There has been 70 plants that have been through the  
12 license renewal process and each one looks at what  
13 happened before and that was kind of the standard that  
14 was settled on to describe those three elements in  
15 that sentence. For the first 70 plants, that has been  
16 adequate.

17 JUDGE KENNEDY: Thank you.

18 JUDE McDADE: And what I am trying to get  
19 a hold of in my own mind here is certain concepts that  
20 are referred to here. For example, talking about  
21 qualified inspection techniques, demonstrated  
22 effectiveness. What is the standard for demonstrated  
23 effectiveness? Demonstrated to whose satisfaction,  
24 the Applicant's, the NRC's, to the Board?

25 Qualified inspection techniques. What are

1 those techniques? How do we determine by way of  
2 review whether or not those techniques are  
3 appropriate, are adequate?

4 Establishing inspection priorities. Well,  
5 you can do a good job of that or a bad job of that.  
6 You can look at the most appropriate or the least  
7 appropriate but you have established a priority. How  
8 do we determine whether or not you are doing that is  
9 adequate to maintain control? You know, the same with  
10 regard to the frequency. You have to establish an  
11 appropriate level of frequency but is appropriate and  
12 who makes that determination and what are the criteria  
13 that he has used?

14 I realize that sort of flows together but  
15 first of all, Mr. Cox, what do we look for to answer  
16 those questions? What do we look to?

17 MR. COX: I think we would look to -- I  
18 mean the details of how to do that has been  
19 incorporated in our procedures and it is largely based  
20 on work that is done throughout the industry. Mr.  
21 Holston has more than mentioned the Electric Power  
22 Research Institute. They have issued guidelines that  
23 address these issues and those guidelines are  
24 incorporated into our procedures to give the details  
25 as far as how that is done.

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1           Once it is in the procedures, those  
2 procedures are, again, under the control of 50.59  
3 process. So there has to be an evaluation done of  
4 those procedures to make sure we don't make  
5 unacceptable changes that would reduce the level of  
6 safety or effectiveness of that program.

7           JUDE McDADE: Okay. Mr. Holston, didn't  
8 you indicate that those procedures weren't subject to  
9 the 50.59 review?

10           MR. HOLSTON: The question that I believe  
11 I was asked was whether the 50.59 be done. And what  
12 Mr. Cox was explaining is that every administrative  
13 procedure goes through a screen, a 50.59 screen to  
14 determine whether you have to do a 50.59 evaluation.

15           And so I believe that if the example I  
16 gave, which is if you had a rating factor of ten for  
17 soil resistivity of X and you change that rating  
18 factor to eight, that level of detail is not in the  
19 UFSAR and in all likelihood a 50.59 would not be done.  
20 A 50.59 screen is a process to ensure you don't change  
21 something that should have been addressed by a 50.59.

22           JUDE McDADE: Okay. If they were to  
23 change the methodology to determine the priority of  
24 inspection, is that something that would be, first of  
25 all, subject to review but review on what standards?

1 MR. HOLSTON: If they change the  
2 methodology but they were still addressing corrosion  
3 risk and they were still addressing consequence of  
4 corrosion damage, then in all likelihood at least what  
5 I would believe is that would be screened and they  
6 would say no, this is a level of detail beyond what is  
7 in our UFSAR so we can make this change. But they  
8 would have to screen that to ensure it wasn't stepping  
9 into UFSAR territory.

10 JUDE McDADE: And that screening would be  
11 subject to Agency audit?

12 MR. HOLSTON: Yes. Well, agency  
13 inspections. Because there are multiple inspections  
14 that go on, component design basis inspections, 50.59  
15 inspections that the Staff conducts. And I know  
16 specifically in 50.59 inspections, based on my prior  
17 plan experience, that the inspectors look at a wide  
18 range of 50.59 screens that have been conducted to  
19 ensure that the process is being followed properly.

20 JUDE McDADE: Okay. When they use terms  
21 like demonstrated effectiveness, what do you look for  
22 to determine what that means?

23 MR. HOLSTON: The GALL Report AMP XI.M41,  
24 the Staff has established two means that we believe  
25 are demonstrated effective to aging managed buried

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1 piping. One is an excavated direct visual inspection.  
2 The other is to ultrasonically examine 25 percent of  
3 the piping.

4 We recognize that there are other  
5 methodologies that are effective tools for screening  
6 the piping so that you could inspect in locations that  
7 might be more susceptible to corrosion risk but we  
8 only recognize those two methods as the methods that  
9 have been demonstrated to be effective.

10 JUDGE WARDWELL: Staff testimony on page  
11 31, answer 28. Staff's review of the plant-specific  
12 operating experience at Indian Point as it pertains to  
13 in-scope buried pipes and tanks revealed the  
14 following. In 2007, a buried auxiliary steam line  
15 leaked. In 2008, three ten-foot segments of the P2  
16 condensate storage tank pipe beams were excavated and  
17 the piping was inspected. There were two areas which  
18 required coating repairs and two areas where there  
19 were minor coating defects. In 2009, an IP2  
20 condensate storage tank return line developed a leak  
21 of under 15 gallons per minute.

22 Mr. Cox, where would these operating  
23 experiences be documented in your AMP?

24 MR. COX: When you say in the AMP, are we  
25 talking about the 2007 version?

1 JUDGE WARDWELL: No. Now you are free  
2 form. You can go wherever you want to go because we  
3 are now judging it really on the AMP or any subsequent  
4 documents that have been submitted.

5 MR. COX: Yes, I don't know if I can point  
6 you to a place. I mean obviously we discussed these  
7 in response to RAIs from Staff. I don't know that we  
8 put them in a specific place in the program. Those  
9 operating experience events were certainly  
10 considerations in developing the number of inspections  
11 that we had an Indian Point.

12 JUDGE WARDWELL: If you were writing your  
13 License Renewal Application now, would you be  
14 including those in your operating experience?

15 MR. COX: Yes, sir. I believe that is a  
16 safe assumption that we would include those types of  
17 things if we were writing this today.

18 JUDGE WARDWELL: Are those a correct  
19 representation, as far as you know, in Staff's summary  
20 in their exhibit -- in their testimony. I'm sorry.

21 MR. COX: Yes, I guess with one exception  
22 that might be the 2007 event. As we mentioned  
23 earlier, that was an aux steam line that had a  
24 coating. That was significantly different than the  
25 type of coating that we find on the other buried

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1 piping. So that may not have --

2 JUDGE WARDWELL: But in 2007 something  
3 happened there.

4 MR. COX: Right. We may have reviewed  
5 that and determined that it was not relevant. It may  
6 not have been mentioned but the others, I think, are  
7 accurate.

8 JUDGE WARDWELL: Thank you.

9 MR. O'NEILL: Your Honor, this is Martin  
10 O'Neill, Applicant Counsel. Can I speak, Your Honor?

11 I just wanted to provide one reference.  
12 Mr. Cox was correct. There was some discussion of the  
13 operating experience that is contained in New York  
14 State Exhibit 000203. It is Entergy letter NL-09-106  
15 in response to Staff questions. There is a discussion  
16 of operating experience in Attachment 1.

17 JUDGE WARDWELL: Thank you.

18 Staff, in your testimony on page 45 answer  
19 to 36, while Dr. Duquette asserts at page 17 that  
20 Entergy's AMP does not explain what factors Entergy  
21 will take into account in performing a risk assessment  
22 or to classify its pipe or how frequently Entergy will  
23 inspect pipes according to their priority, that level  
24 of detail is not required in an Aging Management  
25 Program to satisfy NRC regulatory requirements or to

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1 confirm to the AMP set out in the GALL Report.  
2 Rather, such details are typically contained in a  
3 licensee's inspection plans or procedures for  
4 implementation of its Aging Management Program.

5 And I think I wanted to get back to this  
6 one more time because I really would be interested  
7 from Staff, anyone from Staff of the two, who  
8 determined that that level of detail was not required  
9 in an Aging Management Program to satisfy NRC  
10 regulatory requirements?

11 MS. GREEN: This is Kimberly Green for NRC  
12 Staff. The NRC developed a Standard Review Plan for  
13 License Renewal. It is NUREG-1800, Revision 1. And  
14 in it we state that GALL AMPs programs described in  
15 GALL Report are to be considered as a topical report.

16 And as Mr. Holston explained previously,  
17 when the NRC approves or endorses a topical report,  
18 applicants or licensees may use that topical report  
19 without further NRC review, unless there is something  
20 about that particular topical report that they need to  
21 take exception to or need to enhance.

22 And it says right in the SRPLR, which is  
23 what the Staff uses to perform its reviews of License  
24 Renewal Applications, that an Applicant may reference  
25 a GALL Report in a License Renewal Application to

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1 demonstrate that the programs at the Applicant's  
2 facility correspond to those reviewed and approved in  
3 the GALL Report and that no further Staff review is  
4 required, as described in the next paragraph. And Mr.  
5 Holston discussed the preceding paragraph that talks  
6 about if they take exceptions.

7 JUDGE WARDWELL: I have got some questions  
8 for that very statement a little later on that will  
9 get back to that. Thank you.

10 And it is fair to say that nowhere in the  
11 regs or GALL does it state that that level of detail  
12 is not required. Is that correct? It is in the  
13 Standard Review Plan that Staff itself generated.

14 MS. GREEN: That is correct.

15 JUDGE WARDWELL: On page 45, answer 36,  
16 such details are not subject to Aging Management  
17 Review and approval prior to the license renewal. Is  
18 there any place in the regulations that support this  
19 position that you are aware of?

20 MS. GREEN: In the regulations, in 10 CFR  
21 54.33 when it talks about that all the information  
22 that Applicant uses to support its License Renewal  
23 Application has to be maintained in an auditable and  
24 retrievable form. That is why the NRC conducts audits  
25 and later on inspections.

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1                   JUDGE WARDWELL: Thank you. In New York's  
2 Report Exhibit 000165, pages 12 through 13, it says:  
3 "There are, however, internal documents that appear to  
4 address implementation. These include EN-DC-343" --  
5 make sure I have got that up there for you. Yes,  
6 there we are. It is right at the top. And I just  
7 greyed out what those are just so I -- that was for  
8 myself. I didn't necessarily have to read it but it is  
9 an Underground Piping and Tanks Inspection Program --  
10 monitoring program. CEP-UPT-0100, which is  
11 underground piping and tanks inspection and monitoring  
12 issued in October of 2011 and SEP-UIP-IPEC, which "is  
13 an Indian Point 2 and 3 Underground Components  
14 Inspection Plan approved April 29, 2011."

15                   My question is for New York. Why do you  
16 say that these documents address implementation rather  
17 than documents defining site-specific components  
18 required in an Aging Management Plan for each License  
19 Renewal Applicant? So my question is why did you call  
20 this an implementing -- these documents defining  
21 implementing activities?

22                   DR. DUQUETTE: I don't want to get hung up  
23 on the word "implementation."

24                   JUDGE WARDWELL: That's why I am asking  
25 it. I make sure to see what your understanding of

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1 implementation is or how you use the phrase.

2 DR. DUQUETTE: In this particular case,  
3 implementation in our report had to do with the fact  
4 that they have addressed the situation. They haven't  
5 actually -- again, implementation has a pejorative  
6 term to it. And I don't mean that they have actually  
7 implemented these things but they are proposing to  
8 implement them.

9 These are documents that, as far as I am  
10 concerned, would have, if they were put into place  
11 would have implemented a program. I should state, at  
12 this point, that I don't think the program is adequate  
13 but that is a different issue.

14 JUDGE WARDWELL: I see. On page 13, it  
15 describes EN-DC-341 and again, that is New York  
16 Exhibit 000172, as a fleet-wide Nuclear Management  
17 Manual that "provides the requirements for each site  
18 to develop its own site-specific Underground Piping  
19 and Tanks Inspection and Monitoring Program.

20 Dr. Duquette, to your knowledge has  
21 Entergy developed a site-specific -- I don't know what  
22 I am going to call this but -- the Underground Piping  
23 and Tanks Inspection and Monitoring Program? And if  
24 so, where would one be able to review such a program?

25 DR. DUQUETTE: I haven't seen anything

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1 that would come close to that.

2 JUDGE WARDWELL: Anyone from Entergy that  
3 can answer that question? Have you developed a site-  
4 specific and if you can give me a cleverer way to  
5 pronounce that, the UPTIMP? And if so, where would  
6 one be able to review that site-specific program?

7 MR. LEE: Bob Lee for the Applicant.

8 JUDGE WARDWELL: Mr. Lee.

9 MR. LEE: The site-level procedure is the  
10 SEP-UIP-IPEC document, which is the component  
11 inspection plan for underground --

12 JUDGE WARDWELL: And that is specific for  
13 the Indian Point conditions?

14 MR. LEE: Indian Point. Yes, it is. And  
15 that is, I believe it is New York Exhibit 000174. And  
16 it is specific to the site, yes.

17 JUDGE WARDWELL: And what do you say the  
18 exhibit is for the --

19 MR. LEE: New York State 000174.

20 JUDGE WARDWELL: 000174?

21 MR. LEE: Yes.

22 JUDGE WARDWELL: Thank you. Staff, do you  
23 -- I mean, Staff, do you, Mr. Holston or Ms. Green, do  
24 you agree with Mr. Lee in regards to that is where the  
25 UPTIMP can be found?

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1 MR. HOLSTON: Yes, sir. I am not sure of  
2 the 000174. But yes, absolutely, I have reviewed that  
3 procedure. That procedure implements -- that  
4 procedure contains the requirements as laid out. Yes,  
5 sir.

6 JUDGE WARDWELL: Does it contain the  
7 requirements or does it address those requirements in  
8 regards to providing site-specific information was my  
9 question to Mr. Lee. At least that is what I intended  
10 it to be anyhow.

11 MR. HOLSTON: It provides the site-  
12 specific. In other words, that is the procedure that  
13 lists each of the underground major segments, what  
14 their risk ranking is, high, medium, inspection --  
15 when planned inspections are going to be conducted.

16 JUDGE WARDWELL: Thank you. EN-DC-343 on  
17 page four refers to the CEP-UPT-0100 for details on  
18 risk ranking criteria, reasonable assurance guidance,  
19 recommendations for inspection, monitoring, and  
20 mitigation portion of this UPTIMP. Is there an easier  
21 way to say that by the way? We just got to slug our  
22 way through those acronyms? No one is going to offer  
23 any way to -- Staff, do you have any -- someone. We  
24 always have a way to pronounce these suckers. Okay,  
25 well, we will just go through them.

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1 MR. HOLSTON: I can't help you on that  
2 one.

3 JUDGE WARDWELL: All right.

4 MR. IVY: Ted Ivy for the Applicant. You  
5 could say UPTIMP.

6 JUDGE WARDWELL: UPTIMP. I'll remember  
7 that, yes. TIMP. That is not bad. Who said that?

8 MR. IVY: Ted Ivy for the Applicant.

9 JUDGE WARDWELL: Mr. Ivy. Oh back there.  
10 There you are! Great. Okay, UPTIMP. Okay.

11 Now, where was I? That the document  
12 states that the procedures therein and CEP-UPT-0100  
13 contain a program approach to help owners "prioritize  
14 inspections of underground segments, evaluate the  
15 inspection results, make fitness for service  
16 decisions, select a repair technique where required,  
17 take preventive measurements to reduce the likelihood  
18 and the consequence of failures." It also calls for  
19 each plant to develop its own site-specific UPTIMP.

20 My question for Staff are, are not these  
21 additional attributes that should be covered and  
22 discussed in some sort of document in order to  
23 contribute to the demonstration that the IMP meets  
24 GALL?

25 MR. HOLSTON: Those attributes are

1 discussed in it. I can cite you an example, if you  
2 would like. For example, Table 9-3, soil resistivity  
3 greater than 20,000, it has a risk rating factor for  
4 that --

5 JUDGE WARDWELL: What is the 9.3 that you  
6 are referring to?

7 MR. HOLSTON: Table 9-3 is corrosion risk  
8 assessment.

9 JUDGE WARDWELL: Of what?

10 MR. HOLSTON: For underground -- oh. CEP-  
11 UPT --

12 JUDGE WARDWELL: Okay.

13 MR. HOLSTON: Yes. Table 9-3 corrosion  
14 risk assessment for underground non-radioactive  
15 structure systems and components. And this is also a  
16 New York State Exhibit. I just don't have that number  
17 off the top of my head.

18 It lists the rating factors. And this  
19 gets back to my question before that there is really,  
20 one of you all asked could one person interpret it a  
21 different way. Very unlikely. Very definitive  
22 criteria for values and then specific ratings.

23 JUDGE WARDWELL: And is applied to Indian  
24 Point or is that a generic one that all plants use?

25 MR. HOLSTON: This is the one that applies

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1 to -- it is a corporate procedure. So it applies to  
2 all Entergy plants.

3 JUDGE WARDWELL: All Entergy plants but  
4 not site-specific for Indian Point.

5 MR. HOLSTON: Correct. But I will tell  
6 you that when I have done my AMP audits at many other  
7 plants, that this is the same level of detail I see.  
8 So Indian Point is right in the mainstream of level of  
9 detail and risk ranking.

10 JUDGE WARDWELL: Well what do you feel you  
11 need in order to assure that there is a demonstration  
12 that aging management will be reviewed? Do you need  
13 to see at least a summary discussion of how that is  
14 applied specifically to the Indian Point plant?

15 MR. HOLSTON: I look for this procedure,  
16 for a procedure of this nature which provides the risk  
17 ranking criteria. And then I will look at the site  
18 procedure to see how they rank their piping and did  
19 they do that. And does it, in a broad sense, does it  
20 make sense? Does it pass a logic test?

21 If I see them inspecting a stainless steel  
22 line in a very high resistivity environment with no  
23 chlorides and they are doing ten of those and they are  
24 only doing one carbon steel in a very low resistivity  
25 environment, then I am going to question how they

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1 implemented those factors. So I look for both to  
2 complete my evaluation.

3 JUDGE WARDWELL: How would anyone else,  
4 besides you, be able to determine that they are  
5 proposing to do, in a general fashion, these number of  
6 inspections for this type of piping or this degree of  
7 potential problem compared to the number of  
8 inspections for the other type of problem?

9 MR. HOLSTON: Are referring to the NRC  
10 Staff or do you mean anybody as in anybody in the  
11 public?

12 JUDGE WARDWELL: You can start anyone  
13 besides the Staff and work your way up until you  
14 eventually end up with the whole public, if in fact  
15 they could.

16 MR. HOLSTON: Okay, well --

17 JUDGE WARDWELL: Where could we, as a  
18 Board, find out in the documents submitted where they  
19 have prioritized their areas of concern and  
20 demonstrated that yes, they are concentrating their  
21 inspections on those areas? And that falls well short  
22 of here are the actual locations and here are the  
23 procedures we are doing. It is a general description  
24 of where they are doing it in regards to those  
25 specific areas at Indian Point that are the highest

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1 degree of corrosivity and those areas that are less.

2 MR. HOLSTON: Stations will have that  
3 either in a specific procedure, as Indian Point did,  
4 which lists out each of the piping segments and has  
5 assigned risk ranks and assigned inspection schedules.  
6 Although, it is not always in a procedure. Sometimes  
7 it is in a database.

8 JUDGE WARDWELL: Where could I see that  
9 various table or summary that you just described?

10 MR. HOLSTON: That is in -- and I will  
11 seek Entergy's help here because of the acronyms --  
12 but that is in the S, I think it is in the --

13 JUDGE WARDWELL: SEP --

14 MR. HOLSTON: Yes.

15 MR. IVY: Ted Ivy, for the Applicant.  
16 That is in SEP-UIP-IPEC. It is in Appendix A.

17 JUDGE WARDWELL: Okay, thank you.

18 MR. CAVALLO: Your Honor, could I just add  
19 something to that from an industry standpoint if we  
20 have time?

21 JUDGE WARDWELL: Sure.

22 MR. CAVALLO: John Cavallo for the  
23 Applicant. One thing we have done as an industry in  
24 the post-2009 period is looked at this exact subject.  
25 And the guidance that Entergy relied on for a multi-

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1 plant fleet is similar to other multi-plant fleets in  
2 the U.S.

3 There is two documents that help them out  
4 in this area. One is NEI09-14 and the other is an  
5 EPRI document 1016456, which is --

6 JUDGE WARDWELL: Can I interrupt you right  
7 there?

8 MR. CAVALLO: Yes, sir.

9 JUDGE WARDWELL: We are going to get to  
10 both those documents later on, --

11 MR. CAVALLO: I will hold my comments,  
12 then.

13 JUDGE WARDWELL: -- if that suffices.  
14 Good. Okay. Not good --

15 MR. CAVALLO: No, no, that's fine.

16 JUDGE WARDWELL: I thought you might want  
17 to. Yes, we are aware of those. Thank you.

18 In Section 5.3, risk ranking, page 13, it  
19 says an assemblage of a set of as-built drawings is  
20 required. Entergy, where was your as-built drawing  
21 submitted as part of your AMP or in subsequent  
22 submittals? Anyone from Entergy?

23 MR. COX: Judge Wardwell, I don't believe  
24 that we submitted as-built drawings showing buried  
25 piping as part of the LRA. Those are typically

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1 documents that are maintained on-site. The program  
2 owner has access and uses those drawings in  
3 implementing the program.

4 JUDGE WARDWELL: So you just have them  
5 available on-site for review? Is that correct?

6 MR. COX: That is correct.

7 JUDGE WARDWELL: Okay. And Staff, do you  
8 agree that those drawings are available on-site for  
9 your review?

10 MR. HOLSTON: Yes, sir.

11 JUDGE WARDWELL: Thank you.

12 MR. COX: Judge Wardwell, there is one  
13 other clarification that I wanted to mention. And you  
14 had mentioned the CEP, the corporate procedure. And  
15 then you talked about the SEP being applicable to  
16 Indian Point. I just wanted to point out that  
17 corporate procedure EN-DC-343, as well as the  
18 corporate procedure CEP whatever the number was there,  
19 those corporate procedures are also applicable to  
20 individual sites. Just because it is a corporate  
21 procedure doesn't mean they can ignore what is in that  
22 procedure.

23 So all of those procedures plus the site-  
24 specific procedure would apply to the program at  
25 Indian Point.

1 JUDGE WARDWELL: But wouldn't the site-  
2 specific one, the SEP, really show where things are  
3 taking place? One is a general one and now you are  
4 applying to site-specific conditions at Indian Point,  
5 aren't you?

6 MR. COX: Yes, I think in general that is  
7 true. You would have some results -- I don't think in  
8 every case you are going finding something that is in  
9 the site-specific procedure that is a corollary to  
10 what is in the plant-specific procedure or the fleet  
11 procedure. Or you may have to look at the sum of all  
12 the procedures. The site procedures are not  
13 necessarily going to include all the elements of all  
14 of the procedures above in the hierarchy.

15 JUDGE WARDWELL: Thank you. New York's  
16 testimony on page 18, Dr. Duquette described your AMP  
17 as "containing very few actual commitments" -- and are  
18 conceptual and aspirational in nature.

19 For Entergy, looking back, would you agree  
20 that that is not an unfair assessment of your AMP as  
21 presented in your License Renewal Application? I will  
22 address this to Mr. Cox, considering we had most of  
23 the discussion beforehand. Given what we know now, it  
24 is based on that premise.

25 MR. COX: If you are referring back to

1 2007 when we were operating under GALL Rev 1, I think  
2 I would still contend that that is not a fair  
3 assessment because there are specifics in the GALL  
4 program that is referenced in Section B of the LRA.  
5 So, I can't agree with you that that is aspirational  
6 in nature. I think it does give specifics as to what  
7 we were going to do.

8 Now in 2007, we weren't going to do a  
9 whole lot under the GALL, Revision 1 program. There  
10 was not much required there. Obviously, that has been  
11 changed significantly since then. But as far as what  
12 was required there, I think the description in the  
13 AMP, the description of the AMP in the LRA was  
14 adequate to define what was required.

15 JUDGE WARDWELL: Thank you. New York's  
16 testimony on page 17 states that -- your direct  
17 testimony at page 17 and your rebuttal testimony, that  
18 is New York 000399, states that -- let me rephrase  
19 that. I may be confusing you.

20 In New York's direct testimony on page 17,  
21 that is 000164, and in the rebuttal testimony, that is  
22 0000399 on page 14, states that there has been no  
23 information to what factors criteria are used in the  
24 development of the AMP.

25 Dr. Duquette, doesn't CEP-UPT-0100, and

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1 that is New York's Exhibit 000174 on pages 21 through  
2 25 provide guidance on the risk ranking buried pipe  
3 systems, including inspection priority guidance for  
4 radioactive systems and impact assessment chart to  
5 assign risk factors, based on the impact of pipe  
6 leakage, detailed corrosion rating factors, and  
7 inspection priority guidance for non-radioactive  
8 systems?

9 DR. DUQUETTE: Duquette for New York  
10 State. I agree that it has some of the risk factors.  
11 It doesn't present a program. It presents risk  
12 factors and doesn't say what you do with those risk  
13 factors. There is nothing -- there is no follow-on  
14 relative to the risk factors. I have to agree that  
15 there are risk factors assigned but I still don't know  
16 what is going to happen, once you have identified the  
17 risk. Whether that is --

18 JUDGE WARDWELL: Don't you have to know --

19 DR. DUQUETTE: I'm sorry.

20 JUDGE WARDWELL: -- what that risk and  
21 actually do that first before you can decide what you  
22 are going to do with that risk factor? Or is that  
23 part of what is required under the corporate  
24 procedure?

25 DR. DUQUETTE: No, of course. But if you

1 have a risk factor of one, for example, then there  
2 should be some actions that are taken for dealing with  
3 a risk factor of one, instead of just saying I have a  
4 risk factor of one, end of statement. So it is not  
5 going any further than that. I know where I have a  
6 risk factor. What do I do about that high risk  
7 factor?

8 JUDGE WARDWELL: Is there any other  
9 examples you can give us in regards to that, the lack  
10 of specificity that you are interested in?

11 DR. DUQUETTE: Well I could go on for the  
12 rest of the day, probably, but let's not do that.  
13 Let's just say --

14 JUDGE WARDWELL: Pull off, okay, three  
15 others that come off the top of your head like the  
16 risk factors.

17 DR. DUQUETTE: In addition to what you do  
18 about the risk factor, it is not only what you do but  
19 how you do it. Having been involved with a number of  
20 various kind of plant inspections, usually there is a  
21 defined program. And I will give you an example of  
22 that that came out of this.

23 There is a certain number of inspections  
24 required within the first ten years of operation after  
25 the license is put in place. Reductio ad absurdum, I

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1 could say that I am going to do all of my inspections  
2 on day ten years minus one day and that is going to  
3 satisfy what the documents say. I would like to have  
4 seen some specific program that would say I am going  
5 to -- somewhat like the new thing that we just saw  
6 this week -- and I don't want to say too much about  
7 that because it just came out -- but where there is a  
8 program to inspect every two years all the underground  
9 piping systems. Not buried piping but the underground  
10 piping systems. That is a commitment at least on a  
11 two-year basis. I don't see that commitment relative  
12 to the Buried Piping Program. I see a commitment to  
13 do a certain number of inspections over a very long  
14 period of time with no programmatic method for doing  
15 that.

16 JUDGE WARDWELL: Thank you.

17 On page three of your testimony, you state  
18 that you reviewed New York Exhibit 000151, that is the  
19 NL-11-032 and that is the one that came out in March  
20 of 2011 and it is an Indian Point responses from RAIs  
21 issued by the Staff. Doesn't this document contain  
22 details on the number and frequencies of inspections,  
23 specifically in Attachment 1, pages three to four of  
24 that document?

25 DR. DUQUETTE: I would have to look at it.

1 I have reviewed a lot of documents. I will be honest,  
2 I would have to review that document again. And if we  
3 can pull it up, I can do it now.

4 JUDGE WARDWELL: Sure, we can give that a  
5 whirl. Let's see who can do it faster --

6 MR. WELKIE: Excuse me?

7 JUDGE WARDWELL: I will let you know if I  
8 need help, Andy.

9 MR. LEE: Your Honor?

10 JUDGE WARDWELL: Is that --

11 MR. LEE: Your Honor?

12 JUDGE WARDWELL: Yes.

13 MR. LEE: I was wondering if I might  
14 expand or address the risk ranking that Dr. Duquette  
15 raised.

16 JUDE McDADE: Why don't you hold off for  
17 a second, Mr. Lee?

18 JUDGE WARDWELL: Yes.

19 JUDE McDADE: Let's finish with Dr.  
20 Duquette here for a second and then we will come back  
21 to you, Mr. Lee.

22 MR. LEE: Okay.

23 JUDGE WARDWELL: And what are the pages  
24 for that? Just about there.

25 (Pause.)

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1 JUDGE WARDWELL: I lost my place now. Oh,  
2 I know where I have got to go. Okay, it would be  
3 three to four of five.

4 JUDE McDADE: Judge Wardwell?

5 JUDGE WARDWELL: Yes?

6 JUDE McDADE: What document do you want  
7 Mr. Welkie to pull up?

8 JUDGE WARDWELL: I've got it. I'm just  
9 getting it arranged. I just had to get the right --  
10 there we are. There is pages three. Does that look  
11 familiar to you?

12 DR. DUQUETTE: It certainly looks  
13 familiar.

14 JUDGE WARDWELL: And does it show on the  
15 bottom of the page some IP2 inspections and IP3  
16 inspections?

17 DR. DUQUETTE: Yes, it does.

18 JUDGE WARDWELL: Does that refresh your  
19 memory?

20 DR. DUQUETTE: It does, if I am reading it  
21 -- I don't want to read it out of context but it says  
22 IPEC will perform direct visual inspections during  
23 each ten-year period of the period of operation in  
24 accordance with the following tables. And then it  
25 tells you how many inspections. And it basically --

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1 it is the silly comment I made earlier. I could do  
2 all those inspections, I think, based on that document  
3 on the last day of the ten-year cycle. And to me,  
4 that is not a reasonable inspection period. An  
5 inspection of every year, every two years, whatever  
6 period you decide on.

7 To me at least, a plant, any plant  
8 inspection on any piping that takes place over a ten-  
9 year period is very chancy. I have seen lots of pipe  
10 failures at lots of plants. And I just don't think it  
11 is specific enough to satisfy me, as an engineer.

12 JUDE McDADE: And you are looking at page  
13 four of 27 of what exhibit? What is the exhibit  
14 number?

15 JUDGE WARDWELL: That is 000151. Yes,  
16 000151.

17 But it does state how many inspections  
18 will occur in a ten-year period.

19 DR. DUQUETTE: Oh, yes. I never meant to  
20 imply that there wasn't a number of inspections. It  
21 is just that it is not a program.

22 JUDGE WARDWELL: Do you remember if page  
23 9 of 151, and we shall go to it -- Right up there --

24 JUDE McDADE: Now this is New York 000151,  
25 correct?

1 JUDGE WARDWELL: That is correct. Right  
2 at the very top there. Doesn't that include some  
3 details on soil sampling used to better assess the  
4 risk of corrosion documents that the soil sampling  
5 will occur prior to during the period of extended  
6 operation and discusses the number of increased  
7 inspection based on soil conditions?

8 DR. DUQUETTE: Yes, it certainly says  
9 that.

10 JUDGE WARDWELL: And thank you. I think  
11 that suffices with that.

12 DR. DUQUETTE: Do you want me to expand on  
13 that or wait until later?

14 JUDE McDADE: I would. I mean, that's  
15 what you were responding to and then you have --

16 JUDGE WARDWELL: In response or whatever  
17 it says yes, it did.

18 DR. DUQUETTE: I'm sorry. Could you ask  
19 the question again, please?

20 JUDE McDADE: Okay. You have the  
21 question, then you have the response below that. And  
22 am I taking in your view the response is not adequate?  
23 Why?

24 DR. DUQUETTE: Well if the response that  
25 I can read only indicates the response to A. If you

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1 want to pull up the page a little bit further, perhaps  
2 I can see what the response to B is.

3 JUDGE WARDWELL: We're not -- this is the  
4 response for that. What did you want to say in  
5 regards to six?

6 DR. DUQUETTE: I didn't. I thought there  
7 was a question on six and I thought it had to do, for  
8 example, how often samples would be taken and so on  
9 and so forth, 6a.

10 JUDGE WARDWELL: Well do you have any  
11 comments on that proposed program? I just wanted to  
12 point out and say that yes, you had read that and  
13 recognized that there is this discussion of soil  
14 sampling that will be done and the parameters and that  
15 type of thing in this response to the RAIs. The RAIs  
16 --

17 DR. DUQUETTE: Those are, at least Part  
18 6a, which is indicated here, apparently, there is a  
19 response to that. I'm not concerned about the  
20 response to that. That is an adequate response for  
21 the methods to be used for soil corrosivity.

22 JUDGE WARDWELL: So you want to see the b,  
23 c, d, and e here, the responses for b, c, and d?

24 JUDE McDADE: Because that is what my  
25 question was and basically to take a quick review of

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1 this as to whether or not in your view the responses  
2 to this request for additional information is  
3 adequate, whether or not in your view as to this  
4 particular area constitutes a program.

5 DR. DUQUETTE: Oh. I will repeat what I  
6 said earlier. If I take a look at the response to 6b,  
7 for example, it says soil samples will be taken prior  
8 to the period of extended operation and at least once  
9 every ten years thereafter to confirm the initial  
10 sample results.

11 Soil samples will be taken in a minimum of  
12 two locations at least three feet below the surface  
13 under the in-scope piping to obtain representative  
14 soil conditions for each system and I will tell you  
15 that I find that answer totally unresponsive.

16 JUDE McDADE: Why?

17 DR. DUQUETTE: Because if you take soil  
18 samples on the top three feet of what you are going to  
19 be doing, it doesn't tell you anything about the soil  
20 condition at the location of the pipe. Most of these  
21 pipes were laid with some kind of backfill. That was  
22 brought up earlier. I'm not even sure what the  
23 specifications for the backfill were, since they  
24 weren't provided to us and perhaps New York State  
25 didn't ask for them.

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1           But in any event, the backfill is not  
2 going to have the same conductivity, resistivity, soil  
3 corrosivity, drainage or anything else that the upper  
4 three feet of soil are going to have.

5           And so if I simply read that as an  
6 engineer and say that the soil sample is to be taken  
7 near the in-scope piping to obtain representative soil  
8 conditions for each system, I will tell you that if I  
9 were reviewing that, I would say that is not an  
10 adequate program to tell me what the conditions are at  
11 the pipe surface.

12           JUDE McDADE: And in fact, it doesn't give  
13 you any relevant information, does it?

14           DR. DUQUETTE: Except that they are going  
15 to do it -- well, in Part a they tell you what the  
16 specifications they are going to use to do the  
17 sampling. But the information in 6b, for example,  
18 doesn't really tell you anything about what the  
19 conditions are at the pipe. And so to me, it is not  
20 a program to evaluate the corrosivity of the soil, let  
21 alone the condition of the pipe.

22           JUDE McDADE: Okay. What about the  
23 remaining answers doing down to c?

24           DR. DUQUETTE: Certainly 6c is again just  
25 a standard. There is nothing wrong with that answer,

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1       except it doesn't address a program. It simply  
2       addresses how the samples would be taken.

3               In 6d, I agree with the first statement  
4       except that I don't see a link between the risk  
5       assessment and the location for inspections or how the  
6       inspections will be done. So again, it is talking  
7       about soil samples. Prior to the period of operation  
8       I confirmed that the soil conditions are not  
9       aggressive. By itself, if I only read that sentence  
10      out of context, what if the soil is aggressive? That  
11      says they are going to confirm that the soil is not  
12      aggressive. What if it is aggressive? What do I do  
13      then? It doesn't tell you what it is going to do. It  
14      tells you that it is going confirm that it is not  
15      aggressive. That is prejudging what is supposed to  
16      happen in the system.

17              And so I don't think these are answers  
18      that would satisfy me as a practicing engineer in  
19      terms of evaluating the system or the program that is  
20      going to be put in place to determine whether or not  
21      there is a high risk of corrosion of a piping that is  
22      under the ground.

23              JUDGE WARDWELL: I'm sorry. You are  
24      referring to the very last sentence of that?

25              DR. DUQUETTE: No, I am referring to the

1 second sentence in that under Part 6d. It says soil  
2 will be sampled prior to the PEO to confirm that the  
3 soil conditions are not aggressive.

4 JUDGE WARDWELL: And then what does the  
5 last sentence say?

6 DR. DUQUETTE: -- inspections during the  
7 PEO will be based on the results of the soil survey be  
8 taken prior to the period of extended operation.  
9 Again, once every ten years thereafter to confirm the  
10 initial sample results.

11 JUDGE WARDWELL: But in the last two  
12 sentences.

13 DR. DUQUETTE: If the soil resistivity is  
14 less than 20,000 centimeters and the soil scores than  
15 ten points using the American Water Works Association  
16 C105, the number of inspections will be increased as  
17 discussed in the response to question 1c.

18 JUDGE WARDWELL: Aren't those more  
19 aggressive soils?

20 DR. DUQUETTE: Well they were more  
21 aggressive soils but if you get soils that are very  
22 aggressive, you take them out and replace them.

23 JUDGE WARDWELL: But at least that says  
24 what they will do --

25 DR. DUQUETTE: They will do more

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1 inspections.

2 JUDGE WARDWELL: -- if it is not  
3 aggressive.

4 DR. DUQUETTE: But it is indicating -- it  
5 is implying that there will be inspections of the pipe  
6 but it doesn't say that they are going to inspect the  
7 pipe at the locations where the soil is aggressive.  
8 And based on just that response where it says that the  
9 soil scores higher than ten points --

10 JUDGE WARDWELL: What about the last  
11 sentence?

12 DR. DUQUETTE: -- the number of  
13 inspections, which is inspections of the soil, will be  
14 increased as discussed in response to question 1c.

15 JUDGE WARDWELL: What about the last  
16 sentence?

17 DR. DUQUETTE: The additional inspection  
18 will be in locations with aggressive soil conditions.  
19 That does indicate that there will be some additional  
20 inspections. Again, it doesn't tell me when. It  
21 doesn't tell me how often. And I am sure we will get  
22 this later on but it doesn't tell me how.

23 JUDGE WARDWELL: Okay, in regards to this  
24 --

25 DR. DUQUETTE: That is very important.

1 JUDGE WARDWELL: I want to make sure I  
2 understand here. In regards to the notes I took, at  
3 least, in regards to this section, you were concerned  
4 about the samples. You are concerned about the timing  
5 of the inspections, that they aren't all grouped  
6 together, that they are spread out. Is that correct?

7 DR. DUQUETTE: Yes, sir.

8 JUDGE WARDWELL: The samples need to be  
9 down by the pipe, not necessarily at the surface. Is  
10 that correct?

11 DR. DUQUETTE: That is absolutely correct.

12 JUDGE WARDWELL: And I'm not sure we  
13 haven't addressed the aggressive soil situation. That  
14 went back to timing is the way you concluded after  
15 that final sentence was read, in regards to where  
16 additional tests would be done.

17 DR. DUQUETTE: I am also concerned that at  
18 least as a program, it doesn't necessarily tell me  
19 where the soil samples are going to be taken. There  
20 should be some protocol that I am going to look at  
21 certain locations.

22 For example, they knew that they had a  
23 leak in 2009. And I realize we are now talking about  
24 before the license renewal application. But in 2009,  
25 for example, if I can jump ahead a little bit --

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1 JUDGE WARDWELL: Well we are beyond that.  
2 We are into --

3 DR. DUQUETTE: We are into --

4 JUDGE WARDWELL: You are freeform now.

5 DR. DUQUETTE: Okay.

6 JUDGE WARDWELL: We are cutting you loose.

7 DR. DUQUETTE: Thank you. In 2009 they  
8 knew they had a leak. They ascribed what the leak was  
9 due to but they seemed to have stopped there. They  
10 didn't go back and say well, we knew that that was a  
11 bad backfill situation and the backfill had damaged  
12 the coating. The coating was damaged badly enough to  
13 cause corrosion of the pipes that I had a leak. It is  
14 just following the through the fault reanalysis on  
15 that. And they said well we ascribed that to bad  
16 backfill in that location.

17 It seems to me that if you see this unique  
18 situation occurring, that you would then want to be  
19 concerned about other places where I might have some  
20 bad backfill. Or am I going to wait until the next  
21 leak to occur to discover that I have bad backfill  
22 someplace else?

23 In a remote operation of testing that same  
24 pipeline at that time in 2009, one of their  
25 consultants reported that 85 percent of the pipe was

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1 gone in some locations. I would worry about that, I  
2 think, if I had to report. I know that EPR has  
3 downgraded the kind of report that was done, which is  
4 a g span. But the fact of the matter is if they had  
5 a report of an 85 percent loss of pipe somewhere along  
6 that same line where they had a leak. And I don't see  
7 any follow-up on that. So it makes me very nervous  
8 about putting together a program that is going to go  
9 with relicensing, when they are not taking action on  
10 things that have already occurred. What is going to  
11 happen in the future?

12 That is my concern. I would like to see  
13 a program, a real program of where are you going to  
14 inspect. What protocol are you going to use? What  
15 are you going to determine if you find a problem?  
16 Let's say you don't find damaged coating. You take  
17 the coating off and take a look under it? Because  
18 typically the damage that will occur doesn't  
19 necessarily occur because of the location of damage --

20 JUDGE WARDWELL: Are you asking more for  
21 a specific plan and the details of that plan for that  
22 site, rather than a program?

23 DR. DUQUETTE: I'm --

24 JUDGE WARDWELL: The level of detail that  
25 you are asking for is certainly more extensive than is

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1 presently available to the point that are you after  
2 every little step that must be taken in regards to  
3 addressing Aging Management?

4 DR. DUQUETTE: If you are going to define  
5 an Aging Management Program for a very long period of  
6 time, I would think the Staff would like to know  
7 precisely what is going to be done, and not just  
8 review what has been done.

9 JUDGE WARDWELL: Haven't they testified  
10 that in their audits they have seen numerous pages of  
11 detailed procedures that it seems to border on what  
12 you are asking for? Is that a fair assessment of mine  
13 or not?

14 DR. DUQUETTE: Well, unless I haven't been  
15 privy to some of the documents that may have been  
16 available to the Staff, I haven't seen a detailed  
17 program of what is going to be accomplished over a  
18 very long period of time.

19 I have to preface a lot of things --

20 JUDGE WARDWELL: Just before you -- I will  
21 let you preface.

22 DR. DUQUETTE: Okay.

23 JUDGE WARDWELL: First, I want to -- Mr.  
24 Holston, I think you made that statement earlier as a  
25 representative of Staff. Is that correct?

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1 MR. HOLSTON: Yes, sir.

2 JUDGE WARDWELL: Has either this Board or  
3 anyone else been privy to these detailed procedures  
4 that you were referring to?

5 MR. HOLSTON: They are all New York State  
6 Exhibits.

7 JUDGE WARDWELL: They are. So they are  
8 the ones that are before us?

9 MR. HOLSTON: Yes, sir.

10 JUDGE WARDWELL: In your audit, you didn't  
11 look at any other detailed procedures? When we first  
12 got into the discussion of implementing procedures,  
13 you were talking about I forgot how many you  
14 mentioned. I would have to look at the transcript,  
15 but you talked about the numerous documents and pages  
16 therein that you had reviewed as part of your audit.

17 MR. HOLSTON: During the audit there is  
18 other documents we look at. We look at inspection  
19 reports are available, backfill specifications,  
20 coating specifications. But for the procedures that  
21 drive the programs, the program details, those are in  
22 New York State Exhibit. The other documents I don't  
23 believe are.

24 JUDGE WARDWELL: Those are in the three  
25 documents we have talked about?

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1 MR. HOLSTON: Yes, sir. Then I have --

2 JUDE McDADE: Mr. Holston, before we get  
3 to that --

4 MR. HOLSTON: I'm sorry.

5 JUDE McDADE: Mr. Holston, I'm looking for  
6 some specificity. As I understood Dr. Duquette,  
7 looking at New York Exhibit 000151, which are the  
8 responses to the requests for additional information,  
9 that he looks at it and says there is inadequate  
10 information from an engineering standpoint to tell him  
11 where they are going to inspect, when they are going  
12 to inspect, and how they are going to inspect. And is  
13 there any other document you can point us to that  
14 would give those kinds of specificities to let us know  
15 exactly or the general guidance sometime within ten  
16 years. If this happens more often, is more often  
17 twice in ten years?

18 Is it -- I mean, again, the questions I  
19 believe that Dr. Duquette had are the where they are  
20 going to inspect, how they are going to inspect, and  
21 when they are going to inspect. Where else would we  
22 look, if we can't find it in New York 000151?

23 MR. HOLSTON: Those details would be in  
24 the procedures in the RAI responses. And in the  
25 procedure, the corporate procedure, the CEP-UPT-0100

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1 -- I think I am close enough there -- that gives the  
2 risk ranking methodology. That procedure then for --  
3 it does have some inspections that it states that  
4 there is high risk and it is piping that has  
5 radioactive content in it, then you need to inspect  
6 and it has date. And then it says you go to the site  
7 procedure to look at the implementation schedule when  
8 the inspections are going to occur.

9 I reviewed the SEP-IP - again, I forget  
10 the exact --

11 JUDGE WARDWELL: I think it's up in front  
12 of you there. Those are the three documents, aren't  
13 they?

14 MR. HOLSTON: Yes.

15 JUDGE WARDWELL: The EN-DC-343, the CEP-  
16 UPT-0100, and the SEP-UIP-IPEC.

17 MR. HOLSTON: The SEP-UIP-IPEC, and I  
18 believe it is Attachment A contains a table that is  
19 about I'm thinking ten or twelve pages long, listing  
20 all of the major piping components or piping segments.  
21 And then that is broken down by the risk ranking. And  
22 then it has inspection dates.

23 Now not all of them have specific  
24 inspection dates but for instance when I went to the  
25 TI-2516 inspection, I saw dates going out, I believe,

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1 like three years for planned inspections and where  
2 they were going to occur and I corresponded that to  
3 the risk ranking of the piping.

4 Now, I agree with Dr. Duquette. A plant  
5 could take -- this plant is going to do 30 inspections  
6 and if they have corrosive soil, they are going to do  
7 another 12 in a ten-year period. It is beyond my  
8 imagination to assume that 42 inspections, none of  
9 those are going to occur from day zero of entering the  
10 ten-year period and they are all going to happen two  
11 days before the end of the ten-year period. No  
12 utility in its right mind will do 42 inspections in  
13 two weeks or in a month.

14 JUDGE WARDWELL: Likewise, that wouldn't  
15 be a hard thing for you to ask them to commit to,  
16 would it?

17 MR. HOLSTON: We could have asked them to  
18 commit to spread those inspections out over time, that  
19 is correct, sir.

20 JUDE McDADE: But putting aside what you  
21 could do or couldn't do and putting aside the idea  
22 that they are all going to do it on the last day is  
23 somewhat fanciful. Shouldn't they have guidance on  
24 how to go about doing it? You know, not necessarily  
25 say well we know they are not going to all do it the

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1 last day but they should do it at five-month  
2 intervals, ten-month intervals, some sort of guidance  
3 in there. Shouldn't that be part of the  
4 documentation?

5 MR. HOLSTON: That could be part of the  
6 documentation. I don't disagree. And it is -- but I  
7 have 30 years in the industry prior to I came to the  
8 Commission. And in a portion of that time period I  
9 owned the inspection budgets. Right? And I am pretty  
10 comfortable with what Entergy has provided me because  
11 I know those inspections are going to be parceled over  
12 time. We are talking about inspections at a minimum  
13 cost \$100,000. Right? No plant is going to put -- I  
14 lost track of my number -- you know \$4.2 million into  
15 one year's worth of inspections.

16 But yes, you are right. We could expand  
17 the GALL Report and put in specify it is 34 and you  
18 will make sure that so many are done in every two-year  
19 period or every refueling outage.

20 JUDE McDADE: But the question is, how  
21 much guidance need to be there. I mean, let's start  
22 with a basic premise. Entergy has a big investment in  
23 this plant. They want it to work right. They have  
24 engineers. They want it to work well. If they are  
25 going to do an inspection, they want the inspections

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1 to be meaningful. They are not going to intentionally  
2 do expensive exercises for no reason.

3 That said, in reviewing whether or not it  
4 is adequate, how can we do that without knowing what  
5 it is they are going to do in a general sense? And  
6 again, for example, one of the questions Dr. Duquette  
7 mentioned was where. And if the inspection is not  
8 looking in the right place, then the inspection isn't  
9 going to provide sufficient information.

10 Can we be satisfied that aging will be  
11 properly managed without knowing this, as opposed to  
12 just simply saying we are going to rely on the  
13 engineering judgment of Entergy over the next 20 years  
14 that they will do it right? They have professional  
15 engineers. They have an interest in doing it right.  
16 We are going to rely on that. Don't we need more now?  
17 And if not, why not?

18 MR. HOLSTON: We do have that more now.  
19 In regard to where, their UFSAR commits them to  
20 conduct buried piping inspections in those locations  
21 that are most susceptible to corrosion risk and  
22 consequences of risk. They have to do that.

23 If an inspector comes, a regional  
24 inspector comes to the site and conducts an inspection  
25 and Entergy holds up a sheet saying here is ten

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1 inspections and they are all in the low-risk category,  
2 there is no ambiguity in there. Table 1 of -- whoops  
3 it is not up there. The SEP -- that procedure tells  
4 the inspector what the risk ranking is. That is going  
5 to be not meeting their commitment. So there is no  
6 ambiguity on where.

7 I would like to go back to question 6d.  
8 The additional inspections will be in locations with  
9 aggressive soil condition. There is no ambiguity  
10 there.

11 There is no ambiguity on the quantity of  
12 inspections they have to do. That is also captured in  
13 the UFSAR supplement.

14 The only ambiguity is the timing across  
15 the ten-year period. How do I cover that? We look at  
16 what inspections they have done to date and we inspect  
17 in that 71003 inspection, in this case it was a TI-  
18 2516 inspection. What is the evidence on the plate  
19 right now? What do I see in projecting? And you can  
20 see in that procedure a projection of what are the  
21 next few years' worth of inspections.

22 JUDE McDADE: Okay, Dr. Duquette, does  
23 that satisfy your concerns? And if not, why not?

24 DR. DUQUETTE: The Board knows from my  
25 testimony that I am not very much a fan of periodic

1 inspections at specific locations anyway. I think the  
2 system should be protected. And so it is a little bit  
3 difficult to address this in great detail.

4 But again, I have written specifications  
5 for piping systems in various kinds of plants, not  
6 necessarily nuclear plants but different kinds of  
7 plants. I would like to have seen a criterion, for  
8 example, for what fails. The failure that I see so  
9 far from the reading I have been doing is if the  
10 coating is damaged, you have to do something more.

11 The coating damage and the damage under  
12 coating often occurs in pinholes that get so that  
13 water and so on so forth gets down in the pipe where  
14 you can't see what is going on. I don't see anything  
15 in the inspection procedure, for example, that says I  
16 am going to peel back the coating and see what is  
17 underneath the coating.

18 But obviously they had -- and I might feel  
19 differently if they didn't have an undetected leak in  
20 2009. But in 2009, they had a leak in a location that  
21 they didn't expect to find one. They reverse  
22 engineered what went on and that is a very valid thing  
23 to do. But I said this earlier in my testimony, they  
24 seem not to have paid very much attention to the fact  
25 that if that is one location, will it be in other

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1 locations? Because I suspect very strongly, and I  
2 don't know if it has been done or not frankly, if they  
3 had made a soil corrosivity measurement at the  
4 location where they had the failure, the leak, I bet  
5 that would have had a fairly high resistance in the  
6 soil because they weren't right down at the pipe  
7 level. And so here is a situation where an inspection  
8 procedure -- they probably would not have gone to that  
9 site within an inspection procedure to look for  
10 something like that.

11 I know that there are 42 inspections. I'm  
12 very aware of budgetary constraints in plant  
13 operation. I could make some comments about that  
14 relative to budgets because they go up and down and so  
15 you might cluster a bunch on inspections in one year  
16 because you have got the money that year and you don't  
17 some other year but that is a different issue. But  
18 the fact of the matter is that you get an undetected  
19 leak, you then test the pipeline, that same pipe and  
20 you find out that you have what seems to be some other  
21 significant areas of high corrosion from the outside  
22 in based on a remote technique. They didn't replace  
23 the pipe. They didn't change out the soil all along  
24 the pipe.

25 I don't have any confidence that they



1 won't have another undetected leak someplace. And I  
2 am concerned that an inspection system that they use,  
3 no matter how good it is, will not necessarily find  
4 the locations where they could have a potential leak  
5 in their piping system. And that is why I am not a  
6 big fan of inspections independent of what the  
7 criteria are for where you first start your inspection  
8 procedures.

9 I agree that the priority system they set  
10 up is a good one. The criteria they set up for  
11 priorities are a good one. I think that the  
12 priorities for where you would inspect first are good  
13 ones. But I don't think it ever tells you about the  
14 same situation they had in a failure that they have  
15 already had where they wouldn't have anticipated a  
16 failure. And so I am just not confident that the  
17 inspection system will work.

18 I don't have a problem with their ranking  
19 the pipes for how dangerous it might be to have a leak  
20 at that location. I don't have a problem with their  
21 soil measurements, except that I don't think that they  
22 are valid. I don't think they mean anything unless  
23 they are right up against the pipe surface itself.  
24 And so I am just very concerned that any inspection  
25 system is doomed to failure.

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1                   JUDE McDADE: Mr. Holston, do you want to  
2 address that?

3                   MR. HOLSTON: I don't believe that an  
4 inspection program is doomed to failure. The Staff  
5 has issued License Renewal ISG 2011-3, it might be 2,  
6 I apologize for that. And in that program, we very  
7 clearly recommend a very extensive inspection program  
8 for a plant like this. And really the issue comes  
9 down to whether it is cathodic protection or not,  
10 right? We firmly believe that conducting that number  
11 of inspections will provide a reasonable assurance  
12 that the intended function of those piping systems  
13 will be met throughout the period of extended  
14 operation.

15                   If you look at the number of inspections,  
16 there will be 94 inspections conducted. There will be  
17 an additional 24 conducted if the soil is corrosive.

18                   They did have one leak. We agree with  
19 that. And a part and cause of that was backfill  
20 conditions. Since that time they have done numerous  
21 other buried pipe excavations that don't demonstrate  
22 deleterious materials in the backfill. They had  
23 specifications that controlled the backfill when the  
24 plant was constructed. Clearly at least in one  
25 location, people did not meet those requirements that

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1 day. But we look and see that there is further  
2 evidence the service water lines were excavated in  
3 2011. AFW lines were excavated in 2011. No  
4 indication that there is deleterious materials in the  
5 soil. City water pipe excavations, I forget what year  
6 that was, and found no deleterious materials.  
7 Firewater has been dug up.

8 The number of inspections that are going  
9 to occur at this plant as required by their licensing  
10 basis will provide reasonable assurance.

11 JUDE McDADE: Okay, Mr. Cox, do you have  
12 anything to add to that?

13 MR. COX: Just a couple things. I think  
14 we have looked at -- I believe some of the panel  
15 members may be able to comment on the 85 percent. My  
16 understanding was that the 85 percent that Dr.  
17 Duquette referred to was actually an indication of the  
18 location where we had the leak. So, it was not  
19 another location somewhere else on the pipe that we  
20 never went to look at.

21 MR. AZEVEDO: Yes, Your Honor, this is  
22 Nelson Azevedo. May I add to what Mr. Cox just said?

23 That location, the 85 percent of wall  
24 loss, that was at the leak. And that pipe was  
25 replaced.

1           Also, if I may comment on some of the  
2           comments were made that we did not follow-up with what  
3           we found at that leak. That is not accurate. We have  
4           done a number of guided wave inspections. We  
5           identified other areas there was potentially some  
6           corrosion going on that we have installed cathodic  
7           protection and we are in the process of installing  
8           additional cathodic protection.

9           In addition, we also did an impact survey  
10          of the site. So we have done a lot of testing, a lot  
11          of inspections. We have added cathodic protection as  
12          a result of what we found in the 2009 leak.

13          JUDE McDADE: Okay thank you.

14          Mr. Lee, you had indicated you wanted to  
15          address the risk ranking. Do we want to break for  
16          lunch before we move further?

17          JUDGE WARDWELL: Yes.

18          JUDE McDADE: Okay, would an hour --

19          JUDGE WARDWELL: Don't look at me. I just  
20          wanted a break.

21          JUDE McDADE: Okay, it is about one  
22          o'clock. Would an hour until two o'clock be adequate,  
23          Energy?

24          MS. SUTTON: Yes, Your Honor.

25          JUDE McDADE: New York?

1 MS. DEAN: Yes, Your Honor.

2 JUDE McDADE: Mr. Turk?

3 MR. TURK: Yes.

4 JUDE McDADE: An hour?

5 MR. TURK: Yes, Your Honor.

6 JUDE McDADE: Okay. Clearwater?

7 MS. RAIMUNDI: Yes, Your Honor.

8 JUDE McDADE: Okay, we will then take a  
9 recess. We will be in recess until two o'clock.

10 (Whereupon, at 1:02 p.m., a lunch recess  
11 was taken.)

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1 A F T E R N O O N S E S S I O N

2 2:04 p.m.

3 JUDGE McDADE: Come to order.

4 MR. FAGG: Your Honor, this is Brad Fagg  
5 for the Applicant. Can I have one housekeeping matter  
6 before we get going?

7 JUDGE McDADE: Okay.

8 MR. FAGG: We, in following along in the  
9 questioning, I think the witnesses are tracking, but  
10 sometimes we're working a little bit with the list of  
11 the excerpts that are providing the basis of the  
12 questions.

13 So we would just ask, if it's possible at  
14 some point in due course, if that could be made a --  
15 the hard copy could be made a Board exhibit, to help  
16 us, for example, to go back and tie it to some of the  
17 testimony and some of the questions?

18 JUDGE McDADE: Is that a workable thing?  
19 We will see what we can do. Anything else?

20 JUDGE WARDWELL: Can I just ask a question  
21 in that regard? Why do you need it? We state it and  
22 read it.

23 MS. SUTTON: Your Honor, it's largely my  
24 issue. I'm having trouble at times tracking between  
25 the specific exhibits and the questions, and the text

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1 of what's being asked. I'm trying to follow along,  
2 particularly with respect to New York's testimony, and  
3 again, you're working off an earlier version of that  
4 testimony.

5 So for purposes of clarity on the record,  
6 in using the transcript in this proceeding, I think it  
7 would be beneficial to the parties to have it as a  
8 Board exhibit.

9 JUDGE WARDWELL: Well, the point is what  
10 we start out with in regards to any given question,  
11 and the cite that it's anchored towards, gets  
12 meaningless once questions deviate and answers deviate  
13 from that particular cite.

14 MS. SUTTON: I understand, Your Honor.  
15 But finding the initial point at which the dialogue  
16 begins has at times been difficult.

17 JUDGE McDADE: We will discuss it at the  
18 break.

19 JUDGE WARDWELL: And I'm also trying to  
20 think of ways that I can do it, so that you can find  
21 it quicker, because. Note taken.

22 JUDGE McDADE: Okay. Before we broke, Mr.  
23 Lee, you had -- I'm sorry, Mr. Sipos.

24 MR. SIPOS: Your Honor, I don't know if my  
25 microphone activated that. It's John Sipos for the

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1 State of New York. Another housekeeping detail.  
2 There was testimony this morning about a document  
3 entitled "UFSAR," and I believe that was testimony  
4 from staff and by Entergy.

5 The state would appreciate it if the  
6 version of that document could be clarified at some  
7 point today. There are different versions of that  
8 document.

9 JUDGE McDADE: Okay, and can you say the  
10 document again?

11 MR. SIPOS: Yes. It's U-F-S-A-R is the  
12 abbreviation or acronym.

13 JUDGE McDADE: Okay. Going back to Mr.  
14 Holston, do you recall what you were referring to,  
15 specifically which exhibit?

16 MR. HOLSTON: I will walk, I know of one  
17 exhibit. There's a couple of exhibits for various  
18 versions are published, and I will try to find the  
19 most up to date one, and then inform you all which  
20 document that's in.

21 JUDGE McDADE: Okay. You were referring  
22 to the most up to date one in your testimony?

23 MR. HOLSTON: Yes. Yes sir.

24 JUDGE McDADE: Okay. So hopefully, after  
25 the next break, we'll come back to that and ask you

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1 about it, and hopefully we'll have that information.

2 MR. SIPOS: Thank you, Your Honor.

3 JUDGE McDADE: Anything else before we get  
4 started?

5 (No response.)

6 JUDGE McDADE: Okay. Mr. Lee, you had had  
7 a comment with regard to risk ranking.

8 MR. LEE: Yes. Bob Lee for the Applicant.  
9 There was a reference to an attachment in the CEP-UPT-  
10 0100, which is Exhibit, New York State Exhibit 173,  
11 and I believe we were looking and cited Table 9.3.

12 The discussion was whether or not, it  
13 wasn't very clear how risk ranking was linked to the  
14 SEP document, which is a site-specific inspection plan  
15 for Indian Point, and I thought maybe it would be  
16 worth, just to take a couple of moments to walk  
17 through it.

18 JUDGE McDADE: If you could briefly, and  
19 the SEP, that's New York 174?

20 MR. LEE: Yes. Okay. The SEP contains  
21 the results of the risk ranking that was performed,  
22 and the end result is basically establishment of an  
23 inspection priority, high, medium and low, and with  
24 that, associated inspection interval.

25 Now CEP-UPT-0100 provides the methodology

1 for performing the risk ranking, and there's a series  
2 of tables, beginning with Table 9-1. Well, let me  
3 start with 9-2, which is -- the risk ranking is a  
4 determination from the impact assessment and the  
5 corrosion risk assessment for any given section of  
6 pipe.

7 Basically, the impact assessment is  
8 determination of, a characterization of a pipe's  
9 safety significance. It's whether or not the piping  
10 contents has, represents a public risk in the event of  
11 a leak, and the economics or the impact on plant  
12 operations.

13 So the three categories are basically  
14 high, medium and low impacts on the plant. The safety  
15 class is whether or not a line is safety-related,  
16 performs a safety-related function, whether it's  
17 medium for say an augmented or a fire protection  
18 function, and a low if it performs no safety function.

19 Public risk, the highest category, high,  
20 would be if it contained something having rad content  
21 or potentially rad content. A medium would be an  
22 environmental risk, a chemical or oil fluid, and low  
23 would be untreated water, service water or  
24 demineralized water.

25 Then economics or the impact on plant

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1 operation, or costs associated with possibly effecting  
2 a repair, if you had to do that online, or whether or  
3 not you could do that online. High, greater than a  
4 million; medium, 100,000 to a million, and less than  
5 100 is low.

6 So that would give us an impact  
7 assessment. The corrosion risk assessment found on 9-  
8 3, we mentioned soil resistivity as being one  
9 parameter that goes into the equation. The other  
10 parameters are drainage, the material, its corrosion  
11 resistance associated with that material.

12 A third parameter which we combine, which  
13 is cathodic protection, whether or not there is  
14 cathodic protection and coating, whether or not there  
15 is coating. Now when it comes to coating, unless we  
16 verify the coating condition in our risk ranking, we  
17 assume that it's degraded. So that's a very, that's  
18 a conservative assumption, that we're assuming  
19 degraded coating.

20 As we said for Indian Point, much of the  
21 piping is not cathodic-protected. So on that one  
22 parameter, CP/coating risk weight would basically have  
23 the max point value for that.

24 Now the corrosion risk total, if you will,  
25 is basically the multiplication of all those factors

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1 to give you a point value, and then 9.4 gives you the  
2 summary against which whatever your point total, that  
3 bottom row, will give you a high, medium or low  
4 corrosion risk.

5 So these two factors, the impact  
6 assessment, high, medium and low, in conjunction with  
7 the corrosion risk assessment, high, medium or low,  
8 will give you an inspection priority. That's provided  
9 in Table 9-5.

10 And associated with these different  
11 combinations are inspection intervals, and I just want  
12 to say that all rad piping that has rad content is  
13 rated high priority, inspection priority  
14 automatically, as well as the safety-related.

15 So those, a summary of all that risk  
16 ranking is exported and captured in Appendix A to the  
17 SEP. So each line for each system that we've  
18 identified has an inspection priority, and some of the  
19 high priority lines in Rev 0 of the procedure did  
20 identify dates or a schedule.

21 But many of the lines did not have  
22 projected dates for inspection yet, and would be in  
23 the next revision of this document.

24 JUDGE McDADE: Okay. Thank you, Mr. Lee.  
25 Judge Wardwell.

1 JUDGE WARDWELL: I think we're at the  
2 point of looking at your, New York State, your Exhibit  
3 164. On page 3 of your direct, you state that you  
4 reviewed the document, New York Exhibit 152, that is  
5 NL-11-074. That was dated July 14th, 2011 in response  
6 to an RAI.

7 Why don't we go ahead and pull that  
8 document up, 152? 152. Can you show the whole page,  
9 and Dr. Duquette, have you reviewed this document?

10 DR. DUQUETTE: Yes sir, I have.

11 JUDGE WARDWELL: Do you remember off the  
12 top of your head, and we'll scroll down if not, that  
13 doesn't this document contain changes to the UFSAR?

14 DR. DUQUETTE: I frankly don't remember if  
15 this had the changes. Is this the one we had  
16 discussed just a few minutes ago?

17 JUDGE WARDWELL: No.

18 DR. DUQUETTE: It is not, okay. I would  
19 have to read through.

20 JUDGE WARDWELL: Andy, why don't you go  
21 ahead and search for UFSAR on the top?

22 DR. DUQUETTE: I think I see it about in  
23 the middle of the page.

24 JUDGE WARDWELL: Yeah, there's one anyhow.

25 (Witness reviewing document.)

1 JUDGE WARDWELL: So doesn't this document  
2 reflect the changes to the UFSAR?

3 DR. DUQUETTE: Well again, it's a number  
4 infrequency, and I don't remember seeing the frequency  
5 in the document itself. I'd have to look at the  
6 document itself. But --

7 JUDGE WARDWELL: But it does -- I'm just  
8 saying, it does reference changes to the UFSAR?

9 DR. DUQUETTE: Oh yes sir, it does. I'm  
10 sorry.

11 JUDGE McDADE: Okay, and we're on page 5  
12 of 35 or PDF page 5 of 35 of New York 152.

13 JUDGE WARDWELL: And that these changes do  
14 include the number and frequency of the committed  
15 inspections?

16 JUDGE McDADE: Yes, I see that.

17 JUDGE WARDWELL: About that, yeah.  
18 Entergy, is there any other place that these changes  
19 that referenced here in regards to the UFSAR are  
20 referenced in, I'll just call it generically your AMP,  
21 meaning your -- not necessarily the one you initially  
22 submitted, but any of the documentation that follows  
23 after that, besides this RAI?

24 MR. COX: Ultimately, the description of  
25 the AMP is still in Appendix B of the LRA, and this,

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1 I don't know if this specific letter actually changed  
2 Appendix B, but there are other RAI responses that put  
3 some of the same.

4 This was a change to the SER supplement or  
5 Appendix A of the application. We would make  
6 corresponding changes to Appendix B, and it would also  
7 be reflected in a RAI response.

8 JUDGE WARDWELL: Okay.

9 MR. COX: The latest version of the RAI or  
10 of the program description in Appendix B is probably  
11 in the most recent letter that was submitted in  
12 October of this year. I think it's NL-12-174. I  
13 believe that's Entergy Exhibit 597.

14 JUDGE WARDWELL: Thank you.

15 MR. O'NEILL: Just one clarification, Your  
16 Honor. It's Martin O'Neill for the Applicant. That  
17 is a correct exhibit reference for Mr. Cox. That is  
18 one of the exhibits that was just submitted, that's  
19 been marked for identification but not normally  
20 received into evidence yet.

21 JUDGE WARDWELL: Okay, thank you. Can we  
22 leave that now Andy? These next two question areas,  
23 this is a PDF file, so I can't edit this. But these  
24 next two questions have pretty much been answered. So  
25 we're moving now down, and this is why I'm having

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1 difficulties getting something to you either, because  
2 we're going to be on the fly here, and I'm not sure I  
3 can create a document that actually reflects the  
4 question areas.

5 I've gotta assume that you're going to  
6 have to follow, for instance, where I've skipped over  
7 2 and I'm now down here at Entergy's testimony, page  
8 71A90. That's going to be your key, because I believe  
9 I always say that.

10 MS. SUTTON: Yes. I understand, Your  
11 Honor.

12 JUDGE WARDWELL: Thank you. That was my  
13 reason for my pausing. Entergy at 373, page 71,  
14 Answer 90, you say as an initial matter, sorry, an  
15 initial matter, Entergy developed EN-DC-343, CEP-UPT-  
16 0100 and the site-specific SEP-UIP-IPEC, to implement  
17 the UPTIMP, and to meet the industry initiative in NEI  
18 09-14, Revision 1.

19 That's New York's Exhibit 168, for its  
20 entire fleet. Entergy's adherence to such procedures  
21 is subject to ongoing NRC oversight, review and  
22 enforcement under 10 C.F.R. Part 50. "Furthermore,  
23 NEI's 09-14 initiative requirements, albeit related to  
24 current plant operations, are treated with the same  
25 level of obligation as the license commitment."

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1 For Entergy, could I ask, is every  
2 provision of EN-DC-343 applicable to Indian Point that  
3 you're aware of?

4 MR. AZEVEDO: Your Honor, this is Nelson  
5 Azevedo for Entergy. Yes.

6 JUDGE WARDWELL: And where is that stated  
7 anywhere in the documentation, that all the provisions  
8 of EN-DC-343 are applicable to Indian Point?

9 MR. AZEVEDO: I believe it's stated right  
10 on the first page, on the cover of the EN-DC-343.  
11 There is, all the Entergy sites are listed, and  
12 there's an actual checkmark. If that box is checked,  
13 that means it applies to that given site.

14 JUDGE WARDWELL: So there's no provisions  
15 in there that don't apply to your site; is that  
16 correct?

17 MR. AZEVEDO: Not for EN-DC-343. It may  
18 for other procedures, but I don't remember any for the  
19 EN-DC-343.

20 JUDGE WARDWELL: That's good.

21 JUDGE McDADE: Okay, and you're saying  
22 that appears on the first page of that which is in  
23 the record as New York Exhibit 172?

24 MR. AZEVEDO: I believe that's correct,  
25 Your Honor.

1 (Witness reviewing document.)

2 JUDGE McDADE: EN-DC-343, Revision 4, May  
3 16th, 2011, that's what you're referring to?

4 MR. AZEVEDO: Yes, that's correct, Your  
5 Honor.

6 JUDGE McDADE: Okay, and that's New York  
7 172, okay.

8 MR. O'NEILL: Your Honor if I may, again  
9 I apologize for the interruption. I just want the  
10 record to be clear. This is Martin O'Neill. That is  
11 Revision 4 of EN-DC-343. Revision 5, I believe, has  
12 previously been admitted into evidence as Entergy, ENT  
13 000578, and most recently we've submitted Revision 6  
14 of that document. Again, that's been marked for  
15 identification but not yet received into evidence.

16 JUDGE McDADE: Okay, and what's that last  
17 exhibit?

18 MR. O'NEILL: It is Entergy 000599.  
19 That's Revision 6 of 343.

20 JUDGE McDADE: Thank you.

21 MR. O'NEILL: You're welcome.

22 MR. AZEVEDO: Your Honor if I just may, I  
23 can clarify how the cover sheet reads. If you looked  
24 at all -- that cover sheet lists all the Entergy  
25 sites, and there's -- and the exception date. There's

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1 N/A for Big Rock Point. So this procedure does not  
2 apply to Big Rock Point, and an N/A for NP, which  
3 stands for new plants. But all the other Entergy  
4 sites, this procedure applies.

5 JUDGE McDADE: Okay, thank you.

6 JUDGE WARDWELL: Thank you. New York's  
7 testimony, page 19, agrees that Entergy has offered  
8 more detail in corporate documents it disclosed. Of  
9 primary relevance are the three we've been talking  
10 about. My question to staff is, and I've dodged  
11 around this a bit, and excuse me if I'm repetitive  
12 again, but I just want to fix the point.

13 Have these internal documents been  
14 included in any commitment from Entergy or made part  
15 of any of the licensee documentation commitments?

16 MR. HOLSTON: These procedures, the three  
17 site procedures are not part of a commitment, and they  
18 are available on site to demonstrate how the program  
19 is being implemented, and therefore consistent as is  
20 with the AMP 411, excuse me, AMP 41.

21 JUDGE WARDWELL: Could you repeat again  
22 then how these provisions which they've committed to,  
23 certainly in regards to EN-DC as we just understood,  
24 be enforceable?

25 MR. HOLSTON: These provisions would be

1 enforceable in relation to the UFSAR supplement, where  
2 it states various things. One of the things we  
3 focused on was risk ranking. I'll just continue that  
4 as an example.

5 So CEP-UPT-0100 and SEP-UIP-IPEC represent  
6 the risk ranking methodology and the risk ranking  
7 results for the buried pipe program, and if CEP-UPT  
8 deleted, for instance, the risk ranking process and  
9 said -- say they kept the numbers of inspections the  
10 same, but just allowed Indian Point to pick wherever  
11 they wanted to inspect, versus the highest risk  
12 locations, that would be enforceable as an example.

13 JUDGE WARDWELL: And is that true with  
14 every provision that's in all three of these  
15 documents?

16 MR. HOLSTON: That is true with every  
17 provision that links to the UFSAR supplement. Now  
18 it's --

19 JUDGE WARDWELL: But in your answer, you  
20 have circular -- we're back to where we started again.  
21 You gave an example of where it was incorporated into  
22 the UFSAR. What about the rest of the provisions?  
23 Are they or are they not in UFSAR? Are they not  
24 necessarily in the UFSAR?

25 MR. HOLSTON: If they're in the UFSAR,

1 they're enforceable.

2 JUDGE WARDWELL: I understand.

3 MR. HOLSTON: If they're not in the UFSAR,  
4 then they would not be enforceable, although they  
5 would be noted during an inspection. But they  
6 wouldn't rise to a level of getting into the reactor  
7 oversight process if they weren't in the UFSAR.

8 Now that's not counting the 71003  
9 inspection. The 71003 inspection, that's the  
10 inspection that occurs during the two-year time frame  
11 prior to the plant going into the period of extended  
12 operation. That inspection's task is to ensure that  
13 all the commitments were incorporated into those  
14 procedures, and the three that principally are being  
15 used by the Applicant to include those.

16 But ten years down the line, say into the  
17 PEO, the enforceable ones are what's in the UFSAR.

18 MR. COX: Judge Wardwell, this is Alan  
19 Cox. I'd like to clarify a point there.

20 JUDGE WARDWELL: I think I've got more  
21 clarifications here than what you're going to clarify,  
22 but go ahead.

23 MR. COX: Perhaps. But the clarification  
24 is you asked about the procedure specifically, and  
25 whether they were enforceable, and I've seen in my

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1 experience numerous inspection reports, where Entergy  
2 has been cited for violations for failure to follow  
3 procedures.

4 So to the extent that these are site  
5 procedures, they have to be followed by Entergy. They  
6 are enforceable in the sense that if we don't do what  
7 the procedure says, we are subject to a violation.  
8 That's not necessarily -- that's different from saying  
9 enforceable in the sense that I think Mr. Holston was  
10 referring to.

11 Enforceable in the sense that we'd have to  
12 evaluate it against a SAR change, for example. If it  
13 was something that dealt with the detail that was in  
14 the SER supplement. All these procedures have, they  
15 have various levels of detail, and they go well beyond  
16 what's in the SER supplement.

17 But we're still bound to follow those  
18 procedures unless we do a change, and that change has  
19 to be made under the provisions of 50.59, if it  
20 applies. We have to do the screening to see if it  
21 applies, and then if it does, we have to apply the  
22 questions of 50.59.

23 So in a sense, that would say these  
24 procedures are enforceable, in the sense that we have  
25 to follow our procedures.

1 JUDGE WARDWELL: I'll take a last question  
2 in my mind that just came up. When you say "under the  
3 provisions of 50.59," does that include automatically  
4 the screening criteria, or does it not? Does it mean  
5 that in fact it will, you will have to submit  
6 something in regards to any change you make to these  
7 documents?

8 MR. COX: I think the screening will allow  
9 us to make changes, if it dealt with a level of detail  
10 that's not captured in the SAR. Screening would allow  
11 us to make a change without submitting anything as far  
12 as the 50.59 process.

13 JUDGE WARDWELL: So the answer to my  
14 question was yes, it includes the screening process?  
15 When you reference 50.59, you include the screening  
16 process as part of that?

17 MR. COX: Yeah, and there are different  
18 ways of saying that. You know, we have to do -- to  
19 make a procedure change, we have to do the screening,  
20 and that would determine if we had to answer the seven  
21 questions that are in 50.59.

22 So I guess a lot of times we refer to that  
23 as the same process, as part of the 50.59 process.  
24 But you could argue that you don't get to the seven  
25 questions if you get a negative response on the

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1 screening. But again, we treat it as all part of the  
2 -- we have a procedure that deals with 50.59  
3 evaluations, and the screening is part of that  
4 procedure.

5 JUDGE WARDWELL: I just wanted to clarify  
6 that. Now if I can think of the other questions I  
7 had.

8 JUDGE McDADE: While you're thinking about  
9 it, if I could, for Mr. Holston, whether there's a  
10 link to the SAR supplement or not, as I understood Mr.  
11 Cox, they would have to do the screening, and  
12 depending on the nature of the screening, if it fit  
13 within 50.59, then you would have to submit that to  
14 the agency before making the procedure change. Did I  
15 understand your testimony correct?

16 MR. HOLSTON: Partially. All the  
17 procedures would need to be screened, to whether a  
18 50.59 evaluation would have to be conducted. If a  
19 50.59 evaluation has to be conducted, it could be  
20 conducted, and if there's no unreviewed safety  
21 question, that's the conclusion a 50.59 comes to, the  
22 applicant can then make the change, or the licensee in  
23 this case, can make the changes absent informing or  
24 getting permission from the NRC ahead of time.

25 JUDGE McDADE: Wait, without getting



1 permission from the NRC?

2 MR. HOLSTON: Correct. If there's no  
3 unreviewed safety question. That's what you do a  
4 safety evaluation for, to determine if there's an  
5 unreviewed safety question.

6 JUDGE McDADE: Okay. Now how is it  
7 different if there are links to the SER supplement?

8 MR. HOLSTON: If there are links if it's  
9 a level of detail in the UFSAR, it's almost a foregone  
10 conclusion that you'll have to perform a 50.59  
11 evaluation. The screening really tells us whether  
12 you're going to get into the space of having to  
13 conduct a 50.59 evaluation.

14 So it's part of the 50.59 process, but  
15 it's a part that tells you where you have to do the  
16 much more detailed analysis. If it screens out, and  
17 in this case, if that level of detail's not in UFSAR,  
18 typically it would screen out. Then no 50.59 safety  
19 evaluation is done. The change can go ahead and be  
20 executed by the station.

21 JUDGE WARDWELL: I'm trying to get a  
22 handle on how much weight to give these documents.  
23 That's the whole rule of my question here.

24 JUDGE McDADE: Don't dig too far. That's  
25 the first time I thought I understood this.

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1 JUDGE WARDWELL: Well I hope that I'm  
2 getting there. But I'm not at the land of instant  
3 clarity just yet. Do you have any handle on how many  
4 of these, and I call them promises within these  
5 documents, have been incorporated into the UFSAR in  
6 the current edition, roughly?

7 MR. HOLSTON: To make sure I understand  
8 your question, of all the aspects -- I think this is  
9 what you're asking me. Of all the aspects that are in  
10 the buried pipe program that we evaluated, to be able  
11 to write our safety evaluation report, to say that  
12 there's reasonable assurance that the piping will  
13 maintain its intended function, how many of those  
14 translate then into being into the UFSAR supplement?

15 JUDGE WARDWELL: That's a fair way to say  
16 it. If you then explain which of those documents,  
17 beyond the three we're looking at, are part of this  
18 universe of those that you have looked at, that you  
19 just described?

20 MR. HOLSTON: I would say all of the  
21 principle bases for our acceptance. So when you  
22 review the safety evaluation report, and I'd like to  
23 just take a moment to turn to that.

24 JUDGE WARDWELL: Can you give us an  
25 exhibit number?

1 MR. HOLSTON: Let me see. I did not write  
2 the exhibit number down on that page when I printed it  
3 out, but I can find it in my testimony probably.  
4 George, can you help me out?

5 MR. TURK: May I ask, is Mr. Holston  
6 looking for the SER supplement exhibit number?

7 MR. HOLSTON: The SER supplement exhibit  
8 number, that is correct.

9 MR. O'NEILL: I believe it's Exhibit New  
10 York State 160.

11 JUDGE WARDWELL: 1-5-0?

12 MR. TURK: 1-6-0.

13 JUDGE WARDWELL: 6-0. Go ahead and call  
14 that up. You can stay on the full page, Andy, because  
15 we'll probably jump to some page. What page number is  
16 that?

17 MR. HOLSTON: If you go to page 3-4 of  
18 that document.

19 JUDGE WARDWELL: All right.

20 MR. HOLSTON: Okay, at the top of that  
21 page, this is a summary of the principle findings or  
22 the principle bases for the findings of why we believe  
23 that the program is acceptable. The applicant is  
24 risk-informing the piping inspection locations, to  
25 select those with the greatest potential for leakage.

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1 That's in the UFSAR supplement.

2 "The applicant is sampling the soil for  
3 corrosivity prior to and during the period of extended  
4 operation." I really probably don't have to read all  
5 of that, right? But that's in the UFSAR supplement.  
6 Steel piping is coated.

7 The UFSAR supplement talks bout the  
8 preventive actions, and the only point not, which is  
9 really, you know, the plant, the basis of the  
10 operating experience to date, which is the fourth  
11 bullet, "Recent inspections found the backfill did not  
12 contain rocks or foreign material."

13 So the principle bases for our accepting  
14 the program are captured in the UFSAR supplement, to  
15 ensure that there's a regulatory link to those being  
16 conducted throughout the period of extended operation  
17 or if the staff's informed that they're changed.

18 JUDGE WARDWELL: Dr. Duquette, do you have  
19 any others that you feel concerned with, in regards to  
20 items that may not be directly enforceable through  
21 referencing either the supplemental SER, the regular  
22 SER or the UFSAR?

23 DR. DUQUETTE: Duquette, New York State.  
24 I want to be a little bit careful answering that  
25 question, because when you say "enforceable," that's

1 really not what I'm an expert at, as to whether it's  
2 enforceable or not.

3 JUDGE WARDWELL: Let me rephrase it then.  
4 Let's drop the words "enforceable." That you think  
5 ought to be in there, that are more of a primary  
6 concern, that raises to the level that these raise to,  
7 as referenced in Exhibit 160?

8 DR. DUQUETTE: Obviously, we'd be much  
9 happier if the language in this document said  
10 something like "the applicant has risk-informed its  
11 piping inspection locations," rather than "is doing  
12 it." In other words, it's ongoing.

13 And I'd be happier if it said "The  
14 applicant has sampled the soil for corrosivity," and  
15 you know from my testimony this morning that I think  
16 the soil sampling that is being recommended, or that  
17 has been suggested is not appropriate for the depth at  
18 which the pipes are located.

19 The third bullet in this particular  
20 document says that "Steel piping is coated." In the  
21 EPRI document that we'll be probably discussing later  
22 on, there is a comment in that document about being  
23 very careful about coated piping if you don't use  
24 cathodic protection, because minor damage to the  
25 coating can cause serious damage underneath the

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1 coating.

2 If I look at the fourth bullet, there is  
3 a comment in here that the inspections did find  
4 coating damage. I'm not sure what was done about it,  
5 about finding the coating damage in that particular  
6 case. So I think the document isn't complete as it  
7 reads right now, and I'd be much happier if it could  
8 be updated before a license is granted.

9 JUDGE WARDWELL: Is there any, besides  
10 those four and your unhappiness with some of them, are  
11 there any other bullet items that should be added to  
12 that list, was the heart of my question?

13 DR. DUQUETTE: I don't think so. I think  
14 the staff has reasonably covered most of what we  
15 should be concerned about in this particular process.

16 JUDGE WARDWELL: Thank you. You can go  
17 back. On Entergy's testimony, Question 34, page 17,  
18 you state that the IPEC license renewal application  
19 described in the BPTIP is consistent with NUREG-1801,  
20 with no exceptions.

21 It goes on to say that "This program  
22 description tells the reviewer that the IPEC program  
23 is, in essence, the exact program that the NRC staff  
24 has reviewed and approved in NUREG-1801, without  
25 exception.

1                   "Therefore, the details of the ten element  
2 NUREG-1801 program, 11M34 description are incorporated  
3 by reference into the IPEC license renewal  
4 application."

5                   My question to Entergy, has the BPTIP  
6 program now been usurped by other programs, i.e., it  
7 seems like an earlier question, reference and  
8 testimony, we're saying has been replaced by the -- is  
9 it the UM or the UPTIMP?

10                  MR. COX: I think that -- this is Alan Cox  
11 for Entergy. I think the best way to say that is the  
12 difference in the two programs is basically related to  
13 the scope of what's required to be in the scope of  
14 license renewal.

15                  So the BPTIP is a subset of the  
16 underground piping and tanks inspection program. The  
17 underground piping and tank inspection program, the UT  
18 or the UPTIMP, I think is the right words, it's a  
19 broader program. It includes the things that are not  
20 within the scope of license renewal.

21                  It includes all the piping on site, and  
22 the BPTIP is a subset of that, because it deals  
23 strictly with the piping that meets the criteria, the  
24 scoping criteria in 10 C.F.R. Part 54 for license  
25 renewal.

1 JUDGE WARDWELL: So there's nothing new in  
2 the UPTIMP related to those pipes that are part of  
3 this contention, is what you're saying?

4 MR. COX: Yeah, I think that's a correct  
5 statement. The BPTIP describes the commitment for  
6 license renewal, for how we're going to manage the  
7 effects of aging, the procedures that are implemented,  
8 that also implement the UPTIMP are implementing those  
9 requirements that are described in the BPTIP.

10 JUDGE WARDWELL: And the UPTIMP has  
11 incorporated all of the BPTIP? Is that what you're  
12 saying?

13 MR. COX: I think that's -- yes, that's  
14 what I'm saying. That's correct.

15 JUDGE WARDWELL: Thank you.

16 JUDGE McDADE: And just so I'm clear on  
17 it, we're talking about Entergy Exhibit 373, page 17,  
18 starting at about line 6 is where you're talking under  
19 that convention?

20 JUDGE WARDWELL: I mean is that -- are you  
21 asking me this question?

22 JUDGE McDADE: Yes.

23 JUDGE WARDWELL: Don't you need to swear  
24 me in?

25 JUDGE McDADE: I just want to make sure

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1 I'm reading on the same sheet of music as you are.

2 JUDGE WARDWELL: So if you look at your  
3 screen and if what's written there is what you're  
4 reading off of, then the answer is yes, that that was  
5 where -- it was intended to be from that section. But  
6 I'm not sure what you're reading.

7 JUDGE McDADE: Okay.

8 MR. COX: Your Honor, our latest version  
9 of the testimony, that question is on page 17.

10 JUDGE WARDWELL: Still remaining with  
11 Entergy's testimony, page 54, A76, quoting "Broadly  
12 speaking, the underground piping and tanks integrity  
13 initiative includes the following key program  
14 attributes. Procedure and oversight, risk rank,  
15 prioritization, inspection planning condition,  
16 assessment plan, plan implementation and asset  
17 management plan."

18 What is the difference between the  
19 underground piping and tanks integrity initiative, and  
20 the UPTIMP and the BPTIP, if I might ask Mr. Cox?

21 MR. COX: I'll probably refer that  
22 question to Mr. Ivy. He's more familiar with the  
23 initiative. The initiative is just to summarize,  
24 before I turn it over to Mr. Ivy, the initiative is  
25 the NEI initiative that deals with buried piping and

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1 tanks, and we have implemented the UPTIMP program at  
2 Indian Point to implement the requirements of that  
3 initiative.

4 Then again, as I mentioned earlier, the  
5 BPTIP is a subset. Specifically, I mean the  
6 difference is basically the scope of the components  
7 that are included. It's a more limited scope of  
8 components that are strictly related to license  
9 renewal.

10 JUDGE WARDWELL: Is that what you were  
11 going to say, Mr. Ivy?

12 MR. IVY: Yes, Your Honor.

13 JUDGE WARDWELL: Thank you.

14 MR. IVY: I agree with applicant. It's  
15 very close to what I was going to say, the same thing.  
16 The industry initiative is what implements the UPTIMP  
17 and as Alan said, the buried piping and tanks program  
18 is a subset of that.

19 JUDGE WARDWELL: Thank you. Staying with  
20 Entergy's testimony on 373, page 55, yeah Exhibit 373,  
21 page 55, Answer 76. "Finally, in April 2011, the NEI  
22 buried piping integrity task force issued industry  
23 guidance for the development of inspection plans for  
24 buried piping." Final draft, NEI, and it's  
25 referencing NEI buried piping inspection plan

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1 guidance, and I've added that that's New York's  
2 Exhibit 169.

3 Mr. Cox or whoever else should, Mr. Ivy or  
4 whoever, have all of the NEI recommendations or  
5 comments coming from the task force been completed at  
6 IPEC and/or adopted into, I guess it would be the  
7 UPTIMP program, as it now exists, and specifically the  
8 BPTIP program?

9 MR. IVY: Ted Ivy for the Applicant. Yes,  
10 the recommendations that came out of the buried piping  
11 initiative, which is stated in the same question that  
12 you referred to, there's a Table 2, which talks about  
13 the implementation schedule for the various parts of  
14 the initiative.

15 All of those have been completed, other  
16 than the last one. Well, for buried piping, other  
17 than the asset management plan, which the due date is  
18 December of next year.

19 But procedures in oversight, which is one  
20 of the first sections to establish all the  
21 recommendations that come out of the guidance  
22 document, to put those in your procedures and your  
23 oversight, that has been implemented at the site. So  
24 the program does currently reflect all the  
25 requirements of the initiative.

1 JUDGE WARDWELL: Thank you, Mr. Ivy. This  
2 next area of discussion can be condensed quite a bit,  
3 because we've covered most of the questions I had in  
4 this area, and it deals with Entergy's testimony on  
5 page 56, Answer 78.

6 The only remaining question I have in this  
7 reference is that within that answer, you state that  
8 Entergy has also issued EN-EP-S-002-MULTI, Revision 0,  
9 entitled "Buried Piping and Tanks General Visual  
10 Inspection" on October 30, 2009, and that's Entergy  
11 Exhibit 408. You say that that specifies the  
12 requirements for buried piping general visual  
13 inspections.

14 Mr. Cox, Mr. Ivy or someone from Entergy,  
15 how does this program fit into all of our discussion  
16 here, in regards to being adopted for Indian Point?

17 MR. LEE: Bob Lee for the Applicant.

18 JUDGE WARDWELL: Now I understand why  
19 there's so many Entergy people here. I should have  
20 realized it, with all the various documents that are  
21 floating around.

22 MR. LEE: The quoted procedure, EN-EP-S-  
23 002-MULTI, is basically an engineering standard by  
24 which visual inspections are performed. It includes,  
25 it provides basically qualifications required or

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1 certifications required to perform an inspection  
2 documentation requirements.

3 It includes a checklist for performing the  
4 inspection. It details what the corrective action is  
5 should there be some coating degradation noted. If  
6 the coating exposes bare metal, it gets into the  
7 detail of follow-up actions for that. So which is  
8 basically to enter into the corrective action process.

9 JUDGE WARDWELL: You say it does list some  
10 corrective actions?

11 MR. LEE: Well, the trigger would be if  
12 there's coating degradation noted, or even if the  
13 coating degradation is to the extent where bare metal  
14 is exposed, there would be a CR written and it would  
15 be entered into the corrective action process.

16 Specifically for buried piping, it would  
17 entail cleaning up the coating and performing a  
18 coating repair. If you expose bare metal, it would  
19 include cleaning up the coating to get to sound  
20 coating, and then perform UTs to verify that you  
21 haven't experience wall loss.

22 JUDGE WARDWELL: Now is this something  
23 that would be done as part of the inspection program,  
24 or is this just steps that would take place after the  
25 inspection's been completed and would be implemented

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1 at some other point, implemented by meaning executed?

2 MR. LEE: The report would be completed on  
3 a timely manner.

4 JUDGE WARDWELL: Not the report. You were  
5 saying, you talk about these corrective actions.

6 MR. LEE: In reality, it would be almost  
7 performed as soon as practicable, soon as possible.  
8 You would enter it, it would basically be entered in  
9 the work control process, and work order would be  
10 generated to perform the coating repair, as required,  
11 or perform a UT on the metal, if that was required.

12 JUDGE WARDWELL: Would then, and those  
13 steps are documented in this reference, EN-EP-S-002-  
14 MULTI?

15 MR. LEE: The condition report would be  
16 documented in the inspection report. Probably the  
17 condition report, corrective actions would provide the  
18 link to the work control, the work to close out the  
19 inspection.

20 JUDGE WARDWELL: Yeah, sorry. I'm  
21 confusing you. In the EN-EP-S-002-MULTI, you  
22 reference that there was corrective actions delineated  
23 with that. Is that correct?

24 MR. LEE: If the inspection reveals that  
25 there's coating degradation or metal loss, yes.

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1 JUDGE WARDWELL: And there are specific  
2 corrective measures --

3 MR. LEE: Well, the corrective measure is  
4 at that point to write a condition report, to document  
5 the noted inspection results.

6 JUDGE WARDWELL: And is that all that's in  
7 the MULTI document?

8 MR. LEE: Yes.

9 JUDGE WARDWELL: So nothing more than to  
10 write a condition report?

11 MR. LEE: Right, correct.

12 JUDGE WARDWELL: Okay. So there are no  
13 other corrective measures in there. That would be  
14 evaluated as part of the --

15 MR. LEE: As part of the condition report.

16 JUDGE WARDWELL: --construction report?

17 MR. LEE: Right.

18 JUDGE WARDWELL: Okay. I think I'll go to  
19 staff. Mr. Holston, do your comments in regards to  
20 the other documents also apply to EN-EP-S-002-MULTI?  
21 Or as far as the pertinent parts being incorporated  
22 into the UFSAR and/or are they not listed as any  
23 commitments whatsoever?

24 MR. HOLSTON: Yes sir.

25 JUDGE WARDWELL: They do apply to that

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1 also?

2 MR. HOLSTON: Yes sir.

3 JUDGE WARDWELL: Are there any other major  
4 documents like these four that you were referencing,  
5 that do apply to the comments you made in regards to  
6 what's being adopted into the UFSAR?

7 MR. HOLSTON: I do not recall any others.

8 JUDGE WARDWELL: Okay. Well if you do,  
9 then --

10 MR. HOLSTON: Of course, yeah. As far as  
11 procedural steps.

12 JUDGE WARDWELL: Just say at some point  
13 "Oh yeah, by the way, remember we were talking back on  
14 Monday that," when we finish this up in three weeks,  
15 Monday of this week.

16 MR. HOLSTON: Yes.

17 JUDGE WARDWELL: Thank you. Staff  
18 testimony, Exhibit 016, page 16, Answer 11, says that  
19 "On January 30th, 2012, subsequent to the staff's  
20 issuance of SER Supplement 1, the applicant notified  
21 the staff of a correction to the license renewal  
22 application, noting that based on the IP2 AFW, that's  
23 I believe auxiliary feedwater pump room fire event, a  
24 buried portion of the IP1 river water supply was  
25 determined to be in scope, for purposes of IP2-IP3

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1 license renewal," and that's referencing Staff Exhibit  
2 021.

3 "The Applicant therefore revised license  
4 renewal application Table 3425-11-IP2 to include the  
5 buried IP1 river water system piping components."  
6 Staff, so I gather you approved their AMP, with the  
7 initial SER, without this pipe included; is that a  
8 fair assessment?

9 MS. GREEN: That is correct.

10 JUDGE McDADE: I'm sorry, Ms. Green?

11 MS. GREEN: Yes, that is correct.

12 JUDGE WARDWELL: Is there -- do we have  
13 any other confidence that there are other pipes out  
14 there that we don't know about? Do we need some more  
15 fires to find them, or how confident are we that you  
16 now have all of the piping that falls under license  
17 renewal?

18 MS. GREEN: The staff is reasonably  
19 confident that they've identified all the buried  
20 piping at Indian Point, for Indian Point Unit 1, 2 and  
21 3, that should be within the scope of license renewal  
22 and is subject to major management review.

23 We rely on the Applicant's complete and  
24 accurate information. When they identify something  
25 that is incomplete or inaccurate, they are obliged to

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1 let us know that, and they do that in writing.

2 Should we find the need for additional  
3 information or other action on the part of the staff,  
4 that is to say, if we have to issue a supplement to  
5 the SER or write about it in another SER, we would  
6 take that action.

7 JUDGE WARDWELL: Thank you. Thank you,  
8 Ms. Green. Anyone from Entergy that wishes to add to  
9 this. The question I have is how are we assured that  
10 you've got a good inventory of all the piping now, or  
11 is there any other piping that might be hanging out  
12 there that you've missed, such as this?

13 MR. AZEVEDO: Your Honor, this is Nelson  
14 Azevedo for Entergy. We feel confident that we have  
15 identified all the piping that's in the scope of  
16 license renewal.

17 We will continue to, as we implement the  
18 program, to do additional reviews. If we find  
19 anything else, we'll identify it at that point. But  
20 we're pretty confident that we have identified all the  
21 piping.

22 JUDGE WARDWELL: Weren't you confident  
23 when you submitted your AMP with your original initial  
24 license application?

25 MR. AZEVEDO: Yes.

1 JUDGE WARDWELL: What other steps may have  
2 you taken, since this one came up, to re-review that,  
3 to assure that there aren't any others missing?

4 MR. AZEVEDO: When we identified this  
5 issue, we wrote a condition report, and as part of  
6 that, we did an extended condition review, to make  
7 sure there were no other systems where we had  
8 overlooked some piping, and we did not identify any  
9 additional piping.

10 JUDGE WARDWELL: Why does all of your  
11 other fellow experts always turn their head and look  
12 to you when there's a hard question to be answered?

13 MR. AZEVEDO: I have been designated as  
14 the quarterback.

15 JUDGE WARDWELL: I don't think we call it  
16 that in what I know of situations like this. It's  
17 more like a scapegoat.

18 MR. COX: Judge Wardwell, if I could add  
19 just a little bit of clarification for this particular  
20 piping. There was a significant number of systems on  
21 the secondary plant that were brought into scope after  
22 the initial LRA was submitted, that were there  
23 strictly to deal with this event.

24 It's basically equipment on the secondary  
25 side of the plant that has a function to continue

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1 operating for one hour after you have the fire in this  
2 room. That brought in this river water piping. It  
3 was added to the scope of license renewal.

4 When it was added, it was just -- there  
5 was a failure to recognize that there was a segment of  
6 that piping that was buried piping. So we didn't  
7 include it. We didn't explicitly include it in the  
8 program.

9 I believe the plant had it in their  
10 program for underground and buried piping, but we  
11 failed to include it, failed to identify it in the  
12 LRA, when we added it to the scope, that it included  
13 a segment of underground piping, buried piping.

14 JUDGE WARDWELL: Thank you, Mr. Cox. To  
15 follow up on that response, is there any other IP1  
16 piping that is being used by IP2 and 3, that would  
17 fall under licensed renewal?

18 MR. COX: When we did the scoping for  
19 license renewal, we looked at all the Unit 1 piping  
20 that had a function to support any other units. In  
21 fact, it was all included in the database that we used  
22 for our scoping. So I think there may be some  
23 specific things, and some of my other colleagues may  
24 be able to give you some specifics.

25 But we considered Unit 1 piping when we

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1 did the scoping for Unit 2. I think there may be some  
2 fire water that may have a IP1 designation. But we  
3 didn't draw that distinction. We said it was all in  
4 scope for IP2 or 3, depending on which unit it  
5 supported.

6 JUDGE WARDWELL: Which reminds me of  
7 another question I had, and thank you for that  
8 response. But also in regards to the fire water, has  
9 that not been determined not to be part of license  
10 renewal, because of the activities that take place  
11 with that, or is it some other that I'm thinking of in  
12 this same area?

13 MR. COX: It's in the scope of license  
14 renewal, and I believe the ISG and GALL Rev 2, Program  
15 M41, does allow you to take credit for monitoring the  
16 rate of make-up to that system.

17 It's got a keep field or a jockey pump  
18 that keeps it pressurized, and that is an option  
19 that's available to use in lieu of doing visual  
20 inspections, in lieu of digging up pipe to do visual  
21 inspections.

22 We don't use that option. At Indian  
23 Point, we're doing the visual inspections. But that  
24 is an option that is in the GALL report.

25 JUDGE WARDWELL: Thank you. Dr. Duquette,

1 New York's original contention talked about IP1 piping  
2 that wasn't included and the adequacy of the AMP. I  
3 didn't see much in your testimony in regards to that.

4 Are you satisfied that you have no more  
5 aspects of your contention related to IP1 piping,  
6 specifically in regards to not being included as a  
7 demonstration of the inadequacy of their program?

8 DR. DUQUETTE: I think that's correct. I  
9 think, at least when I first reviewed the  
10 documentation I had, it wasn't clear if part of IP1  
11 was going to be involved at all. I think the state is  
12 reasonably satisfied at this point that IP1 piping  
13 that is involved under the scope, is probably being  
14 covered okay.

15 JUDGE WARDWELL: Thank you. This rather  
16 large section, I think we can skip. It does talk  
17 about the staff testimony at page 44, Answer 36. It  
18 goes into nice detail of summarizing those inspections  
19 that will take place, and I think the questions I had  
20 in regards to that have been addressed.

21 But I do just mention it now, so it's in  
22 the transcript, if people want to go back and look at  
23 the exact summary of what will be done at IP2 and IP3.  
24 But in regards to our discussion of it here, in  
25 relationship to the adequacy, the inputs or what goes

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1 into the AMP, I think we've already covered most of  
2 those questions up to this point.

3 MR. COX: Judge Wardwell, there is one  
4 clarification. I noticed in looking at what you've  
5 got on the screen there, it talks about the soil  
6 samples, and I think there may have been, I want to  
7 make sure it was clear this morning. We were talking  
8 about the three feet below the surface.

9 The samples have to be at least three feet  
10 below the surface. So there won't be any, won't be  
11 soil samples in the top three feet of the soil, and  
12 some of the piping is much deeper than three feet.

13 So when we say below, at least three feet  
14 deep and near the piping, our intent and the way we do  
15 soil samples would be to do piping at whatever depth  
16 it needs to be, to be adjacent to the piping that's  
17 concerned.

18 JUDGE WARDWELL: Okay, thank you, and we  
19 will get into that. That doesn't mean we won't  
20 address these numbers again. But I guess in regards  
21 to just the general program attributes, which is kind  
22 of the section we're in now, I don't have any more  
23 questions. But thank you for that clarification also.

24 MR. COX: Sure.

25 JUDGE WARDWELL: Entergy's testimony, 373,

1 pages 81 through 82, and it's Answer 104. It says  
2 that "Entergy has specified an appropriate acceptance  
3 criteria for inspections of buried piping coatings and  
4 buried piping surfaces.

5 "We discussed the acceptance criteria for  
6 coating inspections in our Answer 107. We discuss  
7 here the acceptance criteria for inspections of buried  
8 piping surfaces." Entergy, where has this acceptance  
9 criteria been documented in any of the submittals,  
10 either with the original license renewal application  
11 or subsequent to that?

12 MR. IVY: Ted Ivy for the Applicant. The  
13 acceptance criteria for the inspections was in the EN-  
14 EP-S-002-MULTI procedure, Entergy Exhibit 408. It's  
15 what we were talking about earlier, those two  
16 checklists that you talked about with Mr. Lee for the  
17 inspections. Those have documented acceptance  
18 criteria.

19 JUDGE WARDWELL: Would you happen to know  
20 the page number offhand, or have that readily  
21 available?

22 (Witness reviewing documents.)

23 JUDGE WARDWELL: I guess that answers my  
24 question. You don't need to. I just wondered whether  
25 you did or didn't.

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1 MR. IVY: Yes, I do. I was looking for  
2 it. It's on page 11 of 12.

3 JUDGE WARDWELL: Okay, thank you.

4 MR. IVY: And that's related to Rev 0. We  
5 submitted, I think, last week a Revision 1 to it  
6 that's on a different page.

7 JUDGE WARDWELL: Is that one that we've --  
8 that's been identified but not accepted yet, if I  
9 might ask counsel?

10 MR. O'NEILL: Yes, Your Honor. That is  
11 correct.

12 JUDGE WARDWELL: Okay. Mr. Ivy, the way  
13 this is stated, it says "Entergy has specified  
14 appropriate acceptance criteria." What makes these  
15 appropriate? Who has designated these as appropriate?

16 MR. IVY: The procedure was written by,  
17 and takes into account various industry standards and  
18 every guidance documents, including the NEI standards,  
19 as well as other industry documents, as far as what  
20 acceptance criteria. However, the acceptance criteria  
21 essentially for these procedures is such that if you  
22 find any of the listed defects, that's unacceptable.

23 They don't get into like size and specific  
24 details from that standpoint. If you find any  
25 blistering of the coating, any flaking, peeling,

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1 delamination, that's considered unacceptable, and you  
2 write a condition report that goes into the corrective  
3 action system.

4 JUDGE WARDWELL: So is it fair to say that  
5 a specified acceptance criteria, that there hasn't  
6 been any independent assessment of appropriateness of  
7 them? I'll get to you in a minute. I'm concerned  
8 about the word "appropriate." That's a designation  
9 that I'm wondering who applied it to this acceptance  
10 criteria.

11 MR. IVY: Other than the use of the  
12 current industry standards that we had, that are  
13 referenced in this procedure, those are where we pull  
14 our acceptance criteria from, and the recommendations  
15 for the types of inspections we have.

16 JUDGE WARDWELL: And those industry --

17 MR. IVY: Would be such as NACE standards.

18 JUDGE WARDWELL: Okay, thank you. That's  
19 what I'm interested in.

20 MR. CAVALLO: I was going to add to what  
21 Mr. Ivy was saying. They come out of the EPRI  
22 document, the 1016456 document that we haven't  
23 discussed yet, the EPRI guidance document. That's  
24 where they come from.

25 JUDGE WARDWELL: But the appropriateness

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1 of them have been --

2 MR. CAVALLO: That's judged by industry,  
3 sir.

4 JUDGE WARDWELL: As judged by at least  
5 some separate group?

6 MR. CAVALLO: The EPRI and NACE group.

7 JUDGE WARDWELL: Yes, thank you.

8 MS. DEAN: Your Honor, Janice Dean for the  
9 State. I'm afraid I'm not able to see who was just  
10 speaking. Who mentioned the EPRI document just now?

11 MR. CAVALLO: I'm sorry.

12 JUDGE WARDWELL: Introduce yourself when  
13 you do speak.

14 MR. CAVALLO: Jon Cavallo for Entergy.

15 MS. DEAN: Thank you.

16 JUDGE McDADE: And because the record is  
17 going to be getting a little difficult to follow up  
18 here. You know, it is important to make sure to  
19 identify yourself, and also when you refer to a  
20 document, if at all possible to refer to the exhibit  
21 number, so that the parties will be able to find the  
22 appropriate exhibit.

23 You know, for example, we talk about the  
24 staff testimony. It's NRC Exhibit 16. If we're  
25 talking about specific exhibits, if we can refer to

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1 the exhibit number, in addition to the name, if you  
2 have that readily available. If not, just simply say  
3 that, and then, you know, perhaps a member of the  
4 Board can identify the exhibit number for you.

5 MR. CAVALLO: My apologies, sir. Jon  
6 Cavallo for Entergy. It's New York State 167 is the  
7 document I was just referring to.

8 JUDGE McDADE: The EPRI document. Thank  
9 you.

10 MR. CAVALLO: Yes sir.

11 JUDGE WARDWELL: Going on to Entergy's  
12 testimony on page 82, Answer 104 continued, it goes on  
13 to state that "As required by CEP-UPT-0100, the  
14 acceptance criteria for a specific piping location  
15 will be developed before performing the actual  
16 inspection of that location."

17 How many pipelines are we talking about  
18 that you're dealing with at Indian Point?

19 MR. COX: This is Alan Cox. Clarify your  
20 question. Do you mean pipelines total, or do you mean  
21 pipelines that -- or this question you referred to is  
22 talking about prior to doing inspections? So I guess  
23 it seems it might be relevant to talk about how many  
24 inspections were planned --

25 JUDGE WARDWELL: No, no. I'm trying to

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1 get a handle on how many pipelines fall within, or  
2 buried, I should say buried pipelines that fall within  
3 license renewal are we dealing with here, and the  
4 proximate, different number of pipelines and total  
5 linear footage, if you've got a handle of what that  
6 is? I'm trying to get a sense for the magnitude of  
7 this issue.

8 MR. COX: This is Alan Cox again. In our  
9 testimony, we have a section that talks about the  
10 various systems, and it gives estimated lengths of  
11 buried piping in those systems. So I mean for  
12 example, the fire protection system I think is on the  
13 order of 5,000 feet.

14 Now that's going to be different segments.  
15 So I mean you could call each of those a separate  
16 pipeline, but it's not segregated and broken down that  
17 way, where we could tell you how many pipe segments  
18 there are in the fire protection.

19 But there's approximately 5,000 total  
20 feet, and we can find the specific answer, but we have  
21 an answer that talks about each of the systems and the  
22 approximate linear feet of piping in those systems.

23 MR. O'NEILL: Your Honor, that's Answer 46  
24 of Entergy's testimony, Exhibit 373.

25 JUDGE WARDWELL: I'd like to wait before

1 we go to that, I think. I guess we can. What's the  
2 reference for that again, Answer 46?

3 MR. O'NEILL: Yes, Answer 46.

4 JUDGE WARDWELL: Could you pull up 373 and  
5 go to Answer 46?

6 JUDGE McDADE: It's on page 27.

7 JUDGE WARDWELL: Entergy 373 is their  
8 testimony.

9 MR. O'NEILL: Again, this is Martin  
10 O'Neill, counsel for the Applicant. It probably also  
11 makes reference to Figure 1, which provides, you know,  
12 illustrations of the piping that we're talking about  
13 as well.

14 JUDGE WARDWELL: What's the page number?

15 JUDGE McDADE: 27.

16 MR. O'NEILL: 27.

17 JUDGE WARDWELL: So here, do you want to  
18 summarize this, Mr. Cox, and what you see here, rather  
19 than me read it all?

20 MR. COX: Sure. This lists the systems --

21 JUDGE WARDWELL: Just the lengths.

22 MR. COX: This is Alan Cox for Entergy.  
23 These are the systems that have buried piping that's  
24 within the, that has a license renewal intended  
25 function. So it's included in the BPTIP program. We

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1 have, it looks like, approximately ten systems listed  
2 here, and with fire protection, which is the one that  
3 has the most pipe, it's got approximately 5,000 feet.

4 This goes down to, you know, the  
5 containment isolation support subsystem that has 150  
6 feet. We have a security generator that has about 50  
7 feet of carbon steel piping that provides propane to  
8 the generators.

9 So these system range anywhere from 50  
10 feet to 5,000 feet of piping, approximately in their  
11 length.

12 JUDGE WARDWELL: Is there a reason that  
13 you have put off designating the acceptance criteria  
14 until you're performing the actual inspection at a  
15 given location?

16 MR. COX: Well, I think there's -- I mean  
17 there is a high level acceptance criteria that we  
18 talked about earlier, that comes from the GALL report,  
19 that says if you have any coating degradation, you  
20 have to write a condition report and get further  
21 evaluation.

22 Now if you go beyond that, there are  
23 acceptance criteria that will be applied on a case by  
24 case basis. I think Azevedo could talk some more  
25 about that, and why it's not reasonable to try to do

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1 that all ahead of time.

2 JUDGE WARDWELL: Let's hear about that.

3 MR. AZEVEDO: Your Honor, it's Nelson  
4 Azevedo for Entergy. Just to be clear when you talk  
5 about acceptance criteria, as we earlier discussed,  
6 the initial cut is whether there's any damage to the  
7 coating or degradation to the coating. If there is,  
8 then we enter a condition report, and then we actually  
9 measure the remaining wall thickness for that pipe at  
10 that location.

11 If that remaining wall thickness is  
12 greater than 87-1/2 percent of the nominal thickness,  
13 we say that's essentially what the manufacturer's spec  
14 allowed, so there's no corrosion going on. If it is  
15 less than 87-1/2 percent, then we do a location-  
16 specific evaluation.

17 It's really not practical -- I mean we  
18 could develop very conservative acceptance criteria,  
19 but it's more efficient to analyze that specific  
20 location, because the remaining wall thickness depends  
21 on the exact loads at that location, and it depends on  
22 the actual configuration of the indication. You know,  
23 how long and how wide is the wall thinning?

24 When you have that information, you  
25 actually evaluate the remaining wall thickness

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1 requirements for that specific location. That's best  
2 done at the time that we collect the information.

3 JUDGE WARDWELL: Is there any acceptance  
4 criteria that would apply to all pipelines, in regards  
5 to when you might replace a pipe?

6 MR. AZEVEDO: Yeah. That last cut. So  
7 when we inspect a location and we measure the wall  
8 thickness, that measured wall thickness is less than  
9 the required wall thickness to carry the design loads,  
10 including future corrosion, then that pipe is replaced  
11 prior to being returned to service.

12 JUDGE WARDWELL: What do you mean by  
13 "future corrosion"? Corrosion anticipated for the  
14 remaining period of extended operation?

15 MR. AZEVEDO: Yes, that's correct. For  
16 example, if we were to return the pipe to service for  
17 the next four years, we would calculate how much  
18 corrosion would be anticipated over the next four  
19 years, and make sure that the wall thickness four  
20 years from now is still adequate to perform its  
21 intended function.

22 JUDGE WARDWELL: And then in between the  
23 87 percent and when you start approaching the design  
24 load, then you're looking at site-specific acceptance  
25 criteria for that given location, given its depth, its

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1 design, etcetera and other factors that you may see?

2 MR. AZEVEDO: Yes.

3 JUDGE WARDWELL: Dr. Duquette, do you have  
4 any comments in regards to that very specific approach  
5 in regards to those acceptance criteria?

6 DR. DUQUETTE: Yes, Your Honor. I have  
7 several comments to make about it. First of all, if  
8 you do a linear analysis of corrosion based on a  
9 certain amount of metal loss, and assume that that's  
10 how much time you have left, it's a very poor way of  
11 doing things, because you don't know when the  
12 corrosion started. That's number one.

13 Number two, I haven't seen anything in the  
14 documentation. Apart from writing a report, I haven't  
15 seen anything about what you do about the report. You  
16 write a condition report, and I think that's as far as  
17 the documents go at this point. I understand from the  
18 testimony that's just been given that action will be  
19 taken based on the condition report, but I don't know  
20 what that action would be.

21 Secondly, I don't see anything in the  
22 document. If I assume that I find a location where I  
23 have 50 percent penetration of the pipe, as a  
24 corrosion engineer I would start to worry about what's  
25 happening 50 feet in some other direction.

1           So if you only do a spot inspection and  
2 find a corrosion problem and repair that corrosion  
3 problem, you haven't really identified what the  
4 problems are with that particular piping system.

5           And to go back to some testimony that was  
6 cited this morning about 42 inspections. My very  
7 quick analysis of what's here is about 15 to 16  
8 thousand linear feet of pipe to be inspected. If I do  
9 42 inspections on 15,000 feet of pipe, I don't see a  
10 lot of pipe with a spot inspection system, no matter  
11 what you use for a criterion for finding it.

12           So I find a lot of corrosion engineering  
13 problems with the program that's been proposed for the  
14 inspection process.

15           JUDGE WARDWELL: Let's stay focused again,  
16 because we're really taking an awful lot of time here.  
17 I appreciate your comments, but I was just trying to  
18 do the acceptance criteria.

19           (Simultaneous speaking.)

20           JUDGE WARDWELL: Okay, and we will get to  
21 more of that inspection stuff later, on whether these  
22 numbers are sufficient or not. But I'm interested  
23 mostly in the acceptance criteria, to stay on point  
24 here.

25           DR. DUQUETTE: Okay.

1 JUDGE WARDWELL: And you've referenced  
2 some. Do you have any others on the acceptance  
3 criteria?

4 DR. DUQUETTE: Well again, I'm not sure  
5 what the level of coating damage would have to be to  
6 decide whether or not something was acceptable or not.  
7 I don't see anything specific about that.

8 JUDGE WARDWELL: Mr. Azevedo, is there, or  
9 anyone else if you want to -- maybe you can look to  
10 someone else now to dish this off to. But can you  
11 give us some examples of the types of things that you  
12 would do and the approximate range of observations  
13 that would lead you towards that, i.e., when would you  
14 -- we've already described when you say it's okay. If  
15 it's 80 percent of its wall thickness, everything's  
16 fine.

17 We drop back down to less than -- once we  
18 get less than that, then it's location-specific. But  
19 there are some general things that you can describe  
20 that dictate whether you repair and the degree of  
21 repair, whether you replace just a section of it,  
22 whether you increase inspections there.

23 Just a range of things and how it might  
24 relate to the wall thickness, and then also address  
25 whether or not you extend the length of your

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1 inspections further away, now that you've observed it  
2 at this particular location.

3 MR. AZEVEDO: Yeah, Your Honor. Perhaps  
4 I wasn't clear on my previous response. When we  
5 inspect a pipe and we find this, regardless of whether  
6 there is wall loss or not, we coat that pipe. We  
7 would not return that pipe to service uncoated and  
8 continue to let it corrode.

9 I was describing the process in general  
10 terms, which applies to above ground and so on. So  
11 for buried piping, if there's corrosion going on, we  
12 evaluate the remaining wall thickness, and then we  
13 coat that pipe. So for all practical purposes, we  
14 don't expect any future corrosion to occur at that  
15 location.

16 As far as extended condition, part of our  
17 corrective action process, when you write a condition  
18 report, one of the questions that we have to answer is  
19 what's the extended condition? Where are the  
20 locations that are susceptible to the same corrosion  
21 mechanism?

22 And before we close out that condition  
23 report, we have to answer that question. In some  
24 cases, we may have to do additional inspections, or do  
25 other testing, to verify that we have bounded the

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1 extended condition.

2 JUDGE WARDWELL: Do you automatically  
3 extend the length of the pipe that you presently have  
4 encountered this condition, to see if other portions  
5 immediately adjacent to it?

6 MR. AZEVEDO: We would have to look at  
7 exactly what the condition is, and where the other  
8 location that's susceptible. I cannot say that we  
9 automatically extend, but we would have to do, likely  
10 have to do additional investigations to convince  
11 ourselves that we have bounded what we found.

12 JUDGE WARDWELL: What general procedure do  
13 you use when you reapply the coating? How much  
14 dressing do you take off, to make sure you're beyond  
15 the area that's been affected and replaced?

16 MR. AZEVEDO: It's my turn to look at  
17 somebody else now.

18 MR. CAVALLO: Yeah, stick with paint  
19 fluid. Jon Cavallo for the Applicant. Basically,  
20 we've reviewed what the various types of coatings are  
21 on buried pipe, and during a recent construction,  
22 which is essentially all the buried pipe, it used a  
23 coating system in accordance with AWWA C203-62, which  
24 is in the exhibits and I'll need some help in finding  
25 it for you. I apologize.

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1 Which is basically a coal tar primer,  
2 followed by a coal tar saturated asbestos wrap. That  
3 coating system, again, we've submitted some articles  
4 that are in the record, has an operating history of  
5 well over 70 years. It's been used for years and  
6 years and years, very successfully.

7 JUDGE WARDWELL: Please, I'd ask you to  
8 cut to the quick. The question I'm asking is --

9 MR. CAVALLO: What coatings do we use?

10 JUDGE WARDWELL: No. I didn't ask that.  
11 I was asking what do you do when you see minimal wall  
12 thickness in regards to repairing the coating that's  
13 there now? Do you go further away along that? How  
14 much do you repair the pipe in order to repair it?

15 MR. CAVALLO: We overlap. We overlap the  
16 repair area by whatever the coating manufacturer's  
17 recommendation is. Typically, that's six inches, on  
18 either side of the bare steel.

19 JUDGE WARDWELL: And what bare steel do  
20 you expose?

21 MR. CAVALLO: The area that's affected by  
22 the corrosion. With all due respect to Dr. Duquette,  
23 who I know, coatings will evidence corrosion of the  
24 underlying steel substrate by two things.

25 One are the visual of the effects, which

1 are described in the Indian Point procedures, which  
2 also reflect the EPRI document, and by lightly  
3 tapping, it will indicate whether or not we have the  
4 lamination.

5 But if none of those defects are present,  
6 we have don't have corrosion, and we do not take off  
7 good coating, contrary to what Dr. Duquette has said  
8 this morning or this afternoon. We don't take off  
9 good coating.

10 JUDGE WARDWELL: And so the tight tapping  
11 you're talking about is tapping the bare pipe, to see  
12 whether --

13 MR. CAVALLO: Oh, tapping the coating,  
14 right.

15 JUDGE WARDWELL: Where is this -- yes,  
16 I'll let --

17 MR. BIAGIOTTI: Steve Biagiotti for the  
18 Applicant. I just wanted to --

19 JUDGE WARDWELL: Say the last name much  
20 slower, please.

21 MR. BIAGIOTTI: Steve Biagiotti for the  
22 Applicant. I just wanted to add onto the acceptance  
23 criteria issue. There are ASME Code equations that  
24 are used, to actually disposition whether the shape of  
25 metal loss is acceptable or not.

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1           So I know we mentioned that we go into the  
2           corrective action program, but that program will lead  
3           into a series of calculations that are in the code,  
4           that start off by doing a team in. If you assume that  
5           that wall thickness was uniform 360 degrees around  
6           full length of the components, what would the  
7           remaining wall thickness need to be for pressure  
8           containing only?

9           Then you go into, you slowly escalate into  
10          considering everything from seismic loads to  
11          overburdened loads to finite element analysis of that  
12          model geometry.

13          JUDGE WARDWELL: Thank you. Where, Mr.  
14          Cox, where might some of this recent dialogue we've  
15          had in regards to the acceptance criteria, be  
16          documented in the various references that we've talked  
17          about so far? Has all of that, is all of that  
18          documented somewhere in those four major documents, is  
19          a better way to ask that question, I think?

20          MR. COX: I think my colleagues from the  
21          plant may be better able to answer that. I suspect  
22          there are some references in the plant-specific  
23          procedures that deal with those conditions.

24          JUDGE WARDWELL: And the four I'm  
25          referring to are the ENs and the SEPs and the CEPs.

1 There's two ENs, one with a MULTI and one with --

2 MR. IVY: Ted Ivy for the Applicant. In  
3 regards to the coating examination and tapping the  
4 coating, that is found in the EN-EP-S-002-MULTI  
5 procedure.

6 JUDGE WARDWELL: Thank you, and I'm not  
7 asking the specific location necessarily. It's just  
8 if you can, based as you recall on your memory,  
9 believe that all of those are documented, that is the  
10 question I am asking, not the specific locations of  
11 them.

12 MR. AZEVEDO: Could you repeat your  
13 question, Your Honor?

14 JUDGE WARDWELL: I doubt it. The dialogue  
15 we've had on acceptance criteria over the last ten  
16 minutes or so, came up with several specific types of  
17 steps that are taken. My question is to the best of  
18 your memory, are all of those steps that you've been  
19 describing over the last ten minutes or so, reflected  
20 in one of the four documents that we've been looking  
21 at in regards to fleet-wide and site-specific  
22 procedural documents for license renewal of buried  
23 pipes?

24 MR. AZEVEDO: Yes, Your Honor. It's  
25 Nelson Azevedo. It's documented in several documents.

1 The one that I can come up with right now, it's  
2 Section 5.5 of CEP-UPT-0100. Section 5.5 gives  
3 acceptance criteria. That's one of the places where  
4 it discusses it.

5 JUDGE WARDWELL: But to the best of your  
6 memory, you think all of these have been documented in  
7 some fashion or another, in one of those four  
8 documents?

9 MR. AZEVEDO: I believe that's correct,  
10 Your Honor.

11 JUDGE WARDWELL: Thank you. Can we go  
12 back? Oh at bullet four. Okay, got you. Yes, sorry.  
13 Yeah. Following through, continuing on page 82 of  
14 104, "Any degradation detected during buried piping  
15 inspections is entered into the IPEC corrective action  
16 program, and evaluated for extent of condition.

17 "Entergy takes any necessary corrective  
18 actions in accordance with the requirements of Part  
19 50, and Entergy procedure EN-LI-102, Rev 17,  
20 Corrective Action Process," which is Entergy Exhibit  
21 401.

22 Do any of those documents provide some  
23 site-specific limits that drive various options, in  
24 regards to the corrective actions? Specifically in  
25 regards to more frequent testing or the repair,

1 replacement or any other things that might add to the  
2 program, because you happen to see it at this one  
3 location? Anyone from Entergy?

4 MR. AZEVEDO: Your Honor, it's Nelson  
5 Azevedo. Yeah, the repair and replacement procedures  
6 are specified in another program.

7 JUDGE WARDWELL: In another program?

8 MR. AZEVEDO: Yes. It's for ASME Section  
9 11, we have to comply with that Section 11, repair and  
10 replacement. And so for safety-related systems, any  
11 repairs or replacements, we have to follow our process  
12 that meets ASME Section 11.

13 JUDGE WARDWELL: And what program is this?

14 MR. AZEVEDO: That would be under the in-  
15 service inspection program, ASME Section 11. It tells  
16 you specifically what you can and cannot do, as far as  
17 repairs and replacements.

18 JUDGE WARDWELL: And that's an EPRI  
19 document? Did you say -- I'm sorry. I think I'm  
20 missing a word that you're saying.

21 MR. AZEVEDO: No, it's an IPEC document.

22 JUDGE WARDWELL: IPEC. I thought you said  
23 EPRI. I'm sorry, okay.

24 MR. AZEVEDO: It's an Indian Point  
25 document.

1 JUDGE WARDWELL: Thank you.

2 MS. DEAN: Your Honor, Janice Dean for the  
3 state. Could Mr. Azevedo please give an exhibit  
4 number? I was still uncertain as to what he was  
5 referring to here. In-service inspection? Did I hear  
6 you say ASME, Mr. Azevedo?

7 MR. AZEVEDO: ASME Section 11.

8 MS. DEAN: ASME Section 11, okay. Is that  
9 an exhibit?

10 MR. AZEVEDO: I can look it up. I don't  
11 have one right now.

12 MS. DEAN: Okay, thank you.

13 JUDGE WARDWELL: Do you know that is an  
14 exhibit?

15 MR. AZEVEDO: I do not know.

16 JUDGE WARDWELL: Okay, thank you. You can  
17 provide us with that later. Entergy's testimony on  
18 page 88, Answers 111 to 112. "On February 15th, 2009,  
19 IPEC personnel observed water in the pipes laid in the  
20 floor of the AFW pump building. Entergy determined  
21 that the water was observed through a leak in the  
22 eight-inch diameter condensate storage tank return  
23 line.

24 "After excavating a portion of this piping  
25 in the area, they identified leakage. Entergy

1 identified a hole in the piping, where a small amount  
2 of protective coating was missing. Entergy also  
3 identified two areas of thinning piping that still  
4 exceeded minimum required wall thicknesses.

5 "Entergy replaced a section of the pipe  
6 containing the leak and performed weld repairs on  
7 nearby areas exhibiting shallow corrosion. Also  
8 recoated the affected piping sections, in accordance  
9 with Entergy procedures."

10 Does anyone from Entergy recall what  
11 length of pipe was involved with this action?

12 MR. AZEVEDO: Yeah, Your Honor. It's  
13 Nelson Azevedo. It was about five to six feet,  
14 roughly in that ballpark.

15 JUDGE WARDWELL: And what did you do in  
16 regards to the remainder of the pipe, if anything?

17 MR. AZEVEDO: The piping just adjacent to  
18 it, we inspected it and we did weld repairs.  
19 Subsequently to that for extended condition, we did --

20 JUDGE WARDWELL: Excuse me. So the five  
21 to six feet involved just the leak?

22 MR. AZEVEDO: That was the section of pipe  
23 that we actually cut out and replaced.

24 JUDGE WARDWELL: Okay. Go on.

25 MR. AZEVEDO: And there was now the

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1 section of pipe right next to it that we did not cut  
2 out and replace, but we did weld repairs.

3 JUDGE WARDWELL: And by that, you mean  
4 what?

5 MR. AZEVEDO: There was some wall  
6 thinning, wall loss. So we just welded. We prepped  
7 the surface. We just welded to build it up at nominal  
8 thickness.

9 JUDGE WARDWELL: Are you able to determine  
10 the wall thickness through the coating or do you have  
11 to remove the coating first to determine the wall  
12 thickness?

13 MR. AZEVEDO: We have to remove the  
14 coating before we can establish the wall thickness.

15 JUDGE WARDWELL: How much total length of  
16 coating was removed in this area?

17 MR. AZEVEDO: Just going off memory, but  
18 not a couple of feet, I would say. The total length  
19 of pipe exposed, including the section that was cut  
20 out, it was probably on the order of eight or nine  
21 feet, again just rough numbers.

22 JUDGE WARDWELL: Fine, and what led you to  
23 believe that the rest of the pipe didn't contain a  
24 problem similar to what you observed here, such that  
25 it might be just ready to leak and hasn't, because it

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1 just needs a little bit more time, a few more years to  
2 go?

3 MR. AZEVEDO: I assume that you're  
4 referring to the section of piping that we did not  
5 excavate?

6 JUDGE WARDWELL: That's correct.

7 MR. AZEVEDO: Okay. Yeah, we did what we  
8 call guided weight inspections, and as a result of  
9 those guided weight inspections, in fact we did  
10 identify a few other areas where moderate corrosion  
11 was occurring, and we have installed a cathodic  
12 protection system for those two pipes.

13 JUDGE WARDWELL: Those two pipes that  
14 aren't part of the condensate storage unit tank return  
15 line?

16 MR. AZEVEDO: That's correct, Unit 2.

17 JUDGE WARDWELL: Right. So for those  
18 condensate storage tank, you didn't discover any other  
19 areas that might be accessible to any corrosion?

20 MR. AZEVEDO: Well again, we found areas  
21 that had some moderate corrosion, and that's why we  
22 installed the cathodic protection system.

23 JUDGE WARDWELL: Oh, okay. So you  
24 installed it on the condensate storage tank return  
25 line, and it also affected other pipes? Is that --

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1 MR. AZEVEDO: Well, it affected -- there  
2 was the eight inch condensate storage tank return  
3 line, and there's the 12 inch supply right adjacent to  
4 it. Those are the two locations that we did guided  
5 weight inspections, and that's where we installed the  
6 cathodic protection system.

7 JUDGE WARDWELL: How difficult is that to  
8 install a cathodic -- hold that. I'll get to that  
9 when we get to cathodic protection.

10 JUDGE KENNEDY: Judge Wardwell?

11 JUDGE WARDWELL: Yes.

12 JUDGE KENNEDY: Just to follow up at this  
13 point. I'm curious, in listening to all this back and  
14 forth discussion. In my own mind, I'm sitting here  
15 trying to separate what actions are driven by the  
16 aging management program, or what actions are driven  
17 by the corrective action process.

18 I understand that the corrective action  
19 process is embedded in the aging management program.  
20 But when you start talking about the extent of the  
21 degradation and that sort of thing, is that embedded  
22 in the aging management program, or is that really  
23 being driven by the GALL element related to the  
24 corrective action process?

25 It seems like this ranges quite far, and

1 I guess that's -- in my own mind, trying to think  
2 through the AMP, to see where this stuff would be  
3 embedded.

4 MR. AZEVEDO: Yeah, Your Honor. For this  
5 specific leak on the eight-inch pipe, this was driven  
6 by the Corrective Action Program. We wrote a  
7 condition report. There was a root cause, there was  
8 a failure analysis, and from those evaluations, we  
9 concluded that we needed to take these additional  
10 steps, and that's what drove this.

11 JUDGE KENNEDY: Okay. We'll follow up on  
12 that later on. But I just wanted to just check.

13 JUDGE WARDWELL: Thank you. Staff  
14 testimony 016 on page 51, Answer 44. You state  
15 "Therefore, the provisions of 10 C.F.R. Part 50,  
16 Appendix B, Criteria 16, corrective actions will  
17 apply, which require that conditions adverse to  
18 quality, for example, coating damage, external  
19 corrosion of piping, are corrected."

20 Is the question I have for staff, is this  
21 process or procedure delineated anywhere, or is it  
22 common knowledge or is it built into the Part 50  
23 regulations?

24 MR. HOLSTON: This Appendix B, Criterion  
25 16, is built into the Part 50 regulations and

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1 continues into the period of extended operation.

2 JUDGE WARDWELL: Thank you. On page 53,  
3 your Answer 45, staff testimony, the identification of  
4 a condition adverse to quality is accomplished by  
5 comparing the as-found condition of the piping and  
6 coatings to that, to the acceptance criteria and to  
7 determine if the SSC is either fit for duty, until a  
8 specific, a subsequent inspection repair the SCC (sic)  
9 or modification in accordance with the design controls  
10 as described in Part 50 again of Appendix B-3  
11 criteria."

12 And staff, I was just wondering. Can you  
13 summarize the criteria that indicate which of the  
14 corrective actions, that is, repair, replacement or  
15 modification, are to be implemented?

16 MR. HOLSTON: Well actually those are  
17 three alternatives, depending upon what is the most  
18 expeditious way to repair. So when Nelson was  
19 discussing that piping that was cut out, a portion of  
20 it was replaced; a portion of it was repaired, right  
21 where the weld build-up was done.

22 In this case, they did not do a  
23 modification. In some cases, you might do a  
24 modification. If you have some carbon steel piping  
25 that corroded and you developed a hole, and you

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1 decided that the best way to possibly eliminate any  
2 issues in the future would be to replace it with  
3 stainless steel pipe, because of its higher corrosion  
4 resistance, that would be an example of a  
5 modification.

6 JUDGE WARDWELL: What does a modification  
7 mean in terms of the buried pipes, and you just  
8 answered that. That was my next very question. I  
9 wanted to show how smart I was in asking the right  
10 questions.

11 Is it fair to say, though, that the Part  
12 50, Appendix B criteria are general program attributes  
13 for all system structures and components, with no  
14 specificity towards buried pipes; is that correct?

15 MR. HOLSTON: That's correct, sir.

16 JUDGE WARDWELL: Thank you. Okay. Any  
17 other questions that people might have on the general  
18 AMP, before we move into the intended functions of  
19 buried pipes?

20 JUDGE McDADE: Well, if we're switching,  
21 maybe it would be a good time to take a ten minute  
22 break, and then we will come back and go until a good  
23 breaking point, between 5:30 and 6:00, and then break  
24 for the evening.

25 I've got 20 minutes of. We'll stand in

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1 recess for ten. Anyone need more than ten minutes?  
2 Apparently not. We'll stand in recess for ten. Thank  
3 you.

4 (Whereupon, a short recess was taken.)

5 JUDGE McDADE: Okay. Well first of all,  
6 let's come to order. Mr. Turk.

7 MR. TURK: Thank you, Your Honor. I don't  
8 know how everyone else in the room is feeling, but  
9 many of us had felt that it's very warm, and I've  
10 asked the front desk to send somebody to put the air  
11 conditioning on. They've assured me that they will,  
12 but I haven't seen anyone yet.

13 So maybe, I'm sorry. If you don't mind  
14 for some of us to take our jackets off, if it's all  
15 right with you, I would tell the witnesses that if it  
16 makes them more comfortable, they could do so?

17 JUDGE McDADE: I think we're formal  
18 enough. I think we can leave our jackets on. We've  
19 also noticed the heat, and we've also asked that if  
20 possible, that be taken care of by the hotel staff.  
21 But hopefully, it will be shortly, and if not we'll be  
22 breaking soon.

23 A couple of things. One, Mr. Azevedo,  
24 just a quick question. You had made reference to ASME  
25 Section 11. There is a document, Entergy 383, that

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1 includes the ASME Code. Does that include Section 11?

2 MR. AZEVEDO: No, Your Honor. This is  
3 Nelson Azevedo. No, Your Honor. That's the OM Code.  
4 That's for in-service testing. The ASME Section 11 is  
5 for in-service inspection. So it's a different  
6 portion of the code.

7 JUDGE McDADE: Okay. Were you able to  
8 find any reference in any admitted exhibit to it?

9 MR. O'NEILL: Your Honor, this is Martin  
10 O'Neill, counsel for the Applicant. One of my  
11 colleagues has informed me that Entergy Exhibit 531  
12 does contain sections of ASME Code 11, or Section 11,  
13 at least a portion of it. But we would need to verify  
14 the exact sections.

15 JUDGE McDADE: Okay. If you could, I  
16 would appreciate that.

17 MR. O'NEILL: Yes, Your Honor.

18 JUDGE McDADE: Okay. The other thing is  
19 sort of a quick question. To make sure we get through  
20 everything, we were proposing to start tomorrow at  
21 eight o'clock. I don't know where people are coming  
22 from. Does that pose any problems, if we were to  
23 start at eight o'clock tomorrow, rather than the nine  
24 o'clock start time we had today?

25 MS. SUTTON: No objections from Entergy.

1 JUDGE McDADE: From New York?

2 MS. DEAN: No, Your Honor.

3 JUDGE McDADE: Mr. Turk?

4 MR. TURK: We'll accept that as well, Your  
5 Honor.

6 JUDGE McDADE: Okay. Do any of the  
7 witnesses and we're going to be starting with the same  
8 panel tomorrow, and I don't know where you're coming  
9 from, and the commuting issues. Is that going to pose  
10 a significant problem for any of you, to be starting  
11 tomorrow at eight o'clock?

12 (No response.)

13 JUDGE McDADE: Okay, apparently not. So  
14 why don't we plan then for tomorrow. We will go today  
15 and find a reasonable break time between 5:30 and  
16 6:00, and then tomorrow we will start at eight  
17 o'clock.

18 MR. O'NEILL: Your Honor, Martin O'Neill  
19 again. Just one more housekeeping matter, just for  
20 the benefit of the record. I know at some point Mr.  
21 Azevedo made reference to a root cause analysis  
22 associated with the 2009 IP2 CST, a leakage event.  
23 That is New York State Exhibit 179.

24 Mr. Cavallo made reference to the AWWA  
25 C203-62, and that is Entergy Exhibit 393. One final

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1 point is I think Judge Wardwell had made reference to  
2 New York State Exhibit 169, the industry guidance for  
3 the development of inspection plans.

4 My understanding is that document, which  
5 was then in draft form, has been finalized, and is now  
6 incorporated as Appendix C to NEI 0914 Revision 2,  
7 which is Entergy proposed Exhibit 601. That's all.  
8 Thank you.

9 JUDGE McDADE: Great. Thank you, Mr.  
10 O'Neill.

11 MR. HOLSTON: I have one other  
12 housekeeping issue. You all had asked me to provide  
13 the most -- this is Mr. Holston. You had asked me to  
14 provide the most up to date UFSAR supplement, and that  
15 is a two-part answer. July 27th, 2011, New York State  
16 000153.

17 However, there's a proposed Entergy  
18 exhibit, ENT 000597 that was issued on November 29th,  
19 and that includes the underground piping issue. But  
20 the July 27th letter, the 153, is probably what we're  
21 talking about here.

22 JUDGE WARDWELL: And the November one is  
23 of this year; is that correct?

24 MR. HOLSTON: Yes sir.

25 JUDGE WARDWELL: Okay.



1 JUDGE McDADE: Sometimes it's difficult,  
2 when we're getting things through the speakers, to  
3 know who's speaking if you're not looking right at  
4 them, and the little red light comes on when people  
5 are talking. But in your instance, Dr. Duquette is  
6 between me and your red light. So I didn't notice it.  
7 So thank you. Okay. We're ready to proceed.

8 JUDGE KENNEDY: I have a couple of follow-  
9 up questions, based on the discussion we had here this  
10 afternoon, and that probably extends into some  
11 questions this morning. My questions are of, again  
12 they're of a follow-up nature, but they're also I view  
13 them as sort of generic to all the aging management  
14 programs that we'll be discussing on Track 1.

15 Some of these questions were discussed in  
16 the previous testimonies we had prior to today, and  
17 again today's discussion sort of fixed in my mind that  
18 maybe we can deal with some of these issues  
19 generically.

20 But I want to at least let you know that  
21 the Board is viewing some of these questions, we just  
22 went over them during the break; we view them as  
23 generically being applicable across the aging  
24 management programs. At least that's our intent.

25 So as you respond to the questions, maybe

1 keep that in mind, and if you feel the need to  
2 specifically note to us, to the Board, that the  
3 response you're giving would only be applicable to  
4 buried piping, please note that, because we intended  
5 these follow-up questions to be a little more reaching  
6 across the various aging management programs that are  
7 contained in the first tier of contentions.

8 Okay. Fair enough, okay. We're going to  
9 get started. If Mr. Wilkie could put up NRC 16, and  
10 take us to page 21? Under the SER supplement, the  
11 last sentence, and SER Supplement 1, the last sentence  
12 if you could, it starts "The staff also reviewed the  
13 UFSAR supplement for this AMP and concludes it's an  
14 adequate summary description of the program." And  
15 again, thinking of this generically, I've got a few  
16 questions about the UFSAR supplement.

17 I think I'll direct this first question to  
18 the staff, since this is a staff document. I guess I  
19 would like to have some clarification of what the  
20 significance of the UFSAR supplement, and why it is a  
21 focus of attention in the aging management program  
22 reviews?

23 MR. HOLSTON: This is Mr. Holston. The  
24 UFSAR supplement represents the capturing of the  
25 critical aspects of the program, as required by 10

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1 C.F.R. 54.21 Delta, into the Applicant's current  
2 licensing basis. The current licensing basis is  
3 different from some of the procedures we're talking  
4 about.

5 The procedures are implementing procedures  
6 that take AMP portions and they demonstrate to us how  
7 the Applicant's going to conduct those activities in  
8 the field.

9 But the current licensing basis document,  
10 which is what the UFSAR is a piece of, is that  
11 document that drives this whole question of a 50.59  
12 needing to be performed, and then the staff being  
13 updated if a change is made that affects the UFSAR  
14 description.

15 JUDGE KENNEDY: That seems to be  
16 consistent with what we discussed this morning. There  
17 seemed to be a different pedigree associated with  
18 information contained within the UFSAR supplement. Is  
19 that what you're trying to convey?

20 MR. HOLSTON: Yes sir.

21 JUDGE KENNEDY: How does the staff decide  
22 or by what criteria does the staff use to determine  
23 that the particular program description is adequate?

24 MR. HOLSTON: We have the standard view  
25 plan for license renewal, Table 3.0-1, and that

1 standard review plan provides generic guidance on what  
2 should be included for each specific AMP within the  
3 UFSAR supplement.

4 So AMP by AMP, and then as the staff is  
5 reviewing the plant-specific considerations, there  
6 will be times when we submit a request for official  
7 information, a request that more information be put  
8 into the UFSAR supplement.

9 So for example, the UFSAR supplement  
10 guidance and the standard review plan license renewal  
11 doesn't say that you have to explain the number of  
12 inspections that you're going to perform, the specific  
13 number of inspections that you're going to perform.

14 However, given that there is no cathodic  
15 protection at Indian Point and that they had a leaking  
16 piece of pipe which we talked about earlier, the staff  
17 deemed that that was appropriate to be in the UFSAR  
18 supplement.

19 JUDGE KENNEDY: I guess now, thinking  
20 about that, how does that relate to the information  
21 that's contained within GALL? Is there -- I guess in  
22 my own mind I'm making some sort of comparison between  
23 the scope of programs under GALL, and the description  
24 of the GALL AMP for a particular aging management  
25 program, and what translates into the UFSAR supplement

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1 and provides an adequate program description.

2 What elevates some of the details under  
3 GALL into the UFSAR supplement, or it doesn't? I mean  
4 maybe they don't elevate.

5 MR. HOLSTON: The pieces that are most  
6 critical to implementation of the program are  
7 generally in the UFSAR supplement. So they answer the  
8 question generically.

9 JUDGE KENNEDY: Do you mean implementation  
10 procedures now again?

11 MR. HOLSTON: Are placed in the UFSAR  
12 supplement.

13 JUDGE KENNEDY: Thank you. So answering  
14 it generically, for example, we have programs that  
15 could either be one-time based. You would go out and  
16 you would look at a set sampling of components and  
17 you'd look at it once, and if you got good results,  
18 you wouldn't look again.

19 We have periodic programs, and those are  
20 programs where you would go back routinely, like on a  
21 two-year interval, on a refueling outage interval, on  
22 a ten-year interval, and we have programs which are  
23 opportunistic, which would mean when you open the  
24 piping system if it's available, you have to look.  
25 But it might be another 15 years before you look

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1 again.

2 So that's deemed it's important to  
3 document the UFSAR supplement, whether that's a  
4 periodic, a one-time or an opportunistic program.

5 It's a key aspect of what we would expect to see and  
6 how that was age-managed.

7 For instance, if somebody were to take a  
8 program that was supposed to be periodic and want to  
9 make it one time, we wouldn't want them to do that  
10 without processing a 50.59 evaluation and informing  
11 the staff that they had done so.

12 JUDGE KENNEDY: So the concept, using that  
13 example, the periodic nature would be captured in the  
14 UFSAR supplement?

15 MR. HOLSTON: That's correct, sir.

16 JUDGE KENNEDY: I guess what, you know,  
17 thinking back through this morning's testimony, I came  
18 away with a sense that, and I'm going to use the same  
19 words again, that the GALL contains the key attributes  
20 of the aging management program. I think as I  
21 reflected, listening to the testimony, it surprised me  
22 that all the key elements --

23 If GALL contains the key elements, why are  
24 not the key elements in the program description, and  
25 captured in the UFSAR supplement? Is that key key-

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1 making? I'm trying to figure -- you know again, it  
2 just seemed logically to me if we buy into the premise  
3 that GALL contains the key attributes of an aging  
4 management program for that particular aging effect,  
5 why that wouldn't have translated into the UFSAR  
6 supplement?

7 At its heart, I'm struggling with why  
8 there's an appendix, thinking of the license renewal,  
9 why there's an Appendix A write up and an Appendix B  
10 write up, with the perspective that the Appendix B  
11 write up in the license renewal application is written  
12 towards GALL, which contains key attributes.

13 So there's different kinds of key, I'm  
14 sensing, and I don't know if you could help us  
15 understand. This is bugging me. Appendix A, Appendix  
16 B, key, UFSAR supplement, if there's some, if there's  
17 a clear path you can help us with.

18 MR. HOLSTON: The program elements, I  
19 guess I can look at the key-key versus key elements.  
20 But I would just say that the program contains the  
21 AMP, the GALL report program, that's Appendix Bravo,  
22 contains the elements of the program.

23 Then there's a lot of built-in guidance  
24 within that document, that go beyond just the key  
25 discrete points. So if you look at GALL AMP 41, what

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1 are the really important things? Coatings, cathodic  
2 protection, backfill, number of inspections. That's,  
3 you know, those are the issues there, whereas it's a,  
4 I think it's about a 12-15 page document, with a lot  
5 of guidance.

6 So there is the -- the standard review  
7 plan, and this is just an example, because there's one  
8 for each section. But say for example Section 3.3.2.5  
9 provides a description of the FSAR supplement. I  
10 don't recall the exhibit number for the standard  
11 review plan. Is it possible we could call that up?

12 If you could call up the Rev 1, Provision  
13 1 of the standard review plan. Is that enough for you  
14 to go by? No, no, I don't know the exhibit number.  
15 I think I can find it.

16 MR. IVY: Ken Ivy for the Applicant. I  
17 think it's NRC 10.

18 MR. HOLSTON: Is that Rev -- I wanted to  
19 pull up Rev 1.

20 JUDGE KENNEDY: Yeah, that's Rev 1.

21 MR. O'NEILL: Martin O'Neill for the  
22 Applicant. Do you want the NUREG-1800 Rev 1?

23 MR. HOLSTON: That is correct.

24 MR. O'NEILL: I see it listed as New York  
25 State Exhibit 195.



1 MR. TURK: Did you find that exhibit  
2 number?

3 JUDGE WARDWELL: What page are you on, Mr.  
4 Holston?

5 MR. HOLSTON: Page 3.2-12, for example.  
6 This is repeated in multiple, in each of the main  
7 sections. So if you -- you can see there in the first  
8 paragraph, and in this case when I told you, and this  
9 is 3.2.3.4, about Table 3.0-1, that's the table number  
10 in Rev 2.

11 Each of the individual sections have their  
12 own table number. But "The reviewer confirms the  
13 (reading) provide information equivalent to that in  
14 Table 3.2-2."

15 So as I was saying, we pre-sanctioned via  
16 the, you know, our process for developing the standard  
17 review plan, the level of detail that we would expect  
18 to see in the FSAR supplement.

19 So if you could go to Table 3.2-2, you can  
20 word search for it. It will take about six jumps and  
21 then you'll be there. 3.2-2, table -- if you search  
22 on Table 3 point -- put table there. Yeah, 3.2-2.  
23 There you are, and if you can go down to "Buried  
24 Pipe." If you want to -- see at the bottom there?

25 So this says you can see what we had

1 decided in GALL Revision 1, as far as we want the  
2 Applicant to talk about the preventive measures. We  
3 want them to state that it's a periodic inspection  
4 program, that preventive measures are in accordance  
5 with standard industry practice, and you know, as an  
6 alternative, buried pipe are inspected visually for  
7 any damage.

8 So that gives us those key aspects. Now  
9 GALL Rev 1, which the Applicant submitted their  
10 application under, is not as onerous as what they  
11 ended up adopting, and what was in GALL Rev 2. But  
12 that's basically our pre-established document. That's  
13 the minimum we want to see in the UFSAR supplement, to  
14 ensure, for instance, I gave you the example of  
15 periodic versus one-time, or for instance, preventive  
16 measures.

17 We don't want people departing from  
18 standard industry practices, in this case NACE 0169,  
19 right, the document that talks about in part about  
20 coatings.

21 JUDGE KENNEDY: I guess why isn't NACE,  
22 why isn't the NACE referenced? Is that not important  
23 enough to capture it here, or I guess that's what I'm,  
24 you know, we're kind of struggling with. Sometimes  
25 this stuff gets locked down and sometimes it doesn't.

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1 MR. COX: Judge Kennedy, this is Alan Cox  
2 for Entergy. I'd like to clarify this, and maybe help  
3 out here a little bit.

4 JUDGE KENNEDY: Uh-huh.

5 MR. COX: And this is not necessarily  
6 going to be true for all, the order that you were  
7 going to ask some of these questions, as to where they  
8 were applicable across the board or not.

9 For this particular program, the third  
10 paragraph in the SAR supplement says that the program  
11 will be implemented consistent with the corresponding  
12 program described in NUREG-1801, Section XI-M34. So  
13 in essence here, we have done exactly what you've  
14 said. We've included everything that's in the GALL  
15 report as a key element in the SAR supplement through  
16 this reference.

17 JUDGE KENNEDY: So in the application  
18 UFSAR supplement, there's a statement about  
19 implementing a program consistent with a specific GALL  
20 AMP?

21 MR. COX: That's correct.

22 JUDGE KENNEDY: And so that incorporates  
23 -- you're intending to say that incorporates by  
24 reference the attributes of the GALL program?

25 MR. COX: That's exactly correct, yes.

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1 JUDGE KENNEDY: Mr. Holston, there's a  
2 program description like this in the standard review  
3 plan for all the aging management programs that are in  
4 GALL?

5 MR. HOLSTON: Yes sir, and what I'd like  
6 to do now is I can shift to Revision 2 --

7 JUDGE WARDWELL: Can we pause right there  
8 for just a second for one question, though?  
9 Specifically, the first sentence in this standard  
10 review plan, under buried piping and tanks inspection,  
11 I believe we asked a question in regards to that, and  
12 it dealt with whether or not it was technically  
13 feasible to describe what's required in that first  
14 sentence within GALL.

15 And the response to that question that was  
16 asked several times for several different things was  
17 that technically, it is feasible to describe it in  
18 GALL. Hypothetically, if one wrote an AMP that  
19 encompassed things like that in it, not to the nitty-  
20 gritty detail but at a higher level of just explaining  
21 what's going on in regards to preventive measures and  
22 the periodic inspections within GALL, would it be  
23 possible that one could write an AMP where there would  
24 be no need to supplement the UFSAR?

25 MR. HOLSTON: No, no. That would not be

1 the case, because the UFSAR supplement is quick placed  
2 into the updated final safety analysis report when  
3 it's done. That is the regulatory hook for those key  
4 aspects. So it's not a question of whether they put  
5 enough detail or applicant put enough detail in their  
6 license renewal application.

7 That license renewal application is used  
8 to evaluate the application, to ultimately issue a  
9 renewed license and, you know, document a safety  
10 evaluation report.

11 But when it's done, it's done. Whereas  
12 the UFSAR supplement goes into the current licensing  
13 basis document, or it goes into the current licensing  
14 basis for the plant, is in effect for the remainder of  
15 that plant's operation, into the period of extended  
16 operation.

17 JUDGE WARDWELL: But wouldn't the license  
18 -- wasn't the license application and the statements  
19 made therein also are a part of the current licensing  
20 basis? Or could the UFSAR just be that, that the  
21 license application, as submitted, is the current, is  
22 part of the current licensing basis?

23 MR. HOLSTON: If an applicant were to  
24 write a UFSAR supplement that said we will be  
25 consistent with the GALL report, then they'd be

1 evaluated against every dotted I and crossed T in the  
2 GALL report.

3 JUDGE WARDWELL: No, I'm getting away from  
4 that. I'm getting away from the fact that as the  
5 level of detail in the AMP that's expressed in the  
6 license renewal application increases, wouldn't the  
7 number of UFSAR things that need to be incorporated  
8 diminish?

9 MR. HOLSTON: No, and I might be missing  
10 your point, and I apologize for that. But the UFSAR  
11 supplement is far more important a document than the  
12 license renewal application. The license renewal  
13 application doesn't live after we've issued the safety  
14 evaluation report.

15 It's a reference document for inspection  
16 teams, just as the SER is, the safety evaluation  
17 report. An applicant will use a safety evaluation  
18 report to judge what they have to address in a 50.59,  
19 if they have to do a 50.59.

20 But it is absolutely essential that the  
21 key aspects of that program are captured in UFSAR  
22 supplement, and that's in chapter or Appendix Alpha,  
23 the license renewal application.

24 JUDGE WARDWELL: But could not you, if the  
25 AMP within the license renewal application was

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1 specific enough, make the UFSAR as simple as saying  
2 that it's captured within that aging management  
3 program that they proposed for that, for buried tanks  
4 and pipes and tanks, for instance?

5 MR. HOLSTON: So if what I'm understanding  
6 you to say, you'd put the detail into Appendix B of  
7 the license renewal application, and then the UFSAR  
8 supplement would reference that, and then that  
9 Appendix B of the license renewal application would  
10 become the living current licensing basis hook? You  
11 could do it that way.

12 JUDGE WARDWELL: Well doesn't that say to  
13 me that the more detail you have in the aging  
14 management program means by definition you're liable  
15 to have a smaller amount of that in Appendix A,  
16 associated with the UFSAR?

17 MR. HOLSTON: Only if the applicants felt  
18 -- I'm sorry. Were you finished? Only if the  
19 applicant, in their UFSAR supplement, said, you know,  
20 Bravo 2.7, I think that's the section here, right,  
21 we're talking about. If Bravo 2.7 of the license  
22 renewal application is inclusive of our, or is  
23 included in our UFSAR. If they didn't make that  
24 statement, there would be no regulatory hook.

25 JUDGE WARDWELL: And currently now what

1 they say is that it's just consistent with GALL, the  
2 AMP is GALL, or don't they even -- the AMP is  
3 consistent with GALL? Don't they even say that in the  
4 UFSAR?

5 MR. HOLSTON: I don't -- let me check with  
6 Ms. Green. I don't recall many that say just that  
7 we're consistent with the GALL. Generally, the UFSAR  
8 supplements, specific to each program, look very  
9 similar to what you're seeing on the screen here for  
10 the specific program. Do you recall any differences?

11 MS. GREEN: This is Kimberly Green for the  
12 NRC staff. Typically, they gave a program description  
13 --

14 JUDGE WARDWELL: Can you get closer to  
15 your mic? We've now got the air conditioning on, and  
16 it's hard to hear.

17 MS. GREEN: Sure. I'm sorry. Typically,  
18 the applicants include a program description and  
19 describe materials and types of components that are  
20 covered, and the types of inspections and such that  
21 they had planned to do. They also include  
22 enhancements that they plan to make. Those are  
23 commitments that they also provide to us.

24 They do not necessarily say in there that  
25 we are consistent with the GALL report, not in the

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1 UFSAR supplement. That statement is made in the  
2 application itself.

3 MR. COX: Judge Wardwell, this is Alan Cox  
4 for Entergy. I could point you to the commitment  
5 list, and the latest version is in this November 29th  
6 letter. But I think the same commitments are probably  
7 in some of these other letters.

8 But Commitment 3 is to implement the  
9 buried piping and tanks inspection program for IP2 and  
10 3, as described in LRA Section (b)(1)(6). That sounds  
11 very close to what you're asking about. That's not  
12 going into the SAR supplement, but it is in our list  
13 of commitments that we're making to the NRC.

14 JUDGE WARDWELL: Yeah, but I'm questioning  
15 whether or not if when we went to (b)(1)(6), there was  
16 something there to review, besides a statement saying  
17 it's consistent with GALL, which is what's there now  
18 in the license renewal application, isn't it?

19 MR. COX: Yes.

20 JUDGE WARDWELL: Pretty much. Thank you.

21 JUDGE McDADE: When you refer to the  
22 November 29th letter, that's November 29th, 2012,  
23 which is Entergy 597 for identification?

24 MR. COX: Yes, that's correct, Judge  
25 McDade.

1 JUDGE KENNEDY: Mr. Cox, the commitments  
2 list that you were speaking to, is that part of the  
3 current licensing basis, or is that something else?  
4 So you mentioned a commitment in the November 29th  
5 letter. Is that, in your mind, part of the current  
6 licensing basis for Indian Point?

7 MR. COX: I believe that's a correct  
8 characterization of it. We treat commitments in  
9 written correspondence to the NRC as part of the  
10 current licensing basis. We tend to give things a  
11 little more weight that are into the FSAR, because  
12 that's controlled under the more, you know, rigid  
13 50.59 process.

14 Commitments are controlled under a license  
15 program that's consistent with NEI guidance. So it's  
16 not viewed as having quite as high a pedigree as a  
17 commitment in a SAR section.

18 MS. SUTTON: Your Honor, this is Kathryn  
19 Sutton on behalf of the Applicant. For purposes of  
20 the record, the current licensing basis is defined in  
21 Section 54.3, and it includes commitments.

22 JUDGE KENNEDY: Thank you.

23 MR. TURK: Your Honor, Sherwin Turk for  
24 the staff. I'm a little -- I want to make sure the  
25 record is not confused, to match my confusion. The

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1 current licensing basis pertains to the plants today,  
2 as it is operating, before license renewal.

3 When an applicant makes a commitment to do  
4 something upon license renewal, that's when the  
5 commitment becomes effective. It does not affect the  
6 current licensing basis for the existing plant, unless  
7 there is some statement that they are applying it  
8 today.

9 In other words, if they say we will adopt  
10 this program and apply it to the Part 50 license, then  
11 it would apply to the current operating plant CLB.  
12 But what we're talking about now are commitments to  
13 apply once the license renewal is issued.

14 JUDGE McDADE: Which then becomes part of  
15 the current operating basis as of the time we go into  
16 extended operation, if the license application is  
17 approved?

18 MR. TURK: Yes, and what they're giving us  
19 in a UFSAR update are -- what they're telling us is  
20 upon license renewal, that a UFSAR will be revised to  
21 have these things in it. It's not that the UFSAR is  
22 being revised today for the current operating license.  
23 This was the update that will be in effect upon  
24 license renewal.

25 JUDGE KENNEDY: That's consistent with my

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1 understanding.

2 MR. TURK: I was confused. Maybe it was  
3 about the tenses being used in the statements.

4 JUDGE KENNEDY: That's fair.

5 MR. HOLSTON: And if I could, I'd like to  
6 read from -- this is Mr. Holston, sorry. I'd like to  
7 read just one sentence, rather than calling up  
8 Revision 2 of the standard review plan. This is the  
9 critical sentence. It's not very long.

10 "The description should contain  
11 information associated with the bases for determining  
12 that aging effects will be managed during the period  
13 of extended operation."

14 So earlier this afternoon, when I went to  
15 the safety evaluation report and walked through those  
16 four bullets, those were the four basic bullets or the  
17 four basic bases of why the staff found Indian Point's  
18 buried piping program acceptable, and that it would  
19 provide reasonable assurance that the piping would  
20 perform its intended function.

21 All four of those bullets are associated  
22 with the bases for determining it's acceptable, and  
23 all four of those are captured in the UFSAR  
24 supplement, such that they become part of the current  
25 license basis. You've got to do a 50.59 if you're

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1 going to change that detail.

2 That also, that doesn't apply just to  
3 buried pipe. That's how we handle them across the  
4 board, AMPs across the board in their UFSAR  
5 supplements.

6 JUDGE KENNEDY: Is that informed by the  
7 on-site audit process that you talk about before?

8 MR. HOLSTON: Yes sir, it is informed by  
9 that, because that's -- during the on-site audit is  
10 when we dig very deeply into the applicant's  
11 Corrective Action Program, and look for examples of  
12 the aging effects that are occurring now. That can --  
13 if there's too many of them, then that tells us there  
14 has to be done, something has to be done more than  
15 just what's in the GALL report.

16 So when you see those type of things,  
17 that's when you want to inform and enhance that UFSAR  
18 supplement.

19 JUDGE KENNEDY: Let me try a different set  
20 of words. So as evidenced here today, the buried  
21 piping program has evolved quite substantially, both  
22 through initiatives by the industry and by oversight  
23 from the NRC.

24 I guess what I'm struggling with is I  
25 guess the affirmative statement. I'm looking for, and

1 I think you just gave it, that the UFSAR supplement  
2 can evolve beyond what's in the standard review plan,  
3 and is informed by something based on the technical  
4 oversight by the audit team, or the RAIs or so on and  
5 so forth.

6 It's really looking for the relationship  
7 between the back and forth RAIs and the audit team's  
8 audit report, and where we end up, where the UFSAR  
9 supplement ends up. What I've heard you say, it's  
10 more than just what's in the standard review plan.

11 MR. HOLSTON: That is correct.

12 JUDGE KENNEDY: It could be.

13 MR. HOLSTON: Yeah, it could be. It can  
14 be just what's in the standard review plan, and most  
15 times it is. But it needs to be augmented, based upon  
16 that informing. So you're correct.

17 JUDGE KENNEDY: Is it fair to say that  
18 when the staff takes a step back and deems both the  
19 reasonable assurance that aging will be managed and  
20 the program description for the particular AMP is  
21 adequate, that it's the confluence of all that that  
22 informs the staff to deem the adequacy of the UFSAR  
23 supplement?

24 MR. HOLSTON: Yes sir.

25 JUDGE KENNEDY: Okay. Thank you. I've

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1 got one last question, and I don't know how deep we  
2 can get into it. Again, this is something that I  
3 think came up today, that I think touches upon all the  
4 AMPs, and that's the Corrective Action Program.

5 I think Mr. Lee started off a lot of  
6 discussion, particularly related to buried piping.  
7 But what struck me as -- if you could help us  
8 understand and we'll start with Mr. Lee, but you can  
9 certainly hand it off as appropriate.

10 But I'm looking for some information as  
11 to what informs the breadth of the potential actions  
12 that could be performed under the corrective action  
13 process, because I think, as Mr. Azevedo was  
14 discussing the work on the condensate piping, you'd  
15 really started to branch off into all kinds of other  
16 stuff.

17 If you could help us maybe at a higher  
18 level, just help us understand the corrective action  
19 process and the corrective actions that would be  
20 spawned by that process, if it's even possible. It's  
21 just something that occurred to me when you were  
22 speaking to that particular issue.

23 MR. AZEVEDO: Your Honor, this is Nelson  
24 Azevedo for Entergy. When a condition report -- if I  
25 may just walk you through the process. Maybe this

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1 will answer the question. We initiate a condition  
2 report that goes into the system.

3 Those condition reports are screened the  
4 following morning by Indian Point management, and they  
5 determine what the level of evaluation is required,  
6 Level A, B or C, and A is, you know, real significant  
7 issues like the results of a plant shutdown or  
8 violation of a requirement. B is less of an impact,  
9 and then Level C is just evaluate and correct the  
10 situation.

11 Depending on what level the condition  
12 report gets, then that determines what level  
13 investigation we need to implement. Then we do either  
14 an apparent cause or a root cause evaluation, and then  
15 we establish the corrective actions that we need to  
16 implement, to make sure this -- first, that this  
17 condition is bounded, and it doesn't occur again in  
18 the future.

19 When we're done, that condition report  
20 goes back to the, what you call it, the CARB. That's  
21 the management team that reviews our response, and  
22 determines whether it was appropriate or not. So  
23 that's the process that we use, to make sure that the  
24 corrective actions that we implement do bound the  
25 problem, and that we'll correct the problem going

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1 forward.

2 JUDGE KENNEDY: So that do I understand it  
3 to include things like looking to see if this  
4 particular issue could affect other piping, using  
5 piping as an example, but other potential problems  
6 within the plant?

7 MR. AZEVEDO: Well not only that. In  
8 fact, the leak was Unit 2. We not only ask the  
9 question for Indian Point 2 and 3; we also ask the  
10 question for the rest of the Entergy fleet. So that's  
11 a broad question, and you're right. We do ask that  
12 question, where else can this be occurring.

13 JUDGE KENNEDY: I have no other questions.  
14 Thank you.

15 JUDGE WARDWELL: We are heading into our  
16 second topic area, dealing with the intended functions  
17 of buried pipes, and starting off with New York  
18 testimony, page 15. You state that the fact that  
19 Indian Point has already experienced leaks, detailed  
20 in my report, indicates to me that there are already  
21 corrosion problems at the facility, and that  
22 appropriate measures must be taken to prevent such  
23 piping failures in the future.

24 Dr. Duquette, have we at least introduced  
25 all the leaks that have occurred at the site up to

1 this present time?

2 DR. DUQUETTE: To my knowledge, yes.

3 JUDGE WARDWELL: How are mere pipe leaks  
4 considered a pipe failure, as you allege in this  
5 statement under aging management review?

6 DR. DUQUETTE: In my opinion, a piping  
7 system is of course, it's supposed to contain a fluid,  
8 whether it be a gas or a liquid fluid, and if it can't  
9 contain that fluid, then it's at failure.

10 The analogy I would use with my students  
11 is if you have a hole in your tire, it doesn't matter  
12 if most of the tire is in pretty good shape. If you  
13 have a hole, it has failed. Its function is  
14 maintaining the fluid.

15 JUDGE WARDWELL: Well, to stick with your  
16 analogy, if the intent was for this tire to hold  
17 pressure for a while, and the tire was surrounded by  
18 compacted clay, such that the leakage out of that hole  
19 was virtually nil, would you consider that a failed  
20 tire?

21 DR. DUQUETTE: I would consider it a  
22 failed tire. In this particular leak, it was 15  
23 gallons a minute, and I think that the utility tried  
24 to downgrade that to some low amount of liquid leaking  
25 out of the pipe. But 15 gallons a minute is actually

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1 quite a lot of fluid coming out of the pipe and would  
2 saturate the soil fairly quickly.

3 My concern would be that not only would it  
4 saturate the soil, but the soil would stay wet, and so  
5 you would have the danger of having other parts of the  
6 pipe in contact with wet fluid, and forgetting the  
7 fact that it was, in this particular case, mildly  
8 radioactive, I think that the leaking of liquid into  
9 the soil was a dangerous situation all by itself.

10 JUDGE WARDWELL: Do you believe a leak  
11 would ruin the pressure boundary function of a buried  
12 pipe?

13 DR. DUQUETTE: Not by the classic  
14 definition of a pressure boundary, no.

15 JUDGE WARDWELL: Would it violate an  
16 unstandard definition of pressure boundary?

17 DR. DUQUETTE: Well again, I think a  
18 leaking pipe loses its function as a pipe, just as a  
19 leaking tank would lose its function as a tank, for  
20 any device that's supposed to contain fluids. If it  
21 begins to lose its fluid, it's lost its function as a  
22 fluid- containing device.

23 When you say a pressure boundary, I don't  
24 think that the pressure in the pipe would change very  
25 much with the leak that occurred in this particular

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1 pipe, as far as the ability to maintain pressure. But  
2 as far as losing the ability to maintain its leak, you  
3 can think of any analogy, including gas out of your  
4 gas tank.

5 JUDGE WARDWELL: What's the purpose of the  
6 pipe?

7 DR. DUQUETTE: To carry fluid from one  
8 place to another.

9 JUDGE WARDWELL: Would it still achieve  
10 that?

11 DR. DUQUETTE: It will carry most of the  
12 fluid from one place to another, but not all of the  
13 fluid from one place to another, and the purpose of a  
14 pipe is to --

15 JUDGE WARDWELL: Or do you believe the  
16 criteria is zero leaks out of pipes is the only  
17 acceptable criteria for an aging management program?

18 DR. DUQUETTE: For systems where there is  
19 the possibility of either safety-related issues. For  
20 example, I would consider a buried oil pipeline that  
21 leaked oil would be dangerous, because it would damage  
22 the environment. In this particular case, I think  
23 we're talking about a situation where there's a  
24 possibility of a radioactive leak, I guess I would  
25 consider that -- I'm sorry.

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1 JUDGE WARDWELL: Before we get there, do  
2 you believe that environmental impacts are associated  
3 with aging management review and the intended  
4 functions of a pipeline?

5 DR. DUQUETTE: Do I believe that? Yes.

6 JUDGE WARDWELL: That's your opinion?

7 DR. DUQUETTE: Yes.

8 JUDGE WARDWELL: Okay. Now go ahead with  
9 radioactivity.

10 DR. DUQUETTE: I think again, anything  
11 that contains a fluid that is of potential damage to  
12 the environment, fails its function to maintain the  
13 fluid that might be damaging to the environment.

14 JUDGE WARDWELL: That's true, but do those  
15 fall under aging management? Isn't that more  
16 associated with, if anything, a current licensing  
17 basis criteria than it is dealing with an aging  
18 management issue?

19 DR. DUQUETTE: I will have to walk away  
20 from that question. I'm not an expert on licensing or  
21 regulation.

22 JUDGE WARDWELL: Fair enough.

23 JUDGE McDADE: It's your testimony that  
24 maintaining a pressure boundary is only part of the  
25 function of a pipe and that therefore, even though it

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1 moved fluid from one place to another, even though it  
2 did not impact the pressure boundary, nevertheless,  
3 the function of the piping could be compromised?

4 DR. DUQUETTE: Yes. I believe the  
5 function of the piping would be definitely compromised  
6 if it had a leak, without any question. I think the  
7 first question, as I understood it, had to do with the  
8 pressure boundary. I don't think that the leak that  
9 occurred in this situation would have changed the  
10 pressure inside the pipe by any appreciable amount.  
11 But I still believe that the pipe fails its function  
12 as a fluid-carrying device if it has a hole in it.

13 JUDGE WARDWELL: But likewise, would it  
14 lose any appreciable amount of fluid as it conveyed  
15 the fluid from one area to the other which would be  
16 able to detect the difference in the flow rate out of  
17 the end of the pipe based on this leak?

18 DR. DUQUETTE: I don't think you'd see  
19 very much of a change in the flow rate in the pipe per  
20 se, but a very large amount of fluid could escape  
21 through a very small hole. At 15 gallons a minute, it  
22 doesn't take a lot of mathematics to know that you're  
23 getting thousands of gallons a day, if it's a buried  
24 pipe, changes of detecting it will not be there until  
25 you've lost a significant amount of fluid.

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1 JUDGE WARDWELL: But it still will achieve  
2 its function of carrying fluid from one end to the  
3 other as I heard your testimony?

4 DR. DUQUETTE: It will achieve it's  
5 primary function of moving fluid from one place to  
6 another and moving all of the fluid that goes in one  
7 end that should come out the other end.

8 JUDGE WARDWELL: Now -- and if that was  
9 for the sake of argument the only function that was  
10 deemed necessary for this pipe, would it matter  
11 whether or not the leak was there or not, if that was  
12 the only function?

13 DR. DUQUETTE: And again, we're assuming  
14 that no damage to the environment would occur.

15 JUDGE WARDWELL: If the only function of  
16 that pipe was to convey fluid from one end, one point  
17 to another point, then a leak would not ruin that  
18 function, would it?

19 DR. DUQUETTE: May I use another analogy?

20 JUDGE WARDWELL: No, I'd like you to  
21 answer the question.

22 DR. DUQUETTE: I'm trying to answer the  
23 question in terms of whether it would serve as  
24 function or not and recently I looked at two --

25 JUDGE WARDWELL: When I said that the

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1 function is conveying fluid from one end to the other,  
2 if that is the only desired function of that pipe, in  
3 the presence of a leak in that buried pipe, would not  
4 impact that particular function. Is that a fair  
5 assumption?

6 DR. DUQUETTE: No, I don't believe it is  
7 a fair assumption. If you lose fluid from the pipe at  
8 any location other than the exit from the pipe, I  
9 believe that the pipe has failed its function.

10 JUDGE WARDWELL: But we're going around in  
11 circles here.

12 DR. DUQUETTE: I know we are.

13 JUDGE WARDWELL: So I'm going to ask you  
14 again and then I won't bother asking the question any  
15 more. Well, you can answer it all you wish. If for  
16 the sake of argument the only function desired of that  
17 pipe is to convey fluid from one end to the other in  
18 a buried pipe, would a leak compromise that function  
19 in your professional opinion?

20 DR. DUQUETTE: You have to qualify that  
21 answer. It would depend on what the pipe is carrying.

22 JUDGE WARDWELL: If the only intended  
23 function of the pipe is to carry fluid from one end to  
24 the other, and we are not concerned with the  
25 environment or anything else, would a leak compromise

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1 that intended function, in your opinion?

2 DR. DUQUETTE: In my professional opinion,  
3 yes, it would.

4 JUDGE WARDWELL: Thank you. And why is  
5 that again?

6 DR. DUQUETTE: Because if you lose fluid  
7 from the pipe from any source except where it's  
8 supposed to go, you have all kinds of risk. If the  
9 pipe were carrying liquid gold you wouldn't be very  
10 happy if it had a leak.

11 JUDGE WARDWELL: But that wasn't one of  
12 the functions of that desired pipe. For whatever  
13 reason, that isn't of concern to the people  
14 transporting that pipe under my scenario. So taking  
15 that away, would the intended function be compromised?

16 Can you get a big enough leak to prevent  
17 the flow of the pipe, flow of the pipe? It's a simple  
18 question. I'm not trying to trick you. I know we've  
19 got to cover radioactivity and that later. I want to  
20 make sure I understand whether you think a leak can be  
21 big enough that you can detect a difference in flow  
22 out the other end.

23 DR. DUQUETTE: The answer is no.

24 JUDGE WARDWELL: Thank you.

25 JUDGE McDADE: And if I could jump in here

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1 a second, and maybe confuse this back again.  
2 Corrosion occurs over time. We're talking about aging  
3 management. If there is a leak and fluid is then  
4 entering the area around the outside of the pipe, over  
5 a period of time, that would tend to increase the rate  
6 of corrosion, wouldn't it?

7 DR. DUQUETTE: If it comes in contact with  
8 any other part of the metal, that's correct, including  
9 any pipes that might be near by.

10 JUDGE McDADE: Do you believe the soil  
11 around pipes is dry?

12 DR. DUQUETTE: I believe --

13 JUDGE McDADE: At Indian Point?

14 DR. DUQUETTE: I believe it can be. I  
15 don't think it's wet 100 percent of the time.

16 JUDGE WARDWELL: Have you ever dug up any  
17 soil that wasn't wet in the Northeast?

18 DR. DUQUETTE: Yes, sir.

19 JUDGE WARDWELL: You have?

20 DR. DUQUETTE: I have. I have been a  
21 consultant in situations where the soil had to be dug  
22 up. I didn't do any digging of the soil.

23 JUDGE WARDWELL: What do you describe --  
24 what do you mean by wet? Do you mean there was no  
25 moisture in the soil?

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1 DR. DUQUETTE: I believe there was -- the  
2 soil was effectively dry as measured with a hydrometer  
3 which is a method for measuring water content.

4 JUDGE WARDWELL: And it shows zero water?

5 DR. DUQUETTE: There are lots of sandy  
6 soils in the Northeast and they are very dry.

7 MR. BIAGIOTTI: Your Honor, can I make a  
8 clarification, please? Steve Biagiotti for the  
9 Applicant.

10 Water in and of itself is not corrosive.  
11 It requires other elements in it to be corrosive, one  
12 of which is oxygen and in condensate systems, it's de-  
13 aerated, no oxygen water, as well as a lot of anions  
14 are missing from it. So when you're dealing with pure  
15 water, that's why we don't get severe corrosion on the  
16 inside of steel pipelines.

17 JUDGE WARDWELL: How much oxygen would be  
18 present as the moisture content of soil decreases?

19 MR. BIAGIOTTI: Again, it's not just  
20 moisture content. And we've got testimony -- I didn't  
21 necessarily want to go off on a tangent, but oxygen is  
22 probably one of the more prevalent things that will  
23 contribute to corrosion.

24 JUDGE WARDWELL: The question I asked was  
25 how much does the oxygen availability increase as the

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1 moisture content decreases? How much oxygen is  
2 available below the groundwater table, for instance?  
3 It should be very little. How much is above the  
4 groundwater table, more or less?

5 MR. BIAGIOTTI: It would be progressively  
6 more until you hit atmosphere.

7 JUDGE WARDWELL: You wanted to discuss the  
8 leakage of radioactivity, I believe, Mr. Duquette, Dr.  
9 Duquette.

10 Would you like to expound on that now?

11 DR. DUQUETTE: Well, only that -- and  
12 again, I'm going to have to state this as a layman and  
13 a citizen. I'm not an expert on radiation physics or  
14 so on and so forth. I think that a leak of a  
15 radioactive fluid into the environment is not a  
16 healthy situation. I don't want to get into how many  
17 rads of exposure of you would have to be involved --  
18 would have to be involved and so on and so forth. I  
19 just feel uncomfortable with any radioactive fluid  
20 leaking into the environment.

21 JUDGE WARDWELL: Do you don't feel  
22 comfortable in addressing how much would need to go  
23 out before dose exposures were exceeded. Is that what  
24 you're saying?

25 DR. DUQUETTE: No, sir. I would not pass

1 myself off as an expert in that area.

2 JUDGE WARDWELL: Okay. Let me ask you  
3 this general one to see if you're comfortable  
4 answering this question.

5 Do you believe that the leak would have to  
6 be so bad that it resulted in an excess of dose  
7 exposures before you would be of concern or not? If  
8 it didn't exceed a recognized dose exposure limit,  
9 then would the leak be excessive in this regard? Only  
10 in this regard?

11 Now it may very well ruin the other  
12 hypothesis. Maybe we're not getting the flow we want  
13 now. But as far as this one is concerned, do you feel  
14 that zero radioactive release is a criteria or is it,  
15 in fact, is based or should be based on dose  
16 exposures?

17 DR. DUQUETTE: No, I definitely don't  
18 think that zero release -- I spent nine years of my  
19 life in nuclear waste disposal worrying about water  
20 flowing through Yucca Mountain and other places where  
21 we knew that there would be some radiation that would  
22 come out wherever water came out. I believe there are  
23 minimum amounts of radiation that are acceptable.

24 JUDGE WARDWELL: Thank you. In your  
25 testimony, and I believe this is your rebuttal

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1 testimony. 000399 is your rebuttal testimony, Exhibit  
2 000399?

3 DR. DUQUETTE: Yes.

4 JUDGE WARDWELL: I believe that's correct.  
5 On page 6, and again, you referenced your -- I think  
6 your testimony and your rebuttal based on line numbers  
7 and not answers to questions and that's fine. So I  
8 can't give an answer number for this.

9 DR. DUQUETTE: Sure.

10 JUDGE WARDWELL: It's on page 6 and I  
11 didn't note the line number so people can Google the  
12 quote or parts of the quote if they're looking for it.  
13 But you state and I quote, "Leaking of radioactive  
14 fluids, in my opinion, constitutes failure of the  
15 system in a pipe that, like all safety-related pipes  
16 carrying radioactive fluid was not supposed to fail."  
17 And then you say some other things, but the next part  
18 of the quote that I would like to reference here says  
19 "There can be no guarantee that future unpredictable  
20 failures will not occur in other safety-related  
21 piping."

22 And so I guess between your previous  
23 testimony on what you're stating here, is it your  
24 opinion that the intended functions of buried pipes  
25 and tanks is to contain radioactivity in addition to

1 holding a pressure boundary for the transfer of  
2 sufficient amounts of fluids in a safety-related SSC?

3 DR. DUQUETTE: Well, as a minimum, I think  
4 it has to maintain a pressure boundary, but at the  
5 same time I think it has to -- I think any pipe has to  
6 retain its fluid, otherwise it fails as its function  
7 as a pipe in my opinion.

8 JUDGE WARDWELL: You've answered some of  
9 the other questions I've had here in regards to  
10 whether what amount of radioactivity -- and you agree  
11 with the dose exposure.

12 I think I'll go to staff. And I'm not  
13 sure who would like to address this question. From  
14 your technical experience, do you know if there's any  
15 regulations preventing the inadvertent release of  
16 radioactivity from a nuclear power plant? And if so,  
17 what might they be?

18 MR. HOLSTON: This is Mr. Holston. I am  
19 not an expert on the radiological effluent side of the  
20 regulations. But as far as buried pipe would go, as  
21 far as aging management, a license renewal  
22 application, I'm not aware of anything, anywhere that  
23 has the non-release of radioactive material being an  
24 intended function of a piping system. I think I  
25 didn't get a double negative in there, but --

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1 JUDGE WARDWELL: We'll sort that out when  
2 we see a transcript.

3 (Laughter.)

4 I thrive on double negatives, as you might  
5 know by some of my questions, so it doesn't affect me  
6 much.

7 Your testimony, Staff Exhibit 000016, page  
8 30, answer 26, I have it quoting -- let me just  
9 interrupt quickly before I go to that.

10 Some of these references, as we noted, the  
11 page numbers are going to change and who knows the  
12 answer numbers may change and who knows, maybe one or  
13 two or these I got the wrong cite numbering for this.  
14 But I believe the quote is correct, so if you don't  
15 find it on where I say it ought to be, then Google  
16 parts of the quote and you should be able to find it  
17 is my overall cop out is for all of the mistakes I've  
18 probably made in this.

19 But anyhow, back to this particular one,  
20 Staff at 000016, page 30, answer 26, states that "10  
21 CFR 20.1501(a)(2) requires that a licensee conducts  
22 surveys that may be necessary to evaluate (i) the  
23 magnitude and extent of radiation levels; (ii)  
24 concentrations or quantities of radioactive material  
25 and (iii) the potential radiological hazards.

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1 Further, under 10 CFR Section 20.2203, a licensee is  
2 required to report within 30 days any radiation  
3 exposure or dose, radiation level or concentration of  
4 radioactive materials that exceeds the limits stated  
5 therein. In addition, 10 CFR Section 50.36(a)  
6 (technical specifications on effluents from nuclear  
7 power reactors) requires that licensees file an annual  
8 report which states the quantity of each of the  
9 principal radionuclides released to an unrestricted  
10 area in liquid and gaseous effluents during the  
11 previous 12 months."

12 My question for staff is don't these  
13 regulations seem to support a position that the  
14 passive function of a pipeline is a need for some  
15 radiologic containment?

16 MR. HOLSTON: These regulations and again,  
17 I'm not an expert in this area. We put this into my  
18 testimony to at least acknowledge the radiological  
19 implications, but the purpose of answering that was to  
20 establish that there are other rules in the federal  
21 regulations outside of license renewal that address  
22 release of radiological effluents.

23 Your direct question to me was doesn't  
24 that seem to imply that we would expect buried pipe or  
25 any pipe not to leak. It's not a desirable outcome as

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1 far as the staff is concerned and we want it to be  
2 controlled and we would obviously want it to be  
3 minimized. But the question in my mind is what are  
4 the regulations for the license renewal state in  
5 regard to the function of the buried piping.

6 JUDGE WARDWELL: While we may all agree  
7 that from a radiological standpoint we don't care  
8 whether it leaks -- care is the wrong word to use, but  
9 it doesn't fall under Aging Management Review if it  
10 merely leaks, but why would we not be concerned about  
11 the potential for exceeding dose exposures as an Aging  
12 Management Review issue? And as such, an intended  
13 function of the pipeline to assure that it doesn't  
14 leak so much that it contributes to dose exposures?

15 MR. HOLSTON: We are concerned, but one of  
16 the premises of license renewal is that the current  
17 licensing basis continues into the period of extended  
18 operation. In the current licensing basis already  
19 addresses the rules and regulations for effluents,  
20 radioactive effluents.

21 When the license renewal rule was written,  
22 it was very specifically stated that the piping  
23 components or anything, but piping per se can have  
24 many functions. The only functions that are subject  
25 to Part 54 are those that are in scope. And when you

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1 review the in-scope criteria, leakage is not there.  
2 It's safety-related components in the inherent  
3 definition of safety related. Non-safety related  
4 equipment that could impact the ability of safety-  
5 related component from functioning, and any equipment  
6 that supports the five regulated events, such as  
7 station blackout, fire protection.

8 I have not run across a single application  
9 yet where an applicant has had to state that one of  
10 the license renewal intended functions is to prevent  
11 leakage.

12 MR. TURK: Your Honor, Sherwin Turk.  
13 Could I ask for clarification if Mr. Holston could  
14 indicate where he sees those three criteria that we  
15 just recited.

16 MR. HOLSTON: Yes, those three criteria,  
17 I believe, are in 54.21 -- 54 -- thank you, Ms. Green  
18 is helping me. 54.4.

19 JUDGE WARDWELL: Has not safety issues  
20 included health and safety of exposures, not just  
21 merely restricting a meltdown of the core, for  
22 instance?

23 Don't those exposures relate to the health  
24 and safety? And that's where they're promulgated  
25 under the current licensing basis. Isn't that

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1 correct?

2 MR. HOLSTON: Correct, yes. Release of  
3 effluents relates to health and safety of the public,  
4 but I'm -- by law, I'm stating what we consider --  
5 what are the requirements for intended functions of  
6 license renewal scoped items and those were very --

7 JUDGE WARDWELL: What is stated in 54.26,  
8 was it?

9 MR. HOLSTON: 54.4.

10 JUDGE WARDWELL: Point 4. That it's  
11 safety related. Isn't that understood include health  
12 and safety of both workers and the public?

13 MR. HOLSTON: Safety related, there's  
14 three functions under safety related. One is reactor  
15 coolant pressure boundary. The second is systems that  
16 support an accident. So for instance, your safety  
17 injection systems have to operate to inject and those  
18 are used to shut down the reactor. They aren't any  
19 now.

20 In regard to an accident, it's to control  
21 off-site dose that relates to health and safety, but  
22 as long as that piping system can deliver the required  
23 flow, it mitigates those releases and you won't see  
24 any change in release whether that pipe is leaking or  
25 not leaking.

1 JUDGE WARDWELL: And how do you know that  
2 in a pipe without knowing how much it's leaking? How  
3 do you know that an accident, for instance, wouldn't  
4 stress the pipe enough to increase the leakage if  
5 there was one? Doesn't does exposure have to be one  
6 of those types of functions that you would want to  
7 control from a buried pipe?

8 MR. HOLSTON: Generally, when you  
9 transition from the piping system in a normal  
10 operating mode to an accident mode, for instance,  
11 service water. Service water flows may increase.  
12 That's actually going to drop the pressure in the pipe  
13 where it is locally leaking.

14 If you are having an AFW auxiliary  
15 feedwater suction line, right, it's again exposed to  
16 more pressure just by the static head in tank.

17 JUDGE WARDWELL: I'm speaking -- I'm sorry  
18 if I confused you. I'm speaking only of those pipes  
19 that contain radioactivity and the release from those  
20 leaks into the groundwater and into the atmosphere  
21 through the ground that may cause dose exposures that  
22 exceed the limits in the current regulations.

23 Why is that not a function even under the  
24 guise of just being related to a safety issue, because  
25 of the fact that safety issues, historically, under

1 the NRC regulations have included the health and  
2 safety of the public? And so why shouldn't that be an  
3 attended function of buried pipes also?

4 MR. HOLSTON: I can only tell you that the  
5 rule change for or the rule that implemented license  
6 renewal, the statements consideration, the -- and then  
7 corresponding to the Standard Review Plan all  
8 establish that what those intended functions were and  
9 when that was all put together as the regulations,  
10 that's what was put in place. And that was put in  
11 place with periods of public comment and due  
12 consideration of --

13 JUDGE WARDWELL: When we started this  
14 discussion, you referenced that radiological releases  
15 are already covered under the current licensing basis,  
16 therefore something defective doesn't need to be  
17 addressed under license renewal.

18 Aren't there numerous AMPs that have been  
19 developed which are currently being monitored under  
20 the current licensing basis and yet still have  
21 required to deal with Aging Management Review under  
22 license renewal?

23 MR. HOLSTON: Yes. There are many Aging  
24 Management Programs for Boiling Water Reactors, all  
25 the BWRVIP programs for all plants. There's flow

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1 accelerated corrosion. There's open-cycle coolant  
2 water system, basically Generic letter 89-13.

3 JUDGE WARDWELL: So the mere fact that  
4 there's a current licensing basis and even falling  
5 under the maintenance rule doesn't pre-empt a  
6 particular system, structure, or component from being  
7 considered for Aging Management Review, does it?

8 MR. HOLSTON: That is correct.

9 JUDGE WARDWELL: Page 26, you say that  
10 "although certain leaks have occurred to date at  
11 Indian Point, there's not been a failure of buried  
12 pipe." In this regard, 10 CFR Part 54 establishes  
13 safety requirements rather than the avoidance of  
14 environmental impacts."

15 What's your definition of environmental  
16 impacts?

17 MR. HOLSTON: My definition of  
18 environmental impacts would be inadvertent release of  
19 radioactive material.

20 JUDGE WARDWELL: And so it's not NEPA-  
21 related impacts. You mean the fact -- you're saying  
22 dose exposures are environmental impacts?

23 MR. HOLSTON: Yes, sir.

24 JUDGE WARDWELL: Entergy's exhibit  
25 testimony under 000374 exhibit, answer 94 on page 74

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1 -- let me pull that up for you.

2 JUDGE McDADE: And that last quote you  
3 were talking about was from Staff 16, page 26, Answer  
4 20?

5 JUDGE WARDWELL: That's correct. Thank  
6 you.

7 Entergy's testimony, 000373, answer 94 on  
8 page 74, you state that "For the foregoing reasons,  
9 the IPEC BPTIP provides reasonable assurance that  
10 external corrosion of in-scoping buried piping  
11 including piping containing or potentially containing  
12 radioactive effluents will not preclude the ability to  
13 have piping to perform its intended function, preface,  
14 maintain a pressure boundary during extended  
15 operations."

16 Entergy, whoever would like to address  
17 this, to the similar questions that I brought up for  
18 the staff, what is your reference that states that  
19 only pressure-retaining capability of pipes is  
20 required under Aging Management Review as the only  
21 intended function under Aging Management Review?

22 MR. COX: This is Alan Cox for Entergy.  
23 The regulations in 10 CFR 54 Part 21 tell you you have  
24 to manage the effects of aging such that you can  
25 maintain the intended functions that are identified in



1 54.4 and we would agree with Mr. Holston's  
2 characterization that if you look at those intended  
3 functions -- I had it here just a minute ago.

4 JUDGE WARDWELL: He read those out. We  
5 don't need to look at those again. Because it falls  
6 back to what falls under safety considerations. And  
7 so let me ask you this. Why doesn't those sections of  
8 Part 20 and Part 50 dealing with those exposures,  
9 relate to safety issues? Because that seems to me  
10 what they were promulgated for. It's not a NEPA or a  
11 NEPA-type of issue. It's an environmental impact, but  
12 only in regards to the safety -- not of the  
13 containment, but of the population. But it is a  
14 safety issue, isn't it?

15 MR. COX: And we're not saying it's not a  
16 safety issue. We're basically going back to the 10  
17 CFR definition of safety related which is what's in  
18 54.4. It's not addressing all the safety issues that  
19 are necessarily associated with 10 CFR 50, Appendix I.  
20 It's saying that the safety function of components  
21 that are safety related is pressure boundary,  
22 mitigating consequences of accident, and prevent the  
23 release of radioactivity that could cause you to  
24 exceed certain limits. And it gives values for those  
25 limits. Those are different limits than what's

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1 covered under 10 CFR 20 and 10 CFR Appendix I.

2 JUDGE WARDWELL: But they're still  
3 whatever dose limit you use should not that be one of  
4 the intentions of the pipe for aging management?

5 MR. COX: For compliance with the license  
6 renewal rule, it's the dose limits that are specified  
7 in the rule. I think in my experience, what we've  
8 seen is that you're going to have issues with the  
9 ability of the pipe to perform it's pressure boundary,  
10 its foundation of getting flow from Point A to Point  
11 B, you're going to have problems with that, long  
12 before you have enough liquid release to cause you to  
13 exceed the limits that are specified in 10 CFR Part  
14 54.

15 JUDGE WARDWELL: May be, but still that --  
16 isn't that an intended function of the pipe? It may  
17 be a fairly low threshold to jump over, but is that  
18 not an intended function of the pipe?

19 MR. COX: You know, the way that I read  
20 Part 54, the definition of safety related, that's not  
21 included in that. Those are different limits than  
22 what's spelled out in 54.4.

23 JUDGE WARDWELL: Which are different  
24 limits. You're confusing on your different limits.

25 MR. COX: Right.

1 JUDGE WARDWELL: Now, is the limits -- you  
2 believe 54.4 requires a look at the limits --

3 MR. COX: 54.4 focuses on accident  
4 mitigation and the limits that are applicable during  
5 an accident.

6 JUDGE WARDWELL: And that's the way you --  
7 and the limits that are there during an accident?

8 MR. COX: That's correct.

9 JUDGE WARDWELL: And those are dose-  
10 exposure limits, correct?

11 MR. COX: Right.

12 JUDGE WARDWELL: Are not those dose-  
13 exposure limits and the ability of a pipe not to  
14 exceed those part of its intended function?

15 MR. COX: I think the ability -- the  
16 regulations say the ability to mitigate the  
17 consequences of an accident. So the regulations are  
18 focused on you mitigate the accident by making sure  
19 you keep the core cooled. It's not directed at making  
20 sure you don't have leakage from the pipe. It's the  
21 releases that would result if you had a core damage  
22 event that you're focused on with those regulations in  
23 Part 54.

24 So I think it's -- ultimately you're  
25 concerned about dose limits, but you're more concerned

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1 about making the systems that are there to mitigate  
2 the consequences of the accident, making sure that  
3 they're able to perform their function as opposed to  
4 leakage from a pipe itself. Those are not the kind of  
5 radiation levels you have in accident condition if you  
6 have core damage are far in excess of what you have in  
7 any of these pipes that are being classified as  
8 potentially radioactive. Those are very low levels of  
9 radioactivity that are not going to challenge those  
10 limits that are in 54.5.

11 JUDGE WARDWELL: But is there a need still  
12 to compare that potential to those limits to close the  
13 loop on this, rather than just saying, it can't  
14 happen?

15 MR. COX: I guess we don't believe there  
16 is a need for that.

17 JUDGE WARDWELL: You, in your testimony,  
18 you go on Exhibit 373 again on page 40 of A47,  
19 Entergy's experts identified -- oh, before I get to  
20 that, I'm sorry, there was one other question.

21 How many of the pipes in the BPTIP contain  
22 or potentially contain radioactivity? Is there a  
23 handle on that, either by the number of systems that  
24 generally contain it or some other measure that we  
25 could look at, get a feeling for, what percentage?

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1                   Unless you know off the top of your head  
2 what you feel would be approximately it, are there  
3 more than 50 percent, less than 50 percent? Are there  
4 --

5                   MR. COX: This is Alan Cox again. It's a  
6 fairly small percentage of the total. The IP3 safety  
7 injection system has approximately 700 feet. The  
8 plant drains which is normally dry unless you had  
9 leakage within the building is about 1,000 feet.

10                  JUDGE WARDWELL: And those plant drains,  
11 are they in areas that could start draining  
12 radioactive fluids from an accident? Or are they ones  
13 that are not associated with that. Do you have any  
14 feeling?

15                  MR. COX: I don't have a feel for that.

16                  JUDGE WARDWELL: Go ahead.

17                  MR. COX: And the third category is aux  
18 feedwater, the CST, the condensate storage tank which  
19 has very low levels of tritium.

20                  JUDGE WARDWELL: And is that the only  
21 radionuclide in that condensate storage tank?

22                  MR. COX: I won't say that there's nothing  
23 else in there. I think that's the major constituent  
24 there. There may be trace amounts of other nuclides.  
25 I don't know for sure.

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1 JUDGE WARDWELL: Okay. Does anyone else  
2 know whether there's other radionuclides and what  
3 concentration in the condensate storage tank from  
4 Entergy?

5 I see no one volunteering, so I'll assume  
6 that. Thank you.

7 Back to my questions on page 30, answer 47  
8 of your testimony, Exhibit 373. Experts identified  
9 six IP2 and IP3 buried tanks that were covered by  
10 BPTIP and that those tanks stored hydrocarbons, that  
11 is fuel oil. As being part of the BPTIP I assume  
12 these fall under license renewal. Is that correct,  
13 Mr. Cox?

14 MR. COX: Yes, that is correct.

15 JUDGE WARDWELL: What are the other -- how  
16 many other tanks are part of the BPTIP program?

17 MR. COX: These are the only ones that are  
18 part of the BPTIP program.

19 JUDGE WARDWELL: And so these six not only  
20 are the only ones there, but they also contain  
21 hydrocarbons and not radioactivity?

22 MR. COX: That's correct.

23 JUDGE WARDWELL: So the condensate storage  
24 tank doesn't fall under this as a buried tank?

25 MR. COX: That's right.

1 JUDGE WARDWELL: What constitutes a buried  
2 tank? Does a whole tank have to be buried, or just  
3 the foundation of it?

4 MR. COX: I think because a storage tank  
5 sits on the ground, it's not considered buried. I  
6 think if you had a tank, and I don't know that we have  
7 any examples, but if you had one that was halfway  
8 buried, it might constitute a buried tank. In terms  
9 of the discussion, we don't have any of those.

10 JUDGE WARDWELL: The way I'm hearing you,  
11 there's not a clear definition of what would be a  
12 buried tank or not. You're saying a condensate  
13 storage tank, the bottom of the tank sits on soil?

14 MR. LEE: Sits on a concrete pad. Bob  
15 Lee.

16 JUDGE WARDWELL: Sorry, Mr. -- identify  
17 yourself, please, and speak loudly?

18 MR. LEE: Bob Lee for the Applicant.

19 JUDGE WARDWELL: Speak a little louder, I  
20 can't hear you.

21 MR. LEE: Bob Lee for the Applicant. The  
22 CST sits on a concrete pad that's above grade.

23 JUDGE WARDWELL: Okay. Are there any  
24 other tanks that aren't currently in the BPTIP that  
25 contain radioactivity that sit directly on the ground?

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1 MR. LEE: No, no. No.

2 JUDGE WARDWELL: That was a no from Mr.  
3 Lee, correct?

4 MR. LEE: Yes.

5 JUDGE WARDWELL: Thank you. So you're  
6 saying, Mr. Cox, that none of the buried -- I'm sorry,  
7 scratch that.

8 Back to Dr. Duquette, I also didn't see  
9 much in your testimony in regards to tanks. Are you  
10 satisfied that the tank program is sufficient for  
11 those six tanks at IP2 and 3 such that you have no  
12 technical criticisms of their program?

13 DR. DUQUETTE: I will be honest with you.  
14 I haven't looked at them carefully, but at the present  
15 time I have no technical criticism of those programs.

16 JUDGE WARDWELL: Just in case it happens  
17 to come up later, Mr. Cox, could I ask you whether  
18 there's anything under the current licensing basis  
19 that -- or any of your other licenses, for instance,  
20 that would inspire some action associated with the  
21 leakage of the hydrocarbons from any of those six  
22 tanks that happen to leak?

23 DR. DUQUETTE: I think maybe my IPEC  
24 colleague maybe ought to answer that, but I believe  
25 there's some state requirements that deal with tanks



1 that contain hydrocarbons.

2 JUDGE WARDWELL: Throw the tough ball over  
3 again, is that correct? Passing it on.

4 MR. LEE: Generally, there's a New York  
5 State regulation for demonstrating on an annual basis  
6 tank integrity. So there's a tank leak tightness test  
7 performed on these tanks and I'm trying to remember  
8 which unit, but one of the units is -- falls under the  
9 state regulation. One falls under the Westchester  
10 County regulation. But in either case, there is an  
11 annual tank integrity test required.

12 JUDGE WARDWELL: So it's not that you're  
13 cavalier about the potential releasing hydrocarbons at  
14 the plant. It just doesn't fall under license renewal  
15 nor does it really fall under NRC bailiwick anyway?

16 MR. LEE: Correct.

17 JUDGE WARDWELL: I'll switch to staff, I  
18 think. If, in fact, one felt that the need to contain  
19 radioactivity in a buried pipe was necessary, would  
20 either of you feel comfortable providing your expert  
21 opinion on the potential for a release from a leaking  
22 pipe exceeding a dose exposure? And if you aren't,  
23 that's fine, just to say you aren't.

24 MS. GREEN: This is Kim Green from the  
25 staff. I'm not comfortable with that. I'm not a

1 certified health physicist.

2 MR. HOLSTON: Restate your question. I  
3 listened to it, but I want to make sure I understand  
4 it.

5 JUDGE WARDWELL: And I don't think you  
6 have to be a health physicist. I can still understand  
7 why you wouldn't be comfortable, necessarily,  
8 answering it, but there's a dose exposure limit. What  
9 is the potential of a leaking buried pipe releasing  
10 sufficient radionuclides to add significantly to the  
11 ultimate dose exposures in your opinion?

12 MR. HOLSTON: I believe those are low. I  
13 talked to a health physicist contact, subject matter  
14 expert, when I was preparing my testimony just to get  
15 a feel. Again, like Ms. Green saying, I'm also not an  
16 expert in that area, but from discussions with them,  
17 there's adequate monitoring wells at that station. If  
18 there was a leak in an underground -- or buried  
19 piping, that it would be detected before material  
20 would release itself offsite, but again, a very, you  
21 know, that's not my heavy area of expertise.

22 JUDGE WARDWELL: Would anyone from Entergy  
23 feel comfortable answering that question?

24 MR. AZEVEDO: This is Nelson Azevedo from  
25 Entergy. No, I'm also not an expert in that area. I

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1 just amplify what Mr. Holston just said. There's a  
2 separate program with lots of monitoring wells on site  
3 that pick up leakage in case one occurs, but that's  
4 the extent I feel comfortable speaking to it.

5 JUDGE WARDWELL: Thank you.

6 MR. COX: This is Alan Cox. There's  
7 actually a separate NEI initiative, 07-07 that dealt  
8 with groundwater protection that is focused more on  
9 that aspect than on the buried piping aspect.

10 JUDGE WARDWELL: Thank you. Dr. Duquette,  
11 do you have any other final comments in regards to the  
12 issues we've just discussed under the attended  
13 functions?

14 DR. DUQUETTE: I don't think so, sir. No.

15 JUDGE WARDWELL: Thank you. Over to you  
16 guys if you have got any.

17 JUDGE KENNEDY: I do not, Rich.

18 JUDGE McDADE: Is it time for a break?

19 JUDGE WARDWELL: It is. We're entering a  
20 new subject area.

21 JUDGE McDADE: We've been going on for an  
22 hour.

23 JUDGE WARDWELL: It's going to take more  
24 than that.

25 JUDGE McDADE: It's up to you. It's

1 about 5:30 now. It might be an appropriate time for  
2 us to break for the evening until 8 o'clock tomorrow  
3 morning.

4 Before we break, are there any  
5 housekeeping matters that need to be taken up from  
6 Entergy?

7 MS. SUTTON: Yes, Your Honor. This is  
8 Kathryn Sutton. Any prognostication about the need  
9 for our cable experts here tomorrow?

10 JUDGE McDADE: I think Judge Wardwell is  
11 suggesting that's a negative.

12 MS. SUTTON: His laughter conveyed that.  
13 Thank you, Your Honor.

14 JUDGE WARDWELL: Don't I wish we could  
15 bring them in.

16 JUDGE McDADE: Are you sure?

17 JUDGE WARDWELL: I'm sure. Well, no, I'm  
18 not sure we'll get some frost tomorrow.

19 MR. SIPOS: And Your Honor, this is John  
20 Sipos. With the consequence of that, we could feel  
21 more assured that the transformer experts and  
22 testimony would definitely not start before lunch time  
23 on Wednesday.

24 JUDGE McDADE: Yes, I'm sorry.

25 MR. SIPOS: Thank you.

1 JUDGE McDADE: I'm sorry, I thought we had  
2 made that clear before, but I think you can say that  
3 the transformers, those witnesses don't need to be  
4 here until Thursday at the earliest.

5 MR. SIPOS: Thank you very much.

6 JUDGE WARDWELL: And we'll probably have  
7 an update every day.

8 JUDGE McDADE: So at this point, as far as  
9 cable, we're talking about Wednesday morning,  
10 transformers Thursday morning, and if that changes,  
11 it's not going to change to sooner. It may change to  
12 later.

13 Riverkeeper?

14 MR. MUSEGAAS: Nothing at this time, Your  
15 Honor.

16 JUDGE McDADE: The staff?

17 MR. TURK: Nothing, Your Honor.

18 JUDGE McDADE: We will be in recess until  
19 8 o'clock tomorrow morning.

20 (Whereupon, at 5:28 p.m., the hearing was  
21 adjourned, to reconvene tomorrow, Tuesday, December  
22 11, 2012 at 8:00 a.m.)

23

24

25

CERTIFICATE

This is to certify that the attached proceedings  
before the United States Nuclear Regulatory  
Commission

Proceeding: Entergy Nuclear Operations, Inc.  
Indian Point Units 2 and 3

Docket Number: 50-247-LR and 50-286-LR

ASLBP Number: 07-858-03-LR-BD01

Location: Tarrytown, New York

were held as herein appears, and that this is the  
original transcript thereof for the file of the  
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