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NOTE TO: File

FROM: Theodore Smith **/RA/**

SUBJECT: TRANSCRIPT OF FERMI-1 LICENSE TERMINATION PLAN PUBLIC MEETING

The document below is being submitted at this time for public release with the above date as the release date.

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

Title: Fermi Nuclear Plant License Termination  
Public Meeting

Docket Number: (n/a)

Location: Monroe, Michigan

Date: Tuesday, June 30, 2009

Work Order No.: NRC-2915

Pages 1-68

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING ON FERMI-1  
ENRICO FERMI NUCLEAR POWER PLANT  
LICENSE TERMINATION PLAN

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Tuesday, June 30, 2009

Monroe County Board of Commissioners Chambers  
125 East Second Street  
Monroe, Michigan

The above-entitled hearing was  
conducted at 7:00 p.m.

BEFORE: LANCE RAKOVAN, Facilitator

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P R O C E E D I N G S

(7:00 p.m.)

1  
2  
3 MR. RAKOVAN: Good evening everyone.  
4 My name is Lance Rakovan. I am a Communications  
5 Specialists at the U.S. Nuclear Regulatory  
6 Commission, or NRC, as you'll hear it called NRC  
7 tonight. And it is my pleasure to facilitate  
8 tonight's meeting.

9 I am going to do my best to make sure  
10 that we keep on track, answer your questions,  
11 hear your comments, and basically make the  
12 meeting as productive as possible for everyone.

13 It is certainly my pleasure to visit  
14 this area. I grew up just a little bit south, so  
15 I actually pulled in a little early so I could  
16 visit with friends and family. So when I say it  
17 is "my pleasure" to be here, I am not joking  
18 about that.

19 The purpose of tonight's meeting is to  
20 provide you with an opportunity to get some  
21 information about the proposed License  
22 Termination Plan for Fermi 1, and for you to give  
23 us your comments on that plan. Today's meeting  
24 is just one of the ways that you can provide  
25 comments, and you'll be hearing more about that

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1 soon.

2 The meeting tonight is essentially  
3 going to have two parts. First, we'll hear some  
4 presentations on the NRC license termination  
5 process, DTE Energy's License Termination Plan  
6 for Fermi 1, and NRC's Decommissioning, Oversight  
7 and Inspection activities.

8 There were copies of the NRC  
9 presentations on the same table as the signing  
10 cards outside. In case you didn't grab one I'll  
11 bring some around and just kind of hold them up.

12 So just get my attention and I'll make sure you  
13 get a copy as we get started.

14 We're going to try to keep the  
15 presentation short so we can get to the real  
16 reason tonight, which is to listen to you, get  
17 your comments and answer your questions. There  
18 were yellow and blue cards that was asked that  
19 you fill out when you came in, and I think just  
20 about everybody did.

21 We are going to start, once we get to  
22 the comment period, with the people who signed up  
23 for the yellow cards, give them an opportunity to  
24 approach the microphone and give us their comment  
25 on the Decommissioning Plan or ask some

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1 questions.

2 Please keep in mind that we're going  
3 to do our best to answer your questions, but we  
4 may not have the NRC expert here with whatever  
5 topic you ask on. So if we can't answer your  
6 question at the meeting tonight, we'll do our  
7 best to get your contact information and get back  
8 to you with the information that you would like.

9 We are transcribing tonight's meeting,  
10 which is why I am speaking into a microphone,  
11 even though we're in such a small setting. So if  
12 you would please make sure that you use a  
13 microphone every time that you ask question or  
14 make a comment, that will help us keep a clean  
15 transcript of tonight's meeting. You can also  
16 help us by silencing or putting your cell phones  
17 or pagers or other devices on vibrate so those  
18 don't go off during the meeting, keeping side  
19 conversations to a minimum, and again, making  
20 sure that you are using a microphone each time  
21 that you make a comment.

22 One item, that I hoped you picked up  
23 on the table outside, is our Public Meeting  
24 Feedback form. The NRC uses these to kind of get  
25 an idea of how our public meetings are going, and

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1 if you fill it out you can drop it in the mail.  
2 It's no postage on your part, and just let us  
3 know what you thought of the meeting tonight,  
4 maybe some suggestions on how we could improve  
5 things. We really do take those into account.  
6 So if you could take a moment to fill that out we  
7 would really appreciate it.

8 Just in case you weren't aware,  
9 restrooms are back out the door you came, keep on  
10 heading to your left and make a U-turn and  
11 they'll be on your left.

12 The presentations are going to be on  
13 this side screen over here. So if you are in a  
14 seat that you can't see them very well, I suggest  
15 if you really do want to see them that you move  
16 to a place that you can see them. Again, we have  
17 copies of the NRC presentations so you might not  
18 necessarily need to see the screen to follow  
19 along. But I just wanted to warn you that that  
20 is where the presentations are going to be seen  
21 tonight.

22 I wanted to take a moment to introduce  
23 some of the NRC staff in attendance tonight.  
24 First, we have Drew Persinko. Drew is a Reactor  
25 Decommissioning Manager at the NRC. Ted Smith,

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1 is the Project Manager for Fermi 1. And finally,  
2 Jeremy Tapp. Jeremy is a Reactor Decommissioning  
3 Inspector out of Region III office which is near  
4 Chicago.

5 Although this is an NRC meeting we  
6 wanted to make sure that you got the information  
7 that you needed about DTE Energy's plan, so we  
8 have a representative from DTE Energy here  
9 tonight who is going to be speaking as well. Her  
10 name is Lynne Goodman, and I believe that Wayne  
11 Colanellow is going to be introducing her.

12 With that, I am going to hand things  
13 over to Drew, and I am going to be back once we  
14 start the second part of the meeting.

15 I'd ask that you hold your questions  
16 until everyone has finished speaking, and that  
17 way we can fully open the floor to questions and  
18 comments once we're done with the presentations.

19 So, thank you.

20 Drew.

21 MR. PERSINKO: Good evening. My name  
22 is Drew Persinko and I am the Branch Chief of the  
23 Decommissioning Branch at the NRC Headquarters.  
24 My branch has licensing and project management  
25 responsibilities for the Fermi 1 nuclear

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1 facility.

2 Detroit Edison has submitted its plan  
3 to terminate the license for the Fermi 1 unit,  
4 and my branch and the NRC has begun review of the  
5 plan. Part of our review process includes having  
6 a meeting with the public, which is why we're  
7 here tonight.

8 As Lance said, tonight we are going to  
9 discuss the NRC's processing criteria for  
10 licensing termination, and we're also going to  
11 discuss the NRC's inspection process and the  
12 inspection program. And as Lance said, Detroit  
13 Edison will talk -- briefly discuss the plan  
14 itself, and then we will obtain comments form the  
15 public, we'll open it up for comments.

16 I'd like to introduce the rest of the  
17 NRC staff who is also here tonight that Lance  
18 didn't introduce. We have Bruce Watson, who is a  
19 Senior Health Physicist, Steve Geeble (ph) who is  
20 a Health Physicist also, Matthew Meyer,  
21 Hydrogeologist, Hans Ault, a Senior Assistance  
22 Performance Analyst, Sarah Michonski, our  
23 Licensing Assistant. So, with that, I am going  
24 to turn this over to Ted Smith. Thank you very  
25 much.

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1 MR. SMITH: Good evening. Thank you  
2 all for coming to participate in the public  
3 comment process. As Lance said, our primary  
4 purpose is to hear your comments tonight, but to  
5 kind of kick that off we want to talk about how  
6 the process works, what is in a license  
7 termination plan, and then Jeremy will come and  
8 talk about the oversight activities and then  
9 we'll do the comment section.

10 So, how does decommissioning work.  
11 There is a handout on the table, and there were  
12 posters, that describe in a generic fashion, the  
13 decommissioning process for a power reactor.  
14 It's a stylized representation and doesn't  
15 represent exactly, but it does give you an idea  
16 of how that process works, and these are the same  
17 kind of steps repeated.

18 So, operations cease, and as you can  
19 see noted here for Fermi 1, that official note  
20 certification was November 1972. After that,  
21 fuel is removed from the reactor. That was in  
22 '73. After that there's a submission of a  
23 planned decommissioning report. And depending on  
24 the timing, that document can have a couple  
25 different names. But for Fermi, it is a

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1 Decommissioning Plan.

2 As part of that Decommissioning Plan  
3 there's some requirements. There was a  
4 requirement for a public meeting. There was a  
5 public meeting on April 22nd '98, and we took  
6 public comments about that phase of the  
7 decommissioning process. And I think some of the  
8 folks may be here tonight that were at that '98  
9 meeting.

10 They have to identify the  
11 decommissioning option. Fermi's decommissioning  
12 option has been safe store, and that's why  
13 they've been in safe store condition since that  
14 shutdown in '75. That's why you see the time  
15 difference now.

16 There must be a site specific cost  
17 estimate. That was provided in July '90, and  
18 some later dates where other information was  
19 provided.

20 I note here that NRC approval is not  
21 required for that report. There are some  
22 requirements about what you can do after you've  
23 submitted that report, which I'll highlight next  
24 in the next slide.

25 After that report is provided the

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1 licensee then goes and starts doing  
2 decommissioning activities consistent with what  
3 they've indicated they plan to do. And so that's  
4 been an ongoing effort since that time.

5 When they get within two years minimum  
6 of wanting to terminate their license, they  
7 submit a Decommissioning Termination Plan. They  
8 submitted their's on March 25th.

9 Requirements for the License  
10 Termination Plan: There must be a public meeting  
11 to solicit public comments, which is part of why  
12 we're here tonight. Certainly, we want to do it  
13 not just because it's required but because it's a  
14 good idea to get the -- hear the local concerns  
15 of the local public about activities at the site.

16 NRC approval is required for that  
17 document, but it's incorporated by license  
18 amendment. And part of that license amendment --  
19 there's a process that will control how the  
20 licensee can go about doing the termination and  
21 what kinds of activities might trigger them to  
22 have to come back to NRC. But as long as  
23 they're consistent with their plan they proceed  
24 through the decommissioning phase of it.

25 And so once we approve the license

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1 termination plan they'll begin implementing that  
2 plan. They'll begin conducting surveys, and  
3 we'll begin our oversight inspection process.

4 And then, finally, when that's  
5 completed and they've demonstrated that they've  
6 met our criteria for cleanup, the license is  
7 terminated.

8 So, just going back to thinking about  
9 the decommissioning activities, which are the  
10 things that the licensee has been doing since  
11 they submitted their decommissioning activities  
12 report. They can do lots of decommissioning  
13 work, as long as it doesn't trip these three  
14 broad requirements, which is: It doesn't cause  
15 them to have a restricted release of the site,  
16 there's no new significant environmental impacts  
17 that haven't been previously considered, and  
18 there's no expectation of not having sufficient  
19 money to complete the decommission work.

20 And so as long as the licensee  
21 complies with those broad criteria, they can do  
22 the decommissioning. And in fact, they've been  
23 doing a lot of work over the years at Fermi 1.

24 So what has to be in a license  
25 termination plan? As specified in the CFR

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1 citation there, they have to characterize the  
2 site conditions, including a historical site  
3 assessment. They provided that in Chapter 2 of  
4 their plan. They have to have a list of the  
5 remaining activities that need to be done.  
6 That's in Chapter 3. They give plans for how the  
7 additional remediation that needs to be completed  
8 before they're ready to terminate. That's  
9 indicated here, Chapter 4.

10 They also have to provide plans on how  
11 they're going to do their final surveys. It's a  
12 very elaborate process of statistical evaluation  
13 of this site to confirm that it meets our license  
14 termination criteria. They have provided an  
15 updated estimate for the cost for all that work,  
16 and they give us updated environmental  
17 information so that we can make our evaluation of  
18 the environmental impacts -- potential  
19 environmental impacts of their action.

20 So the criteria that they must comply  
21 with in the plan and what the plan demonstrates  
22 is that they'll meet our unrestricted limits as  
23 specified in 10 CFR 20.1402. Which says: "25  
24 millirem per year total dose, above background."

25 I know that's kind of a complicated term. I did

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1 bring some booklets on radiation to help explain  
2 that. They were at the table as you came in. If  
3 you want to understand some context for what that  
4 number means, I think that will be helpful for  
5 you.,

6 It also needs to be as long as  
7 reasonably achievable. And, you know, in a quick  
8 word what that means is, things that they can do  
9 that are a reasonable expectation that aren't  
10 exorbitantly expensive that can make the dose  
11 even lower than 25 are expected to be done. And  
12 it needs to consider all pathways. It needs to  
13 be from any media that could potentially be  
14 contaminated by a site. If it's in air, ground,  
15 water, as in all pathways it does, which not  
16 every agency regulates that exactly the same way.

17 But that's our criteria in Part 20.

18 So, how does the license amendment  
19 review process -- remember, we approve the  
20 termination plan by a license amendment. So  
21 there will be an amendment to their license. And  
22 so, like other license amendments that are large,  
23 we offer an acceptance review. And that's for a  
24 license termination plan, that's a 90-day period.

25 We have been doing that acceptance review and

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1 that acceptance review is an evaluation at a very  
2 rough level if the licensee's application is at  
3 least responsive to the requirements in the  
4 regulations. Do they have something that  
5 responds and talks about the sections that's  
6 required. In fact they do, as the previous slide  
7 show. They've got a chapter on each of the  
8 sections of requirements.

9 We've completed that acceptance  
10 review. That will be noted in the Federal  
11 Register. The date here of June 30th. I think  
12 we just missed the cutoff, and so it will  
13 actually go out -- it should be July 14th.  
14 That's part of a bi-weekly set of notifications  
15 that come out in the Federal Register.

16 What that notification provides is a  
17 60-day public comment period. And so if you're  
18 wanting to look at the license termination plan,  
19 it's a big document. We don't expect you to have  
20 been able to read it tonight and look at it. But  
21 there's CDs on the back table, and there's also  
22 some -- I think there was in the newspaper ad,  
23 the ML number, which is the way you can  
24 electronically find that document at NRC's web  
25 page in the public reading room. You can go look

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1 at that and there's a 60-day period plus two  
2 weeks for which you can go and provide us any  
3 comments or questions you might have about it.

4 So after that acceptance review is  
5 done we begin the technical review, and that's  
6 been ongoing since we've completed the acceptance  
7 review. And the staff that Drew introduced are  
8 in the process of looking through that in some  
9 detail. We expect to have discussions and  
10 exchange of correspondence on some topics where  
11 we've got some questions about things. So that's  
12 going to be an ongoing process.

13 If we find their application  
14 acceptable, ultimately we approve that by  
15 amendment, and that will incorporate the LTP.  
16 Our time line for doing that, our goal is about  
17 one year from the time of submission.

18 So just a few notes about the way we  
19 do that technical review. It is specified by  
20 regulation to protect the public environment, and  
21 those are, as we see, as quoted here:

22 "Not inimical to the public health and safety of  
23 the public, and will not have a  
24 significant effect on the quality of  
25 the environment."

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1 Further amplifying that, there's a lot  
2 of NRC guidance that is available, NUREGs. That  
3 is also accessible on our NRC web page  
4 electronically if you want to see what that  
5 guidance is for everyone to see.

6 I listed a few of the key documents  
7 that we use when we conduct our reviews. There's  
8 a standard review plan for license termination  
9 plans. That's NUREG-1700. There's a three-set  
10 volume on Consolidated Decommissioning Guidance,  
11 there is additional guidance on the environmental  
12 reviews that we do, and a generic environmental  
13 impact statement for decommissioning. They're  
14 all listed here.

15 The disciplines of the folks who are  
16 doing the technical reviews, that Drew  
17 introduced, the guys that are here tonight, just  
18 before the meeting I briefly added up the years  
19 of experience of the team that's going to be  
20 doing this review, and it came up to about 125  
21 years of experience in their specialties. And  
22 you can see their specialties are listed at the  
23 bottom of the slide.

24 They are, Health physics, performance  
25 assessment, financial review. The financial

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1 review person actually isn't here, but there is a  
2 significant effort on financial reviews.  
3 Groundwater hydrology. And we bring in others as  
4 needed if questions arise that we need other  
5 specialties.

6 If there's another question, I just  
7 wanted to point out another NUREG document that  
8 may be useful to you. It's available  
9 electronically. The URL is there on the page.  
10 It dates from about 2000, but it's got a lot of  
11 good information that's still applicable, to just  
12 generic questions you might have about the  
13 decommissioning process. So I'd recommend that  
14 to you to look at if you just want to understand  
15 a little more. And certainly you can ask staff  
16 anytime if you've got other specific questions.

17 In fact, I want to include my boss and  
18 I's phone numbers and e-mail addresses. If you  
19 have any questions, contact us at any time. And,  
20 that's all I have. Thank you for your time.

21 MR. PERSINKO: I think that DTE Energy was  
22 going to give you some information about their  
23 decommissioning plan.

24 So, if you guys would like the stage for a  
25 short time.

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1 MR. COLANELLOW: Good evening, and thank  
2 you everyone. I'm Wayne Colanellow. I'm Director of  
3 Support at Fermi 2 station. I'm responsible for most  
4 of the online (sic) functions at the station, one of  
5 which includes Fermi 1. And Lynne Goodman, who I'll  
6 introduce, is our Manager of the Fermi Decommissioning  
7 project, and she's going to have some information for  
8 you tonight, so.

9 MS. GOODMAN: Thank you, Wayne. Good  
10 evening. With me today are also Ken Lindsey, the  
11 Fermi 1 Health Physicist, Christie Aldridge-Nunn,  
12 also from the Fermi 1 staff, and I'd also like -- I'm  
13 also happy to see Don Ferencz, Evelyn Madsen, Phil  
14 Harrigan, Dave Masserant, Earl Page, all who worked at  
15 Fermi 1 during its operation. And, they're in  
16 attendance because they are still interested in what's  
17 going on at Fermi 1 today.

18 I thank you all for attending and I am  
19 going to talk about the goal of the decommissioning  
20 project. I'll briefly discuss each of the chapters  
21 and our license termination plan.

22 Building on what Ted Smith discussed, the  
23 plan itself is about 500 pages long, and Ted supplied  
24 some disks out there for you to pick up if you want,  
25 and it's on the NRC website. We also have a brochure

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1 out there, a one-pager that's a summary of this  
2 presentation and our license termination plan.

3 I am going to start with the goal of our  
4 decommissioning project. Our goal is to perform  
5 activities to remove the radioactive materials to  
6 achieve Fermi 1 license termination. Plain and  
7 simple: We want to do this and we are doing this in a  
8 safe and controlled manner. And by "safe and  
9 controlled," by safety I mean workers safety,  
10 radiological safety, public safety. Safety is very  
11 important to everything we do, as well as  
12 environmental protection as we go about our  
13 activities.

14 Fermi 1 has a very interesting history.  
15 It's an experimental sodium-cooled fast breeder  
16 reactor. It was owned by the Power Reactor  
17 Development Company during its operation. It was the  
18 largest breeder reactor in the world in 1963 when it  
19 first started up. It was designed for 430 megawatts  
20 thermal, and operated at its first core design of 200  
21 megawatts thermal.

22 It was one of the first of a kind. People  
23 came from all over the world to study here and learn  
24 about nuclear power, about breeder reactors, and then  
25 bring that technology back to their own countries.

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1 I've met some of them.

2 The plant was permanently shut down in  
3 1972, and partial decommissioning was performed at  
4 that time. For example, the nuclear fuel was sent  
5 offsite. Since then it's been in safe storage with  
6 monitoring, and we're currently in the final phase of  
7 decommissioning.

8 I thought I'd show you an aerial view of  
9 the site. This little portion there, which is about 7  
10 acres, is Fermi 1. The rest of the site is basically  
11 the Fermi 2 site, Fermi 2 plant over here. So when we  
12 talk about license termination we are talking about  
13 specifically terminating the license for this area  
14 right around here.

15 Ted discussed some of the Nuclear  
16 Regulatory Commission's guidance. We wrote our  
17 license termination plan based on the guidance, and  
18 also the experience of other plants going through  
19 nuclear decommissioning. The plan describes how we're  
20 going to meet the license termination criteria. We do  
21 plan to terminate the license with the building  
22 standing, and afterwards the area where the Fermi 1  
23 plant facility is remains part of the Fermi 2 site.

24 I'm now going to go through a little more  
25 detail about what's in the license termination plan.

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1 The first chapter is a description of the facility,  
2 the site, and the surrounding area around the site.  
3 The second chapter is the characterization. It  
4 contains many survey results. Most of those surveys  
5 included were performed last year. We surveyed to  
6 determine the extent of the contamination, what areas  
7 are currently contaminated, and how much the  
8 contamination is. We did it building by building,  
9 room by room, throughout the plant.

10 We've also been monitoring groundwater  
11 around the plant for several years. We installed some  
12 wells around the perimeter of the plant, especially  
13 between the plant and the lake. And we have detected  
14 no contamination from the operation of Fermi 1 from  
15 our sampling.

16 The Chapter also addressed the history of  
17 the facility. Especially concentrates on which areas  
18 could have been contaminated by the plant operation.  
19 And so we take this information on our surveys, the  
20 history of the plant, to determine what could be a  
21 contaminate, what has the potential for being  
22 contaminated. From there we help design a final  
23 status survey.

24 The next Chapter is on the remaining  
25 dismantlement. During this chapter we talk about what

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1 it is we still have left to do. We estimate the  
2 amount of radioactive waste we're going to dispose of  
3 during the rest of the project, what is the  
4 occupational dose.

5 Currently what we're working on is the  
6 reactor vessel and large component removals. We're  
7 also currently working on removing our liquid waste  
8 system, and also few pool liners. So we have a lot of  
9 work going on at the plant now.

10 The fourth chapter talks about remediation  
11 plans and methods. It talks about what methods we  
12 might use to remediate, basically cleanup where we  
13 have contamination, so that we will meet the proposed  
14 residual radioactivity levels.

15 When we talk about methods: Example  
16 methods are scrubbing the wall, shaving concrete, if  
17 we have concrete that is contaminated. We also  
18 address our method of determining whether additional  
19 actions are reasonable to reduce the remaining  
20 contamination below the 25 millirem criteria per year.

21 The ALARA, which Ted Smith earlier discussed, and  
22 what was the reasonable achievable level.

23 The next chapter is on our final radiation  
24 survey plan. This is the heart and soul of our  
25 decommissioning plan. It tells you all, tells the

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1 NRC, how we plan to demonstrate Fermi 1 will meet the  
2 release limits. We are going to take thousands of  
3 measurements, we're going to be taking soil samples,  
4 concrete samples.

5 We'll have very detailed instructions on  
6 how to do this surveying. We have a quality assurance  
7 program specifically for our final status survey;  
8 involves things such as duplicate measurements of the  
9 same area by a different technician, sending duplicate  
10 samples to the laboratory to see if the laboratory  
11 comes with the same results. It's a very detailed  
12 quality assurance program as well as the statistical  
13 methods of analyzing the data.

14 The next chapter provides the scenarios  
15 for meeting the NRC's license termination criteria of  
16 25 millirem per year dose level for members of the  
17 public. This dose level is too low to measure  
18 directly. Background radiation on the average in the  
19 United States is 360 millirem per year. So we're  
20 talking 25 millirem per year compared to 360 millirem  
21 that's already in background and in natural sources.  
22 Very hard to measure. Just for example, the 25  
23 millirem per year, that's about the same radiation  
24 you'd get if you had one chest x-ray per year, to put  
25 it in perspective.

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1           So what we do is we develop criteria that  
2 we can measure, and for that we use two scenarios.

3           One scenario assumes that a farmer moves onto the  
4 site. The farmer plants crops, eats the produce,  
5 drinks the water, raises livestock, and we look at all  
6 the pathways that could result in exposure to that  
7 farmer.

8           The second scenario we look at assumes a  
9 worker works in the buildings after we leave, and  
10 renovates the buildings. And again, we look at what  
11 radioactivity level, what contamination level would  
12 correspond to a dose of 25 millirem per year for  
13 either the farmer that's living there, or the worker  
14 that's working in the buildings. And from there we  
15 end up with what is the criteria that we can measure  
16 that correlates the 25 millirem per year that is our  
17 license termination criteria that we can compare to in  
18 our final status surveys.

19           We do provide an update of our  
20 decommissioning cost. It also addresses the  
21 combination of the trust fund and guarantee that  
22 provide assurance that Detroit Edison will have  
23 sufficient funds to perform the remaining of the  
24 decommissioning.

25           The last chapter is a supplement to our

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1 environmental report. It addresses the interaction of  
2 the remaining activities with the environment. We  
3 basically look to see whether or not we are bound by  
4 what we are going to be doing by the generic  
5 environmental impact statement for decommissioning,  
6 which Ted Smith earlier mentioned. And where we are  
7 not, we address that separately.

8 We have concluded that there is no  
9 significant environmental impact based on remaining  
10 decommissioning activities. We also looked at the  
11 historical significance of the facility under this  
12 Chapter, and we did determine that Fermi 1 is  
13 historically significant. We have provided to the  
14 State Historical Preservation Office for review a  
15 report on the historical significance of Fermi 1. But  
16 with us decommissioning with the building still  
17 standing, we will have minimal impact on the  
18 historical significance of the facility.

19 I've talked about how much we have left to  
20 do. Now I'll go over the time line. This is an  
21 approximate time line. We're going to be doing the  
22 reactor vessel and large component removal between now  
23 and next spring. We expect to continue the component  
24 removals through the end of next year. They will be  
25 doing decontamination and surveying into 2011. In

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1 2011 submitting our final reports on the results of  
2 our final status survey to the NRC. And if they deem  
3 it's ready, then we expect them to terminate our  
4 license in 2012.

5 The NRC does provide oversight, both the  
6 reviews that Ted Smith mentioned and Jeremy Tapp will  
7 talk about the inspections. Those inspections will  
8 be continuing. One inspection has already been  
9 conducted on our final status survey methodology. We  
10 had a reason to do an excavation onsite, and so the  
11 NRC had the opportunity to come out and monitor how we  
12 write our survey plans and how we perform our  
13 surveying.

14 We also do internal audits. Some of our  
15 internal audits are performed by representative from  
16 another decommissioning facility, so we can have an  
17 outside look at ourselves. And it was reviewed by the  
18 State of Michigan.

19 So, that's what our license termination  
20 plan is about and what we're planning on doing. And  
21 with that, I'll turn it back to Lance.

22 MR. RAKOVAN: Okay. We've got one more  
23 quick presentation that we wanted to go over before we  
24 open up the floor.

25 Jeremy.

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1 MR. TAPP: Good evening everyone. My name  
2 is Jeremy Tapp. I am out of Region 3, which is closer  
3 to Chicagoland, and we do both inspections for the  
4 Midwest region, so Fermi comes under our purview.

5 I've been inspecting for about three years  
6 out of Region 3, and just transitioned 10 months ago  
7 over to Reactor Decommissioning Inspection.

8 First thing I'm going to go over is some  
9 of the general objectives that we have for our  
10 inspection program. I will go into a little more  
11 detail on the focus of when our inspections are going  
12 to be over at Fermi. And then look a little bit more  
13 of how we kind of plan and do our inspections.

14 First objective that we have: Obtain  
15 information through direct observation and  
16 verification and licensee activities. I want to point  
17 out that obtaining information is used to assess the  
18 performance of the licensee so we can make a judgment  
19 on how well the performing activities, and then  
20 depending on that, how often we come out to do the  
21 inspections.

22 And we are onsite for these observations.  
23 We plan those the year before, how many times we're  
24 going to come out through communication with the  
25 licensee so we know when they're in need of performing

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1 work and we always have good communication between the  
2 two, ourselves and also Fermi.

3 Now also in verification of the licensing  
4 activities, we're going to be looking at are they  
5 also implementing the LTP, or the license termination  
6 plan with those inspections. So when they approve it  
7 at headquarters, and that goes into their license,  
8 then that's part of their -- I guess what they're  
9 supposed to be doing. So we make sure that they're  
10 doing it in accordance with that.

11 And when we do inspect decommissioning  
12 activities we look at -- there's a lot of things that  
13 the licensee is performing all the time, a lot of work  
14 going on. So we want to inspect what we had the most  
15 recent or significant decommissioning activities so  
16 we get the most, I guess, bang for your buck. And we  
17 do pick these decommissioning activities based on risk  
18 such as, you know, activities that would have a lot of  
19 radiological significance, would have a lot of public  
20 interest. So we want to be out there for that to make  
21 sure those are going well, safely, and in accordance  
22 with their license termination plan, their procedures,  
23 and our regulations.

24 Ensuring decommissioning activities are  
25 adequate and in accordance with the regulatory

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1 requirements. I spoke to that as well in my previous  
2 comments, so we'll go onto the next one.

3 Two more objectives: One, verify residual  
4 radioactivity is reduced to a level that permits  
5 unrestricted release of property and termination of  
6 license. This is the ultimate goal of the project, is  
7 to decommission the reactor and then have the site  
8 recertified (sic) or be a potential that it could be  
9 released for unrestricted use, and as Lynne said, it  
10 would be for the 25 millirems, we would be assuring  
11 that there is at least that much ALARA. And we also  
12 want to ensure that safety decommissioning workers,  
13 members of the public, and the environment. And those  
14 are our goals at the NRC. That's why we're here, what  
15 we're working for.

16 Now, just a little background on Fermi.  
17 Compared to other sites that have been going through a  
18 decommissioning process, Fermi has a very low amount  
19 of total radioactive material onsite compared to other  
20 sites decommissioning. So this would make it a little  
21 bit, you know, easier on their part and ours as well,  
22 to be able to have assurance that they'll be able to  
23 clean this up to what we expect them to do it to. And  
24 for unrestricted release.

25 For focus of the inspection program, it

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1 kind of goes back. It's all similarly related to the  
2 general objectives I just talked to before. But we  
3 will verify that licensing activities, organization,  
4 and controls are effective to provide reasonable  
5 assurance that decommissioning can be conducted safely  
6 and in accordance with all our regulatory  
7 requirements.

8 And just to give you a couple examples for  
9 activities that we will watch. We'll be watching when  
10 they will be doing work in the reactor building. We  
11 are going to be taking apart the reactor vessel,  
12 cleaning up, doing deconning or activities, and we  
13 want to make sure those are done safely. So that's  
14 our number one thing that we're looking at right away  
15 is, are they performing these safely. And we're  
16 always looking around, making sure that everything is  
17 in a safe condition; the workers are following the  
18 procedures, that they have the correct protective  
19 equipment to ensure their safety.

20 For the organization, we want to make sure  
21 that the organization or the management-type tier,  
22 that they are conducting adequate oversight of the  
23 activities going on in the plant. One of those could  
24 be procedure adherence: Are they making sure that the  
25 workers are going towards the procedures, making sure

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1 they're looking at them, using them throughout their  
2 job activities. And that ensuring that there's  
3 trained individuals performing these activities, that  
4 they're qualified to do the work that they're doing.  
5 And that they're always communicating a strong safety  
6 focus. Safety verse production: Is it being  
7 communicated at the site that safety is our goal.

8 For controls that we look at, they can be  
9 both physical controls, they can also be  
10 administrative controls. Example, a physical control  
11 that we would be looking at if there is work being  
12 done in the plant and it's causing airborne  
13 radioactivity: Is it controlled by barriers, physical  
14 barriers; are the workers wearing breathable units so  
15 they're not breathing in the contaminated material.

16 For administrative controls, we're looking  
17 at the procedures and making sure they're following  
18 them, as I spoke to before. Those would be an  
19 administrative control and making sure that everyone's  
20 safe.

21 Ensuring the licensee radiation and  
22 radioactivity measurement programs provide accurate  
23 quantification and classification of radioactivity.

24 As Lynne mentioned, they're going to be  
25 performing final status surveys. And in those final

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1 status surveys we will make sure that the information  
2 that they're getting, make sure it's trusting and  
3 reliable information. So what we do is we come out as  
4 a third party in order to verify the results that  
5 they're getting. And so we'll perform side-by-side  
6 surveys. While they're actually doing them we'll be  
7 doing it at the same time, making sure that we're both  
8 getting the same readings.

9 We'll be doing independent surveys so that  
10 they finish a survey, have a quality assurance go  
11 over review and make sure it's okay, and then we go  
12 out and we see if we get the same results.

13 And that would be mostly done in a  
14 building type setting. And we have our own equipment  
15 that we bring out as well, so we're not using their  
16 equipment to do the same sort of surveys.

17 If there's any land or soil that they had  
18 contamination in it, we'll come out, perform a  
19 sampling of that soil, and we send ours to an  
20 independent -- or not a lab that the licensee will be  
21 using, but we'll be sending that to ORISE, Oak Ridge  
22 Institute for Science and Education -- that's our  
23 contract laboratory -- and seeing what results they're  
24 getting compared to ours.

25 And I just want to reiterate that we would

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1 not be releasing the site before we would approve  
2 their final set of surveys and approve the license  
3 termination. So we'll have a final check there before  
4 the site gets released.

5 We also verify that licensing documents  
6 are adequately maintained -- or implemented and  
7 maintained and reflect the size of decommissioning.  
8 As I talked before the procedures are barrier,  
9 control, administrative barrier for workers' safety,  
10 public safety, and the environment.

11 A lot of times we can't be out for every  
12 single activity that's going on at the site. So  
13 records and procedures are relied upon, that we have  
14 assurance that they will be doing it this way the  
15 entire time, even if we're not there. So we want to  
16 make sure that these procedures are reasonable, they  
17 are consistent, and that when we come back to look at  
18 those at our onsite inspections, that we can see what  
19 they've done when we were not there, have a good  
20 record of that. And we do look at the activities that  
21 they perform when we're not there, but records that  
22 they have.

23 And another thing I would like to point  
24 out with procedures and the program in place, that a  
25 lot of times there can be changing of employees at the

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1 licensee's site, and when you have strong procedures  
2 and a strong program in place, then you can assure  
3 that with the next person coming on board being  
4 trained, they have those procedures right there  
5 waiting for them that will help them do their job that  
6 much better and that much quicker. So to make sure  
7 that when we look at that, that the procedures they  
8 have in place are good and we'll be able to make sure  
9 from then on they'll be able to have a good program in  
10 place.

11 Also, we will ensure that NRC project  
12 oversight and inspection resources are effective,  
13 consistent, and appropriately focused. We want to  
14 maximize the amount of information that we get during  
15 our visits. We don't want to be out there and then  
16 not have a plan what we're going to do. So we are  
17 constantly communicating with the licensee, with our  
18 managers in the region on our plan of the inspection,  
19 the focus of the inspection, and then also with the  
20 results of our inspection.

21 And all this planning is captured in a  
22 master inspection plan for on a yearly basis. And  
23 I'll talk about that in more detail in a later slide.

24 But basically we want to make sure that all that  
25 we're doing is effective and consistent and proper

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1 focus is there so that we don't waste any time that we  
2 have on site.

3           Going to the inspections. We call them  
4 performance based inspections. So depending on the  
5 performance of the licensee that's where we want to  
6 focus our attention when we're out on site. We want  
7 to take a balanced look at the cross section of  
8 licensee activities important to the conduct of safe  
9 decommissioning. And the balance can be changed each  
10 time you're out there, depending on what activities  
11 we're looking at. What, you know, if there have been  
12 any deficiencies in some program areas, we can take a  
13 larger look at that. But we want to be flexible in  
14 how -- what we want to look at while we're onsite, but  
15 also balance that we don't leave anything out.

16           Our schedule is based upon decommissioning  
17 activities being planned or performed, and that comes  
18 with the communications that we have at the site. We  
19 have monthly phone calls with the site to get data,  
20 and then planned activities. If things are changing  
21 they call us, and if we have some, we call them. So  
22 we're always in constant communication to make sure  
23 we're out there for any significant activities that we  
24 would want to watch.

25           We also want to provide for flexibility in

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1 the application inspection resources to promptly  
2 address any unexpected issues or problems. So,  
3 there's multiple inspectors in the region that can  
4 perform these same inspections. So if the lead  
5 inspector for a site wasn't able to come out for any  
6 certain reason, he's on another site inspection or  
7 something else, we're going to be flexible in the  
8 region in order to get the right person out there to  
9 do the inspection when we need to. And we also can  
10 get supplemented by headquarters as well with  
11 personnel from there if we really are in a bind.

12 This just goes over the core inspection  
13 areas that we look at when we're out there. I've  
14 talked about most of these throughout the  
15 presentation. Organization, management controls,  
16 quality assurance. We do look at their quality  
17 assurance group, look at what they do. An example  
18 would be, they do self-assessments at the site. We  
19 might look at some internal audits that they perform  
20 on the groups, make sure those are being done on an as  
21 required basis by their license.

22 Maintenance and surveillance. Any  
23 maintenance activities, surveillance activities on the  
24 site, we verify they're being performed on the  
25 required periodicity.

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1           Radiation protection. That's one of the  
2 largest areas that we look at since most of the work  
3 has radiological hazards involved with it, and we make  
4 sure that no one's getting any dose that is not  
5 detected.

6           And for the final site surveys, radiation  
7 protection is one of the largest sweeps there in order  
8 to make sure the site's being cleaned up to the route  
9 requirements.

10           Security. We do a review of security in  
11 the site when we're doing plant tours. And safety  
12 evaluation. Sort of if they're doing non-routine, you  
13 know, maybe radiology complex work. Do they need to  
14 do -- evaluate if they need to do a safety evaluation  
15 and then we look at that and make sure that they've  
16 planned everything accordingly.

17           In discretion inspections. That kind of  
18 comes out of the performance based inspections. If  
19 there's something that we really need to look at, do  
20 we need to augment with more people, do we need to  
21 more of a vertical look instead of a horizontal across  
22 the board, look at one area really hard. And if we  
23 need to evaluate any certain concern, we'll go ahead  
24 and do an inspection on that.

25           For our master inspection plans. We

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1 annually develop this. It's based on what the  
2 licensee's performing at the time. And we plan this  
3 for resource allocation from headquarters, make sure  
4 we have the amount of resource that we need to perform  
5 the inspections that we're planning for the year.  
6 Which they can be changed. It's not set in stone, so  
7 if we need to go out different times, more times, then  
8 that's what we'll do.

9 This current year we had planned for three  
10 inspections, and we performed one back in April of  
11 this year already. The plan is communicated, it's  
12 communicated to regional management, it's communicated  
13 to headquarters of the NRC, to licensee personnel,  
14 they understand what our activities are going to be.  
15 And it's also communicated to state and county  
16 officials, so they understand what our role is and  
17 what we're going to be performing for the year.

18 And this will put or contact information.

19 Dr. Peter Lee's our Lead Inspector for Fermi, myself,  
20 and Prema Chandrathil, Public Affairs Officer, is  
21 actually over here today in the back.

22 So, that's all I have for my planned talk.

23 Thank you.

24 MR. RAKOVAN: Okay. We want to go ahead  
25 and move onto the next part of the meeting, which is

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1 hearing from you, hearing your comments and taking  
2 your questions.

3 Before I do, though, actually I have one  
4 question that I wanted to start out with, and then Ted  
5 or Drew, if one of you guys want to handle this.

6 We've talked about this is one way that  
7 people can give comments to this process at this  
8 meeting. But do we have a date as to when comments  
9 are due by, and can we let them know how they can get  
10 the comments in? Can one of you guys address that  
11 real quick?

12 MR. SMITH: Sure. There will be a Notice  
13 in the Federal Register. There's a 60-day duration  
14 for public comments. That notification should be  
15 going out. I expect it to be dated July 14th.  
16 Obviously we take comments before then, but 60 days  
17 from July 14th would be anticipated close of the  
18 comment period for comments on the LTP. And the  
19 contact information is in the Federal Register. You  
20 also have my contact information. You can certainly  
21 get comments to me or Drew.

22 MR. RAKOVAN: Okay. So we're looking  
23 about mid September then probably?

24 MR. SMITH: Yes.

25 MR. RAKOVAN: Thanks.

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1           Okay. We do have a couple of officials  
2 that I wanted to recognize. Hedwig Kaufman is a Board  
3 Member of the Frenchtown Charter Township is present,  
4 and we also have Floreine Mental from the Monroe  
5 County Commissioner's Office. So I wanted to identify  
6 those two.

7           Okay. What I'd like to do is start out  
8 with the yellow cards that people filled out, saying  
9 that they for sure wanted to speak. Once we've gotten  
10 through all those then we'll go ahead and open the  
11 floor to the others.

12           The first three that I have are for Evelyn  
13 Manson, Richard Meyer, and Richard Micka. So, Evelyn,  
14 if you could, we've got a microphone here set up.  
15 When it's your turn, if you could, just come to the  
16 microphone. If you have any questions we'll ask the  
17 appropriate NRC person to come to the microphone over  
18 there, and I'll just kind of be over here, hopefully  
19 directing traffic.

20           Is Evelyn here, or is that possibly --

21           MS. MANSON: I don't have any questions.

22           MR. RAKOVAN: Oh, you don't have any?

23           Okay. All right. Then could we please go to Richard  
24 Meyer?

25           MR. MEYER: I've had a long interest in

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1 nuclear power, and it dates back to Prairie Island up  
2 in Minnesota, and I've been in quality assurance and  
3 project engineering in this construction phase of  
4 quite a number of plants, both nuclear and fossil.

5 I also had a couple of sessions at Three  
6 Mile Island writing radiological control procedures  
7 under Dave Limroth, who is a retired submarine  
8 commander, and another session with a gentleman that  
9 was an engineer at Barnwell, South Carolina, doing the  
10 reports to the NRC concerning the accident. That was  
11 a very interesting project in my mind. I still have  
12 the materials at home, the three quarterly reports  
13 that I was in charge of producing, I have copies of.  
14 Plus the logs on the report -- the report of the logs  
15 on the control room.

16 My nuclear experience, I did manage to  
17 suit up an operating plant for a short time. So I'm  
18 familiar with the step off pads and all of the  
19 procedures of the gloves and the tape and the suits  
20 and the respirator. And I have a close kinship with  
21 the people that do that sort of work.

22 I am hopeful that during this  
23 decommissioning that somehow cooling is one of the  
24 major things that these people have to put up with.  
25 It's very hot working in one of those suits, and also

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1 it can be kind of hazardous. You don't know if you  
2 get overheated. I don't know whether there's air  
3 conditioning provided during this operation or not.

4 I also have reactor operator training  
5 materials and health physics materials. My interest  
6 was piqued way back after the war. The first thing  
7 that came up that started to open up the secrecy was  
8 the Report on the Atom by Gordon Dean. I bought that  
9 book in 1953. And I have subsequently, in my military  
10 experience I was a Nike Missile Guidance Instructor,  
11 was at Red Stone Arsenal, and I had access then to the  
12 effects of nuclear weapons, which is a very good  
13 source of material for people who want to learn the  
14 physics.

15 I live out very close to Fermi 1. I'm out  
16 there at Pointe aux Peaux Farms subdivision, which  
17 borders nearly on the site. And I have had no bad  
18 experiences. I've been there since 1977, and I have  
19 enjoyed watching the deer and the wildlife that gather  
20 there, including geese and goslings munching on the  
21 grass in that area. I have no qualms about what's  
22 going on out there, and I'm hopeful that the  
23 successful decommissioning and also the permit for the  
24 Fermi 3 goes through without any trouble whatsoever.

25 I've attended the ASLB meetings, plus two

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1 of the NRC meetings previous to this, and have  
2 maintained this interest. I have sufficient material  
3 and background that I could probably teach quite a  
4 number of these courses. So, if there's anybody that  
5 needs to give me a call I'd be glad to discuss this  
6 thing with them. Thank you.

7 MR. RAKOVAN: Thank you, sir.

8 I'd like to invite Richard Micka or Micka  
9 from Lake Erie Cleanup Committee to the microphone.  
10 After that we'll go to Michael Keegan, and third, to  
11 Mark Farris.

12 MR. MICKA: Richard Micka, 47 East Elm.  
13 I'm a secretary for the Lake Erie Cleanup Committee,  
14 which has been involved in water quality issues in  
15 Lake Erie since 1966. As a teenager I fished at  
16 Laguna Beach, and hunted on Pointe aux Peaux. Today  
17 that is no longer possible because of Homeland  
18 Security Issues.

19 When I first stepped on Laguna Beach there  
20 was no reactor, so I have some idea what was there  
21 before power generation took place. Thanks to the  
22 efforts of DTE Energy stewardship of the environment  
23 received a high priority, and today we see eagles on  
24 that site, which was not the case in 1954. The  
25 American Lotus beds have returned as well. This is

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1 something that I did not see in the 1950's.

2 Cooperation with the U.S. Fish and  
3 Wildlife Service to enhance the Detroit River,  
4 International Wildlife Refuge is a recent addition.  
5 All of these things add up to a sustainable natural  
6 resource on the west shore of Lake Erie, contributing  
7 to protective wildlife habitat.

8 From what I can see, Fermi 1 did not  
9 disrupt the back barrier wetland ecosystem, which is  
10 the major natural feature on the Great Lakes. The  
11 site is not an area of concern under the Great Lakes  
12 Water Quality Agreement, which testifies to the  
13 diligence of stewardship activities conducted by the  
14 licensee.

15 The Monroe County shoreline on Lake Erie  
16 is dominated by State game areas, state park, public  
17 utilities, harbor activities, and residential areas,  
18 plus some industrial activity. There are  
19 approximately 13,000 acres of wildlife habitat as part  
20 of Lake Erie West in Monroe County.

21 The security provisions for public  
22 utilities provide Lake Erie West with exceptional  
23 wildlife sanctuaries unequalled on the Great Lakes.  
24 Fermi 1 played a critical role in this process, and  
25 even after being decommissioned its legacy will live

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1 on through the environmental precautions taken during  
2 its presence on Laguna Beach. It helped set the stage  
3 for wildlife habitat conservation on the West shore of  
4 Lake Erie.

5 And in conclusion, this hearing is an  
6 opportunity for me to vindicate myself after  
7 challenging a Corps of Engineer's Permit Notice on  
8 Fermi 2 in 1980, and receiving a letter from Arthur  
9 Schlesinger, who reminded me he did not see my name on  
10 the attendance list for Fermi 2 hearings. He  
11 indicated that would have been the time to let my  
12 concerns be known. I learned my lesson. The NRC  
13 keeps good records over long periods of time.

14 MR. RAKOVAN: Thank you, sir.

15 We'll go to Michael Keegan, and then to  
16 Mark Farris.

17 MR. KEEGAN: Good evening. My name is  
18 Michael Keegan. I'm a lifelong resident of Monroe,  
19 Michigan. I hold graduate degrees in the social  
20 sciences, and this is my 30th year of tracking the  
21 Fermi 1, 2, and 3. So, I have a couple comments and  
22 then I have a multitude of questions. So, interrupt  
23 me as we need to, but I do need to get some answers,  
24 so let me proceed.

25 First off, with regards to the history of

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1 the Fermi 1. There were a couple items that were  
2 omitted by Detroit Edison, and I would like to review  
3 that just briefly, just for the record so the record  
4 is accurate.

5 And I'm reading from the Atomic Energy  
6 Commission, a 1951 document, on the History,  
7 Organization and Objectives of the Fermi 1. And on  
8 page 18 of the history is the high rate of production  
9 of fissionable materials. Forward: Where weapons  
10 material production is the prime objective, as appears  
11 to be the case in much of the Commission's program.

12 Objective No. 3: Unique weapons  
13 materials. So what Fermi 1 was about was to produce  
14 weapons -- to have plutonium available for weapons.  
15 So that's the first item I'd like to set straight for  
16 the record. And that is an Atomic Energy Commission  
17 document.

18 And the other item I would like to set  
19 straight is, I notice that the partial core melt was  
20 omitted from the presentation by Detroit Edison as  
21 chronicled in the book, We Almost Lost Detroit, and  
22 that occurred on October 5th, 1966.

23 And I would personally like to thank Phil  
24 Harrigan for coming to the rescue on that situation,  
25 but I wish we had not been in that situation to begin

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1 with.

2 So those are a couple comments I have. I  
3 do have some questions with regard to what will become  
4 of the waste from Fermi 1. It's my understanding that  
5 the Barnwell Low-Level Waste Repository is closed as  
6 of July of last year. So, where will the Class B and  
7 C waste go?

8 Should I go run through these first and  
9 then you can maybe --

10 MR. RAKOVAN: If it's okay, why don't we  
11 handle them one at a time because I think we might  
12 have different people that we need to address that.

13 Drew, who should we bring up to do the  
14 waste? Okay. It looks like Lynne from DTE is going  
15 to handle that one.

16 MS. GOODMAN: I'm Lynne Goodman. And all  
17 of our remaining waste is Class A waste. It will be  
18 going to Enviros -- EnergySolutions in Utah.

19 MR. KEEGAN: So there is no Class B and C  
20 waste, and it's going to EnergySolutions in Clive,  
21 Utah?

22 MS. GOODMAN: There is only Class A waste,  
23 and they are only licensed for Class A waste, and  
24 that's all we have left.

25 MR. KEEGAN: Okay. Is the reactor vessel

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1 still there?

2 MS. GOODMAN: The reactor vessel is still  
3 there and it is a Class A waste.

4 MR. KEEGAN: It is Class A waste?

5 MS. GOODMAN: Yes, it is.

6 MR. KEEGAN: Do you know the total curie  
7 count of the vessel and the total curie count of the  
8 radiation onsite?

9 MS. GOODMAN: I don't remember the exact  
10 number off hand. I know it is documented in our Fermi  
11 1 Safety Analysis Report, which is on the NRC website.

12 MR. KEEGAN: Is that the 570 page  
13 document?

14 MS. GOODMAN: No. This is in the Fermi 1  
15 Safety Analysis Report, which is also a document that  
16 we've been updating every other year, and is --

17 MR. KEEGAN: Is that the 970 page report?

18 MS. GOODMAN: It's about 100 pages, maybe,  
19 at the most.

20 MR. KEEGAN: Okay. FASR. Okay. So I  
21 could find it there?

22 Could you help provide it to the record?

23 Is this meeting being transcribed?

24 MR. RAKOVAN: Yes, it is.

25 MR. KEEGAN: Every good.

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1                   Could you provide that for the record?

2                   MS. GOODMAN:    I'm not sure I understand  
3 your question.

4                   MR. RAKOVAN:    We can take materials for  
5 the record, but we need to receive them tonight.  If  
6 it's something that's already been posted in something  
7 that's available, we can put a reference in the  
8 transcript to it.  Is that what you --

9                   MR. KEEGAN:    My point is, these documents  
10 are huge.

11                  MR. RAKOVAN:    Yes.

12                  MR. KEEGAN:    And I've gone over them, I've  
13 done searches, and it is very difficult to find things  
14 at times.  I would like to know the specific curie  
15 count of what's on site, of the vessel, and of all the  
16 radioactive waste.

17                  UNIDENTIFIED VOICE:  On site or all?

18                  MR. KEEGAN:    Onsite.

19                  MR. RAKOVAN:    It sounds like onsite.

20                  MR. KEEGAN:    And along with the total  
21 volume, do cubic yards, cubic feet?

22                  MS. GOODMAN:    We have approximately 50,000  
23 cubic feet of radioactive waste that we estimate that  
24 we'll be making from the duration of the project.

25                  MR. KEEGAN:    Are the contracts currently

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1 in place with Utah?

2 MS. GOODMAN: Yes. We have a contract  
3 currently in place with EnergySolutions, which is the  
4 operator of the disposal facility in Utah.

5 MR. KEEGAN: Do you have a price on the  
6 cubic foot?

7 MS. GOODMAN: That is proprietary  
8 information to the contract.

9 MR. KEEGAN: And -- from their end?

10 MS. GOODMAN: Absolutely from their end.  
11 It's a commercial term that is proprietary.

12 MR. KEEGAN: Okay. Is there any  
13 radioactive waste that is below Class A which is below  
14 regulatory concern?

15 MS. GOODMAN: The lowest level of  
16 radioactive waste is Class A waste.

17 MR. KEEGAN: Will any of this waste be  
18 going to incineration?

19 MS. GOODMAN: We are not sending any of  
20 our radioactive waste to incineration that we are  
21 currently planning on.

22 MR. KEEGAN: Okay. So the EnergySolutions  
23 does not -- is not involved in the incineration of  
24 radioactive waste? I don't know. It's not a  
25 rhetorical question. I don't know. I'm asking.

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1 MS. GOODMAN: I'm not sure if they have a  
2 current incinerator with EnergySolutions. I don't  
3 know the answer.

4 MR. KEEGAN: Okay. Where will the vessel  
5 go?

6 MS. GOODMAN: The Fermi 1 reactor vessel  
7 will go to the EnergySolutions disposal site in Clive,  
8 Utah.

9 MR. KEEGAN: Okay. Would it go by rail?

10 MS. GOODMAN: Yes. The reactor vessel  
11 will  
12 go by rail.

13 MR. KEEGAN: Do you know the weight on  
14 that?

15 MS. GOODMAN: The reactor vessel will  
16 actually be cut into several pieces. The largest  
17 piece will be close to 150 tons.

18 MR. KEEGAN: In repairing the finances on  
19 the decommissioning, I see that there's \$3.8 million  
20 still left, and it's estimated that it will take an  
21 additional \$26 million. An affidavit was signed in  
22 March of this year. And Deloitte and Touche also  
23 signed off on the accounting firm, that said that was  
24 accurate. And that Edison was going to put forward  
25 \$30 million to guarantee that, unsecuritized bonds.

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1 is that accurate?

2 MS. GOODMAN: That's very close. I  
3 believe it's two-and-a-half million dollars in the  
4 trust fund, and we also have a parent company  
5 guaranteed by DTE Energy for \$30 million, which more  
6 than covers the rest of the cost.

7 MR. KEEGAN: Okay. Because in the  
8 newspaper article written by Charlie Slat, who's very  
9 very accurate and meticulous in his documenting, he's  
10 citing \$65 million is now the estimated cost?

11 MS. GOODMAN: Oh, I can help with that.  
12 The \$65 million is the cost of the full  
13 decommissioning, including what we have already spent  
14 on the project.

15 MR. KEEGAN: Okay. And this is a 200  
16 megawatt reactor?

17 MS. GOODMAN: The reactor was designed for  
18 430 megawatts thermal. The first core, which is the  
19 core design they used was 200 megawatts thermal.

20 MR. KEEGAN: 200 megawatt, thermal was it?

21 MS. GOODMAN: Thermal. Which is the  
22 thermal energy in the core.

23 MR. KEEGAN: So, okay. So about a third  
24 of that would be electrical. So roughly comparable  
25 size to the Big Rock Nuclear Power Plant?

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1 MS. GOODMAN: It was somewhat bigger than  
2 the Big Rock plant.

3 MR. KEEGAN: Because at the Big Rock plant  
4 it was -- \$366 million was the decommissioning cost,  
5 and I could tell you that it's still not clean. I  
6 have the documents on that.

7 Recently the NRC came out, June 18th,  
8 citing that there was concerns about decommissioning  
9 -- enough decommissioning funds being in the coffers  
10 for utilities. Of course utilities are invested and  
11 the money grows on the stock market and so on, and of  
12 course we had a collapse in the past fall. So, those  
13 funds took a hit. So the NRC seems very concerned  
14 about having adequate decommissioning funds.

15 And, I'm having trouble reconciling that  
16 the cost of the Big Rock decommissioning was \$366  
17 million and the Fermi 1 is larger than that, had a  
18 partial core melt, and yet we're hearing the total  
19 cost is going to be coming in at \$65 million.

20 And I'm wondering, are you doing it on the  
21 cheap, or are you doing the job adequately?

22 How is it that that was 366 and Fermi's  
23 65?

24 MS. GOODMAN: I'll go over a few  
25 differences between the Fermi 1 plant and Big Rock

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1 Point. The Fermi 1 plant, over the course of its  
2 operation, operated for 34 effective full power days.

3 The Big Rock Point plant operated for many years for  
4 current full power days. So we had less radioactivity  
5 generated in our plant.

6 The second item is, we were a sodium  
7 cooled reactor, and along with the sodium cooled  
8 reactor there was the radioactive material was more  
9 contained. And so our levels of contamination on the  
10 plant site are quite low.

11 MR. KEEGAN: I understand the sodium, the  
12 barrels were removed in '84.

13 MS. GOODMAN: The barrels of sodium that  
14 were drained from the primary system were removed from  
15 site in the 1980's.

16 MR. KEEGAN: Okay. How much sodium is  
17 still onsite?

18 MS. GOODMAN: Currently the amount of  
19 sodium we have onsite is just what's been absorbed in  
20 some graphite blocks that we've already removed from  
21 the reactor, and some instrument lines that we're  
22 currently in the process of cutting open. We have  
23 very little sodium left onsite. We have processed all  
24 the systems that contain sodium, and have basically  
25 transformed the sodium into sodium hydroxide, and have

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1 neutralized the sodium hydroxide, and we have  
2 contaminated salt water.

3 MR. KEEGAN: Because it's my understanding  
4 that sodium spontaneously combusts with water or air.

5 Is that --

6 MS. GOODMAN: It is true sodium reacts  
7 with water or the moisture in the air.

8 MR. KEEGAN: And I recall, I believe, May  
9 of last year there was a sodium fire at the Fermi 1  
10 site? A piping got cut open and some sodium  
11 spontaneously combusted.

12 MS. GOODMAN: We were processing last year  
13 and we did have a small leak of sodium. There was a  
14 small fire that was out within 10 minutes. We have  
15 since finished processing that system.

16 MR. KEEGAN: Okay. An explosion like  
17 that, what kind of risk would that be to workers';  
18 potential contamination?

19 MS. GOODMAN: There was no injuries an no  
20 contaminations due to the event. We did need to  
21 cleanup from the event, which we did.

22 MR. KEEGAN: And there's a record of that?  
23 Is that available? Do you --

24 MS. GOODMAN: We submitted a Licensee  
25 Event Report to the NRC, which is on the docket.

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1 MR. KEEGAN: Okay. Specifically, what  
2 work is going to be done in much of the seven acres of  
3 the Fermi 1 location? The workforce, are they going  
4 to be within that seven acres or are they going to be  
5 elsewhere on the site?

6 MS. GOODMAN: The workforce that is  
7 working, doing the Fermi 1 decommissioning is located  
8 at the Fermi 1 facility, within the seven acres is  
9 where our offices and break rooms are.

10 MR. KEEGAN: Okay. Now specifically, is  
11 the work that is going to be done, is that spelled out  
12 in the 570 page document?

13 MS. GOODMAN: A summary of remaining work  
14 and all the final status surveys that will be part of  
15 the remaining work is described in the license  
16 termination plan.

17 MR. KEEGAN: Do you have an estimate of  
18 the workforce that will be required?

19 MS. GOODMAN: Our workforce is going to  
20 vary in size. Currently we have between 50 and 60  
21 people. It's going to change as the remaining  
22 activities change. We need different expertises to do  
23 the work.

24 MR. KEEGAN: Will any additional roads be  
25 built for that, access roads for workers?

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1 MS. GOODMAN: No, no additional roads for  
2 workers.

3 MR. KEEGAN: Is there any need for that?

4 MS. GOODMAN: No. We're talking about 50,  
5 60 people, compared to our workforce onsite that's  
6 probably close to 900 people.

7 MR. KEEGAN: Okay. My understanding is  
8 that the Fermi site sits on top of the Bass Island  
9 rock formation, sits over the Bass Island aquifers.  
10 Is there any potential -- what's the potential there -  
11 - you said that the FONSI has been issued and a  
12 finding of no significant impact. Is that addressed  
13 in the FONSI?

14 MS. GOODMAN: What we have issued we've  
15 actually submitted, and it's on the docket. A  
16 groundwater monitoring report that specifies the  
17 results of some years of groundwater monitoring around  
18 Fermi 1 in wells we specifically installed for license  
19 termination planning. The results of that groundwater  
20 monitoring are also summarized in the license  
21 termination plan.

22 MR. KEEGAN: Okay. So when you say  
23 "around Fermi 1," what's the distance? How far out  
24 does monitoring go?

25 MS. GOODMAN: The monitoring we do for

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1 Fermi 1 is specifically right -- either basically  
2 right at the boundary of the seven acres, or some of  
3 the them are right within certain areas of the plant.

4 MR. KEEGAN: Is the Bass Island aquifer  
5 monitored?

6 MS. GOODMAN: I don't know the answer to  
7 that question.

8 MR. KEEGAN: Okay. Would that be in the  
9 documents?

10 MS. GOODMAN: The document would describe  
11 the specific areas monitored. That's not my area of  
12 expertise.

13 MR. KEEGAN: Okay. Concern about worker  
14 health. My understanding there was a large workforce  
15 that took the plant apart from '72 to '75. Are there  
16 health records of those workers? Was epidemiology  
17 done? Are there records? And if so, how does one go  
18 about gaining access to those?

19 MS. GOODMAN: I'm not aware of any records  
20 that were specifically kept of those workers. I do  
21 know some of those workers are in this room tonight.

22 MR. RAKOVAN: Sir, if you're going to make  
23 a statement I'm going to have to ask you to come to  
24 the microphone. Sorry. And if you could identify  
25 yourself again, just to make sure that we have it

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1 correctly on the transcript, please.

2 MR. MEYER: This is Richard Meyer, again.

3 When I was at Three Mile Island some of the chemical  
4 technicians there had a certain amount of radioactive  
5 exposure. And I knew their names to begin with, but  
6 that information is considered private and the NRC has  
7 those records, and I don't believe any of the personal  
8 radiological records concerning personnel would be  
9 allowed to be made public. That was the principle  
10 back then, and I think it probably still endures.

11 MR. RAKOVAN: Thank you, Richard.

12 Sir, how many more questions do you have,  
13 just to get a sense?

14 MR. KEEGAN: I have just a couple more  
15 questions.

16 MR. RAKOVAN: Okay. I just wanted to make  
17 sure. All right. If you could go ahead, if you just  
18 have a couple more, because if not I was going to ask  
19 if we could let some other people speak and then we  
20 could let you take the stage again.

21 MR. KEEGAN: Okay.

22 MS. GOODMAN: Can I just make one more  
23 comment? We also do monitor personnel exposure, and  
24 the exposures are within all the regulatory limits.  
25 We do do, currently in our annual report, and

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1 previously we did document what the overall exposure  
2 was to the personnel working on site.

3 MR. KEEGAN: Okay. How many TLDs so those  
4 workers wear?

5 MS. GOODMAN: Each worker wears one TLD.

6 MR. KEEGAN: Then you collect that one TLD  
7 and you do the analysis on that?

8 MS. GOODMAN: Each TLD is specifically  
9 analyzed by the trained personnel.

10 MR. KEEGAN: All right. The point being  
11 is there is not a split sample and the worker  
12 themselves does not have that record. But that's  
13 minutiae. I don't want to go down that, unless you've  
14 got an answer for me.

15 MS. GOODMAN: I will say the worker gets  
16 documentation of what that record is, what their  
17 exposure is.

18 MR. KEEGAN: The record is read by Detroit  
19 Edison or a private agency you contract with?

20 MS. GOODMAN: The TLD, the dose  
21 monitoring, is read by Detroit Edison by a qualified  
22 lab.

23 MR. KEEGAN: Okay. It's my understanding  
24 that the Federal Register notification, and it's not  
25 in the June 30th, it did not appear today. I heard it

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1 was likely to appear June 14th.

2 Is there any opportunity for a hearing  
3 before the Atomic Safety Licensing Board?

4 MR. RAKOVAN: Drew or Ted, can one of you  
5 guys address this one?

6 MR. SMITH: Ted Smith, NRC. Since it's  
7 going to be enacted as a license amendment, that is an  
8 opportunity for request for hearing. Certainly that's  
9 part of the process. And as it would be to the  
10 informal process, anytime there's a licensing action.

11 MR. KEEGAN: Okay. And so after that  
12 hearing before the ASLB, then work would commence?  
13 When does work commence on the dismantling and the  
14 decommissioning of Fermi 1?

15 MR. SMITH: Well, if a hearing was  
16 requested and done, then that would have to be -- the  
17 time would have to be considered through hearing.

18 MR. RAKOVAN: Don't be afraid to get  
19 closer to the mic. I'm having a hard time hearing you  
20 and you're a couple feet from me.

21 MR. SMITH: Excuse me. So normally -- if  
22 there -- we would not expect there to be a hearing.  
23 If a hearing is requested then the hearing process  
24 will define when the LTP would be approved depending  
25 upon the contentions. So that would have to be set up

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1 when the hearing was allowed. Absent a hearing, after  
2 the LTP is approved, then they would be authorized by  
3 the license amendment to go do the work that's  
4 specified in the license termination plan.

5 MR. KEEGAN: So the work could actually --  
6 would commence after the hearing? But I got the  
7 -- go ahead.

8 MR. SMITH: As I said, it depends upon the  
9 proceedings of the hearing, what actions can take  
10 place. Depending on what contingents are allowed in  
11 the hearing and the impact of them, that hearing would  
12 decide how they can proceed forward. So the answer  
13 really is, it's going to depend upon how the Board  
14 would decide to play that out.

15 MR. KEEGAN: Okay. Because my  
16 understanding is the work has commenced already and is  
17 in progress and by this fall the vessel was to be  
18 disassembled, and yet we haven't had the hearing. A  
19 schedule's been established, and yet we haven't had  
20 the hearing. So again, it's the cart before the  
21 horse.

22 MR. SMITH: Well, let me back up and  
23 explain the process. Yes, first the decommissioning  
24 process has been underway since the site was shut  
25 down. As I tried to describe and maybe I wasn't

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1 clear, but activities have been going on since that  
2 time. There was a public meeting in 1989 -- I believe  
3 you were there -- I think it was April 22nd.

4 They discussed that -- that was where they  
5 provided a discussion of activities that would happen  
6 as they've shut down, which included many of the  
7 things that they've been doing, sodium removal --  
8 although they may not have been specifically discussed  
9 they're allowed, under our regulations, as long as  
10 they don't do those three things that I mentioned in  
11 my slides: They don't require restricted release of  
12 the site, they don't impact the environment, and they  
13 don't cause them to have insufficient money to  
14 complete decommissioning. And so the fact that  
15 decommissioning has been doing work, there's been no -  
16 - we had a meeting and we discussed that in '89.

17 MR. KEEGAN: So anything that would fall  
18 under those three categories would be precluded from  
19 being accomplished prior to a hearing?

20 MR. SMITH: Would be precluded, period.  
21 They would be violation of their license.

22 MR. KEEGAN: Okay. All right. Well,  
23 that's all the questions I have at this point, and I  
24 look forward to reviewing the Fermi 1 documents.  
25 Thank you.

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1 MR. RAKOVAN: Thank you, sir.

2 Lynne, did you have something you wanted  
3 to add?

4 MS. GOODMAN: Please. I just wanted to  
5 finish answering the question about cost. The third  
6 main item that is different in the cost between Big  
7 Rock Point and Fermi 1's decommissioning is that Fermi  
8 1 has already been through one decommissioning. That  
9 was from 1972 to 1975. So many of the most  
10 radioactive components and the nuclear fuel was  
11 removed at that time.

12 MR. RAKOVAN: Thank you.

13 I've just got one more yellow card of  
14 someone who knew they wanted to ask a question or make  
15 a comment, and that is mark Farris.

16 MR. FARRIS: The couple questions I had  
17 were answered in the previous --

18 MR. RAKOVAN: Your questions were  
19 answered? Okay.

20 MR. FARRIS: I'm all set. Thank you.

21 MR. RAKOVAN: Thank you, sir.

22 Okay. That concludes the cards of people  
23 who had pre-signed up to speak. At this point I want  
24 to open the floor to anyone else who may not have  
25 known at the beginning of the meeting that they wanted

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1 to say something or ask a question. If you would like  
2 to say something?

3 Sir, if you could just go ahead and  
4 approach the microphone, and if you could let us know  
5 who you are.

6 MR. HARRIGAN: My name is Phil Harrigan,  
7 and I worked at the Fermi 1 plant from the time that  
8 it was well under construction until the time that it  
9 was shut down for decommissioning.

10 And unfortunately during that time I came  
11 down with irritable bowel syndrome, you might call it,  
12 ulcerative colitis, which is about as bad as colitis  
13 can get. It runs in the family, stress related, that  
14 sort of thing. My job was pretty stressful. So I  
15 had to go under doctor's care. And during that time  
16 they did a fair amount of fluoroscopy, using a  
17 fluoroscope with a radiation while they observed the  
18 motions within my abdomen. And of course I was  
19 concerned about the radiation dosage, you know, from  
20 the doctor. And I knew I had records being kept on my  
21 dosage at the Fermi plant. So I always asked for the  
22 dosage whenever I was given radiation treatments.

23 And at the end of the year, the end of the  
24 period in which I was being treated, I got the total  
25 dosage and then I got the total dosage from the plant.

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1 I should say there's two figures you get from the  
2 plant. You get the maximum allowable and you get your  
3 own. I was well below the maximum allowable for the  
4 plant. And, I found that the dosage I got from the  
5 doctor was 10 times the maximum allowable at the  
6 plant. And it settled my concerns an awful lot.  
7 Thank you.

8 MR. RAKOVAN: Thank you, sir.

9 Guys, if we're going to have  
10 conversations, we going to have to get them on the  
11 record. I apologize.

12 Any further questions or comments for the  
13 transcript tonight?

14 Yes, please. Re-approach. One more  
15 comment from the speaker who has just stopped.

16 MR. HARRIGAN: Am I dying of cancer or  
17 anything? No. In fact, I remember a doctor's comment  
18 recently. You know, I'm 83 so I have to, you know, be  
19 checked up frequently. But the doctor said, "You're  
20 in good shape. Whatever you're doing, keep it up." I  
21 felt good about that.

22 (Applause.)

23 MR. RAKOVAN: All right. I think that's  
24 an excellent way to end the meeting if we have to, but  
25 we're still going to open it up for comments.

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1                   Sir, if you could identify yourself,  
2 please.

3                   MR. LINDSEY: Ken Lindsey, I'm Fermi 1  
4 Health Physicist. I'd just like to make one comment  
5 about the dosimetry and TLD measurements.

6                   All workers there do wear TLDs and those  
7 are the legal records. Workers also carry secondary  
8 dosimetry's, electronic dosimetry, what they can  
9 measure and read themselves, and they can compare that  
10 reading with their TLD readings that Edison gives  
11 them. So they do have a way of measuring that  
12 themselves and what they're getting.

13                  MR. RAKOVAN: Okay. Thanks for that  
14 clarification.

15                  Okay. One more chance at hands? Of  
16 course the NRC staff will be hanging out after the  
17 meeting, so if you have questions you can approach one  
18 of the speakers. And again, if we can't answer the  
19 question directly we'll be sure to try to find  
20 somebody who can provide the information to you at a  
21 future time.

22                  Drew, Ted, do any of you guys want to  
23 close out the meeting? Drew.

24                  MR. PERSINKO: At the outset we stated the  
25 purpose of the meeting. I believe we've accomplished

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1 that. I thank everybody for your comments. They're  
2 on the transcript and we'll look at the transcript, or  
3 course.

4 And so with that I would just like to  
5 thank everybody for attending tonight, and  
6 participating.

7 MR. RAKOVAN: Thanks, Drew.

8 (Whereupon, at 8:37 p.m., public meeting adjourned.)  
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