UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

***

WORKSHOP TO DEVELOP A STANDARD REVIEW PLAN

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USNRC

Two White Flint North

Auditorium

11545 Rockville Pike,

Rockville, Maryland

Thursday, February 17, 2000

The workshop commenced, pursuant to notice, at 8:30 a.m.

PARTICIPANTS:

ORLANDO

PITTIGLIO

GENOA

DUVALL

EID

FORD

GREVES

DARMAN

NARDI

ALLARD

McKENNEY

PARTICIPANTS: [Continued]

GOODMAN

GOLDIN

MAIERS

SEXTON

CULBERSON

ZINKE

LITTLEFIELD

ROBERTS

MORTON

KILLAR

P R O C E E D I N G S

[8:42 a.m.]

ORLANDO: Good morning everybody. I want to thank you all for coming. This is the sixth in a series of workshops we've been having on developing a Standard Review Plan for decommissioning.

Most of you know me. If you don't, my name is Nick Orlando. I'm the Division of Waste Management lead for pulling this together.

Before we get started, and to -- I have a short presentation to make, about 15 minutes, to give some clarifying information and a little bit, because of some questions that have already been raised about the Standard Review Plan. But before we get started, John Greves, the Division Director, would like to make a couple of opening remarks.

So, if John will come to the front --

GREVES: Good morning. First, let me apologize about the delay, but there is apparently a bottleneck up at the entrance for people coming in, and you're probably more aware of that than I am. I just sort of walked right by it.

First, I'm John Greves, Director of the Division of Waste Management here at the Nuclear Regulatory Commission. I have met with and spent some time with most of you. Those that I haven't, I'd like to meet you today, and I'll try and be in the meeting sometimes. Just walk up and introduce yourself to me.

This is a day-and-half workshop, and it's the sixth in a series of public workshops sponsored by the Nuclear Regulatory Commission, principally to support the guidance for decommissioning of facilities under your license termination rule. It covers a lot of different types of facilities.

I see that the nuclear utilities are well represented, the fuel cycle community, and a number of others that are confronted with these issues.

We've had a number of previous workshops last year, covering targeted topics such as dose modeling, restricted use of facilities, which continues to be a subject of much discussion; how to evaluate ALARA concepts in the decommissioning context. And we had a good meeting on groundwater modeling. I know a number of you participated in that.

Today's workshop is going to focus on any questions that you might have regarding our Standard Review Plan that's in draft. We've had it up on the Web for awhile now.

I know, in fact, that we've gotten a number of comments already. So, some of you are still developing your comments, and we want to use this as a session to help you in that process.

As I said, Nick and company have had the Standard Review Plan up on the Web. It seems to be working. It's a healthy process.

Over the last year and a half, we've also put out some criteria on surface contamination in November of 1998, and for soil values in terms of concentration, this past December.

So, these things are being implemented as we are working this process, and I've seen a number of you utilize those so-called screening values. We're aware that they are quite conservative, but they really do fill the bill if you've got a single nuclide and that's the criteria.

Frequently, you can just go to the NRC Region and demonstrate that you have been able to clean up to that criteria, and it's a very easy process.

I want to thank all of you for attending today. I see many representatives from industry. States, how many state representatives do we have here today?

[Show of hands.]

GREVES: Good, join us at the table, please. I need some

help from our state representatives out there.

A lot of this is actually going to fall to the states. I know that a number of stakeholders in the room won your license by NRC and you also are licensed by an agreement state under certain circumstances.

And over time, thanks -- good to see you -- okay, over time, the agreement states actually are going to inherit a lot of these responsibilities, and I need to sit down and spend some time with the agreement states and go over this, because there is probably going to come a day when you're going to take over these responsibilities for going over these plans, and we need to work on that.

We also made an effort to invite some public groups to participate in today's meeting. We find we learn a lot from them. There are a lot of these issues that we just aren't seeing certain sides of them, and so we've made some targeted calls to try and get that level of participation.

We've put the announcements for these meetings up on the Internet, put them out in newsletters. We've contacted a number of other stakeholders. We've asked EPA to join us today, and I see that John has joined us, John Carnak.

And we hope the word is getting out, so, if you can, please spread the word about these workshops. They have been well-attended, but we can always use additional participation.

I'll give you some feedback: I'm finding that the license community is actually using these tools already. Trojan has picked up on using the screening values in their license termination plan for that utility, and it seems to be going quite well.

Nuclear Fuel Services down in Tennessee has used the guidance in terms of the modeling that was identified in 15.49. I've got a ways to go, but I was pleased to see them pick up on the use of

that guidance, and it seems to be working.

Maine Yankee recently submitted their license termination plan and is looking at a site-specific dose assessment analysis. Obviously we will be reviewing that in detail with a lot of help from others, but I'm pleased to see that what we're putting out is actually being used, and we thank you for your input in helping Nick and others perfect the process. So we're gaining some experience.

We've structured today's session with an eye toward interaction. Again, I'm inviting people to join us at the table. You've put a lot of work on that, and please grab a chair at the table, because there's not going to be a lot in the way of presentations.

I think Nick plans to walk through the modules, and I know NEI, for example, has had groups look at certain chapters. We'd like you to take lead on giving us some feedback as we go through the meeting.

In fact, these meetings have given us some leads on difficult topics like resuspensioin factors. A number of licensees have provided data that they have available to them that's helped us refine those factors which very much affect dose analysis at fuel cycle facilities.

So, as I understand it, Nick is going to try to go through two chapters an hour. It's probably a fairly aggressive schedule, but depending on the topic, I'm sure we will get some good feedback on these various chapters.

That's a quick rundown on the workshop. I'll just give you some background before I turn the meeting over to Nick:

We are planning to have a followup workshop in June, June 7th and 8th of this year, on what we're calling the technical 400 basis document. It will be an appendix to our Standard Review Plan.

And it will provide detailed technical approaches to perform dose modeling. If you're going to do a site-specific analysis, you're probably going to find a lot of the details that you're going to be interested in, in that technical basis document.

Frankly, we are looking forward to getting some interactions going on that in the June 7th through 8th workshop.

As far as some of the other things we've been doing, we've talked to a number of you about doing some updating on the D&D Screen Model. Version 2 should be available this summer.

We also have been work with the RESRAD group to develop some probabilistic distributions for that particular code, and that also should be available this summer.

One last point: We've tried to get around and talk to some of you, but the Draft Guide DG 4006, and the Standard Review Plan cover pretty much the same set of topics. And we have come to a point where it makes sense to us to merge the two, not have two separate documents.

The Standard Review Plan, as with the Reactor Standard Review Plan, is probably going to get a revision on an every-year, every-two-year basis, and if you have to carry along multiple documents in revising them, it gets to be a problem.

We do have -- I don't know what the count is, but it seems like it was 185 comments we had on DG 4006. So we're going to factor those comments in, and fold them into the Standard Review Plan, so your comments will be utilized, but we're indicating, don't look for a final version of DG 4006. The Standard Review Plan will do the work.

If you've got some feedback on that, today is an opportunity to let us know that, but those are our plans.

At this point, Nick, I think I'll turn the meeting over to you, and I'll go out there and encourage a few more people to join you at the table. Maybe you're a little bashful.

So, Nick, take it over.

ORLANDO: Thanks, John. As John said, what the focus of today's workshop is to discuss what we've produced so far. The draft modules have been out for awhile, and I know a lot of you have been taking a look at them.

I've gotten some comments already from some people, via the Internet and some reference letters. So, you know, what we want to do today is crisp up anything that you have, or help you crisp up anything you have, and send it in.

As John said, we'll be having another workshop in June to talk about the technical basis document, and some issues that the Dose Modeling Group has put together. We'll continue to accept comments. We had said we'd take comments on the Standard Review Plan through February.

Quite frankly, I'm going to be down in Waste Management at the end of February, beginning of March, so if they come in by the middle of March, I -- since this isn't a rule, I'm never -- I don't think it's fair to say that we would reject any comment or wouldn't consider any comment that came in almost up until, you know, the summertime.

At some point, I've got to put the last pen to paper, but I'm really interested in finding out what your thoughts and concerns are on the document. So, I request, you know, mid-March, latest, but if you find something really great that everybody else has missed, please send it in.

What I would like to do today is a couple of things: Right at the get-go, here's our schedule. As John said, what we're going to try and do is go through the modules at about one every half hour. Now, clearly, the Executive Summary Module, I don't think we're going to spend a half an hour on that, but what I'd like to do is, as we go

through, I'll maybe say one or two things about each module, and then open it up.

You all have reviewed them. You all, I think, probably know what your concerns are. And I'd like to hear what they are and see if there is anything we can do to smooth everything out.

The other issue is that I just do want to make a comment and say that we have to be very careful as far as trying to reach a consensus in this group. That runs us a little afoul of the Federal Advisory Committee Act, so if it seems like we're trying to do that, we have to back off just a little bit.

What I do want to do is, there were two issues that were raised to me in other meetings and whatnot, on the SRP. The first one is how does this integrate with the reactor decommissioning process?

So the first thing I'd like to do before we kick everything off, is kind of try and illustrate that a little bit.

And then the second thing was, this is an extremely detailed, apparently prescriptive document. And I'd like to describe the process that we have sort of developed to make this an iterative, risk-based approach, and not a very prescriptive approach.

So with your indulgence, what I will do is just -- first of all, the general materials decommissioning process, or my world, if you will, operations cease. You do a site characterization, develop a decommissioning plan. We issue a license amendment, authorizing the decommissioning.

You all go out and do your decommissioning, you send in your final and confirmatory. You send in your final survey, we do a confirmatory survey, and then we terminate the license.

In the reactor world, it's similar, but just slightly different, principally, in the matter of timing of things. For the reactors, you have the cessation of operation, then you remove the fuel

from the reactor vessel.

You either begin the D&D or go into safe store. You send in your PSDAR, and then your license termination plan two years prior to requesting termination of the license.

You do your final and we do our confirmatory surveys, and then the license is terminated.

Now, the question came up, well, all the information that is laid out in the DG and in the Standard Review Plan seems to be very materials-oriented. So in the handouts that I gave you, what I tried to do is kind of give you a matrix as to what is applicable in each of the different programs, and sort of when we see these.

For example -- and I won't go through each one of these -- but if you look at the license termination plan and the decommissioning plan, there has to be information on site characterization.

For the license termination plan, you have to identify the remaining decommissioning activities. Well, that's the same thing you do in your DP.

You have a description of the final survey in the LTP and in the decommissioning plan; methods for demonstrating compliance with Part 20 appear in both the DP and the LTP, and you can go on down the line there.

I think there is also a slide that shows about approval of the scheduling, which is, I think, where the principal differences occur in the process.

The point that I'm trying to make with this is that you can see that there is a lot of overlap in the information. What we plan to do is, NUREG 1700, which is the license termination plan, Standard Review Plan for Reactors, where it asks for information on specific technical issues like site characterization, or description of the final survey or something like that.

It will reference the appropriate sections of this Standard Review Plan. So, instead of bringing all of the information from one document and just cutting and pasting it into the other, it will reference it over.

So, when you're going through and looking at NUREG 1700, it's not as detailed as this SRP.

The other thing to keep in mind is that there is -- in the timing, there, too, we would want to be working with the licensees throughout the process to make sure that the information that was coming in is of the right type and quality to do the -- to satisfy both your obligations under the rule, and our needs to be able to review.

And one of the things that the Commission told us to do, and what we want to do with the Standard Review Plan, is incorporate this iterative risk-informed approach.

In order to do that, what I've done, or what we've done is to develop extremely comprehensive and detailed Standard Review Plan modules. Those of you that have reviewed it, can go through, and it pretty much asks for everything-plus, okay?

What we will do is establish -- if you all are familiar with the NMSS Decommissioning Handbook -- and this is where we'll have to also work with the folks in reactors to figure out how, exactly, they want to merge this in.

But if you're familiar with the NMSS Decommissioning Handbook, it lays out for materials licensees, different licensing decommissioning types. Now, that was principally based, in the Handbook, on the type and amount of radioactive material that was used by the licensee during operations.

What we're going to do is revise the Handbook to, instead of looking at what the licensee did during the operational phase, look at what the licensee plans to do for decommissioning.

So, right now there is a thing called a Type 1 decommissioning, which would be, say, a sealed source. Very minimal information is needed from a sealed source user. Principally, they just send in their NRC 314, which is the Disposition of Radioactive Material, some statements that they had cleaned everything up, and maybe the last leak tests on their units to show that there is no potential for contamination.

That will probably stay the same, but we also have Types 2, 3, 4, and 5. What I'm envisioning now is a graded approach where you would go through and establish the minimum information needs for a Type 2, which would say, for example, perhaps be a nuclear medicine laboratory, relatively short half-lived isotopes, and they're going to decommission by decay.

They can send their sealed sources off, send the generator off, and it's all Tech-99 anyway, and they wait a week, and the facility is clean. They have to send in a small survey.

We lay all this out in the Handbook, referencing the individual sections in the Decommissioning Standard Review Plan, that this is the information that's needed for each one of these.

And then that will be sort of your core information you'd need to send in. The next step is t meet with the licensees as soon as we get some indication that you are going to go into decommissioning. In some cases, it may be the notification of the timeliness rule. In others, you may come to us a few years before you're even contemplating it, and say, well, we're thinking about shutting down, and what should we be doing?

At that point, we'll meet with the licensees and start going over, discussing what it is you did, how you did it, and what you're going to do to clean it up, and then go through the Standard Review Plan and say, okay, yes, you need this, you don't need this, we probably

don't need this information about your particular facility, because you're not going to be doing a decommissioning that actually -- where we actually need that kind of information.

Then what we'll do is come up with a site-specific checklist of information that we both think, or that we agree needs to be submitted. You will then have a copy; we'll have a copy, and you'll have the Standard Review Plan to see what we need and what our expectations are.

And then we'll have a checklist to have an idea of what's coming in. The idea is to try and start cutting back on millions of requests for additional information, and so that you all know at the get-go, what we're going to be looking for.

The next kind of component to this is what we're calling our streamlined approach to licensing actions. And this incorporates, again, meeting with the licensees and having an understanding up front of what we're going to do.

Now, under this approach, what we will do is make sure that everything we're looking for, we truly need.

Then the staff, in developing its assessments of decommissioning plans or other submissions, will develop technical evaluation reports, or safety evaluation reports, to identify the gaps that we see in the information that has been submitted.

We will then meet with licensees to go over what our concerns are before you put pen -- or before we send you the formal requests for additional information. We'll get with in an open, publicly accessible forum -- and I want to make sure that everybody understands that; that these meetings would be open to the public, and observable by whoever is interested.

Go over what our concerns are, make sure you know what they are, see if there is anything that we can take care of or clear up

without having to send in an information request; make sure you understand exactly what we're looking for, and then try -- and I say, try -- to keep our requests for additional information to a single set.

Now, those of you who have complex decommissioning sites know that that is a laudable goal, but I'm not sure if we're going to make it, but, you know, you've got to shoot for something.

So, this approach is incorporated into the Standard Review Plan, and it's discussed in actually Section 0, which is the how-to-use section. So, thoughts on that would be appreciated, too.

Then, finally, to make sure that this process actually -- or to hopefully make sure this process actually works, we'd like to do -- we're going to publish the Standard Review Plan in July of 2000, and it will be Rev. 0.

At that point, we'll track the issues and implementation questions and problems that may arise, and in two years or thereabouts, reconvene the process and find out, is it working, what isn't working, has anybody found a way to perhaps make it a little bit better?

So, that's sort of the philosophy of how we hope this document will work. We've planned in a step-back and take a look at it, and see if it works, to maybe with Rev. 1 or Rev. .1 or whatever, can use some polishing, you know.

And as John said, a lot of times this information changes on every couple of years, so there may be more than one revision to it. But the idea is, plan in a step-back and take a look at everything. So, I'm hoping to see everybody in June and I'm hoping to see everybody in two years.

Are there any questions on any of the things that I've gone over? One thing, for those of you that haven't been in this venue before with us, the meetings are being transcribed. Jon is the transcriptionist.

Please state your name and your affiliation each time you have something to say, so that we can identify you in the record.

And the NRC Regional Offices have also been piped in. So, Paul?

GENOA: Paul Genoa for Energy Institute.

ORLANDO: Speak right into the mike.

GENOA: Paul Genoa with the Nuclear Energy Institute. Nick, my question would be the schedule for getting SRP. Do you expect that the NUREG 1700 will be revised prior to that, or not?

PITTIGLIO: Larry Pittiglio. NUREG 1700 will probably issue prior to that. The document is currently with our Generic Review Committee for review. It has been revised to reflect comments that were provided during the public comment period, as well as to be made consistent with the SRP and some additional cost guidance that NRR is currently under development with. We anticipated it should be issued within the next month and a half to two months.

GENOA: Thank you, Larry. And that would be pointing to the relevant sections of the SRP as you discussed?

PITTIGLIO: Yes.

GREVES: Thank you. That's very helpful. I think there was another question at the table.

GOODMAN: I'm Lynn Goodman out of Fermi I. The question I have is dealing with that dose modeling guidance, the appendix, as far as when that would be available. Would we be able to see that before the June meeting?

ORLANDO: Bobby Eid and Chris McKenney are all on the dose modeling group, so I'll turn that question over to Bobby.

EID: This is Bobby Eid. The technical basis, the comment in support of the dose modeling, we anticipate to be ready on the Web by April, and we will have, of course, the public workshop meeting in June

to discuss those technical basis comments.

GOODMAN: I've got a followup. Again, this is Lynn Goodman. The NMSS Handbook, would that also be available in the same timeframe?

ORLANDO: No. I am going to focus on revising the NMSS Handbook after we finalize the Standard Review Plan. I want to make sure that the document that I'm referring to in the Handbook is the final document.

Also, I think I'm going to be fairly busy between March and July to finalize the Standard Review Plan, so I don't think I'll have the time.

But I hope to have the Handbook done by maybe late Fall, early Winter.

GREVES: John Greves. I'm a little concerned about too many documents. My advice to you is, look, whether you're a reactor or materials facility, you have to comply with Part 20. That's that whole business of confusion.

There's no confusion about what you have to comply with. Part 20, that's the termination.

And this Standard Review Plan and all the things we've been talking about in these workshops, would guide you in material or a reactor licensee through how do I do that? It's complicated, and probably -- Standard Review Plan in this technical basis document, that's probably all you're going to.

If you get too worried about the handbook, you're going to be -- it's going to take awhile. The document was principally written for us internally, and what exists there now is out of date.

So, frankly, I don't know how you're going to keep an eye on all these documents. That's why we've collapsed the G4006 into the Standard Review Plan. And my advice is to look at the Standard Review

Plan, come back in June, work with us on the dose modeling effort.

And if you can absorb that much and help participate that much, I think you have a big leg up on the process.

ORLANDO: To follow up just a little bit on what John said, maybe -- I hope I didn't mislead anybody on the handbook. The handbook is the regulatory framework for the NRC staff to manage a decommissioning project here at headquarters or in the Regions.

It lays out the different steps that PM needs to do from when the decommissioning plan hits their desk to license termination. We published it as a NUREG, and I can't, off the top of my head, remember what the NUREG number was. But if anybody's interested, I can get that for you.

But we published it as NUREG so that materials licensees would understand the process and the steps that the staff goes through. I know our staff in the Regions do use it. I'm not sure to what degree licensees are using it.

Again, I will emphasize that it is the NMSS Decommissioning Handbook, and it is very -- and it is materials-oriented.

PITTIGLIO: Larry Pittiglio. Nick, let me just clarify one thing. NUREG 1700 addresses both the requirements of reactors of 50.82, as well as the requirements for Part 20, so there are two regulatory requirements that are identified and addressed in the NUREG 1700.

FORD: Bryan Ford, Millstone I. I guess, going back to your comment over the SRP and the regulations should be what we're focused on, not some of these other documents like the Handbook --

GREVES: I was giving a caution.

FORD: Well --

GREVES: If I sat in your chair and I had to be familiar with all of these documents, it would be tough.

FORD: And we understand that. I guess one of my problems

would be that the Standard Review Plan, without those documents, to me, doesn't seem to meet the goal of being risk-informed. Maybe when you have a document out that shows which parts apply -- it can also be very misleading to others and to us over what are the requirements, without guidance that says these sections don't apply to -- licensees, because there are different regulations that apply for the different types of licensing.

In some cases, this has picked on path or the other. So I guess that in my view, this isn't of much -- until you have the guidance -- to the public, the licensees, NRC that's -- how it's supposed to --

I hope that comes out for public comment so that we have a chance to look at it. It's kind of the same thing on the NUREG 1700. I guess I've just heard that there is information being added to it to refer to this document, and I'm not sure that that was in the document when it came out for public comment earlier. There is a whole group of new information going in that no one has had a chance to comment on.

GREVES: I was trying to simplify and sort of articulate it but the process -- I am trying to put myself in your shoes. What you have to deal with is Part 20. That's the regulation that puts out these guidance documents, one, to help sales, and two, they help you too, also.

I think with Part 20 and this Standard Review Plan you have got enough to get through this process with your materials licensee or a reactor licensee. The other documents are useful and 1700 is needed to target some things in terms of the process but the Handbook was written when, Nick?

ORLANDO: '95 -- came out in '96.

GREVES: It's a '95 document. Should I move to another microphone?

ORLANDO: No, just sit a little closer.

GREVES: Can the audience hear me?

THE REPORTER: It is breaking up.

GREVES: Okay. Anyhow the Handbook is a ’95 document. This rule went in place in ’97 so I know there are errors in the current Handbook. Nick has an ambitious agenda to revise the Handbook. That takes a lot of horsepower and we have a commitment to the Commission to get this Standard Review Plan done this summer, so I am not going to have him marching off doing a Handbook when we have got to do the Standard Review Plan, so I just wanted to caution you, don’t over-read what is in a ’95 Handbook or don’t over-read what you might be getting out of a revision of that because it will take time.

Nick, help me out if I have --

ORLANDO: Yes, and I think what we want to do is as we are developing the revised Handbook you will be meeting with the Staff. The key to this is meeting the embodiment of the iterative risk-informed approach as you meet with the Staff, okay?

You go over your site. You go over your decommissioning objective and how you are going to get there. The Staff at that point has the Standard Review Plan, which has, as I said, questions and answers to everything you could conceivably want in a decommissioning plana, and at that point you go through and say okay, we need this -- I need Bullet 1, 3, 5, 7, 10, 15 and 22 of Section 13.2.

That is the iterative risk-informed approach. This way we are only asking for information we truly need, and you then have examples or you do have our expectations for that in written form and that is why we wanted to get sort of a technical document, if you will, out first before we start saying okay, would a sealed source manufacturer need to -- which of these bullets would a sealed source user need to turn in.

Until I have those bullets carved in stone, as it were,

through this process, I am not going to know, but as John said, we do have a pretty ambitious schedule to try and get the Handbook out after we get the Standard Review Plan out. I trying to build it from the base up as opposed to from the pinnacle down, so I can start referencing in one document something in something else. It would be nice have that.

FORD: Bryan Ford again. The only problem is problem is that makes it very difficult to review the SRP and make meaningful comments.

ORLANDO: Well, then I would say if I could --

FORD: That's all.

ORLANDO: -- focus the comments on what the information is asking. Are the -- you have got a piece of information there. See if the expectation is what you think you can do, if you think that is reasonable. That is sort of what we were thinking about, as opposed to, well, do I have to turn that in or not?

If it is something that you are pretty confident is never going to apply to your facility, don't worry about it.

GREVES: Is it Bryan?

FORD: Yes.

GREVES: I don't know what stage you are in but as I articulated in my opening remarks, I am pleased with the experience that I am seeing with the Applicants that are coming in the door with an incomplete Standard Review Plan. They got the message, the ones that are coming in the door. George, sitting next to you, has a product on the table and we have interacted a lot with him so he's found a way to come forward -- hasn't been reviewed yet but got through the door, same with Trojan, sat through a meeting with Nuclear Fuel Services in December. They understand what is needed and they demonstrated that in terms of what they showed in December so the people that have this front and center have the message, apparently have the tools --

FORD: I guess I was more worried that we put this guidance out and now we are saying we leave it up to the individual staffer to decide whether it applies or it doesn't. Sorry -- I guess my only problems was we're saying we are going to leave it up to the individual staffers going forward to determine what parts apply and what parts don't apply, which makes it sound like it's going to be relatively inconsistent from one Licensee to the next -- as least previous history, not necessarily with this branch, but on other issues. That's all I was trying to say.

GREVES: In fact, I would like to meet with you separately and just make you feel a little better about the process. We're probably tying up too much time here, but I am listening and let's spend some time together and I will answer your question.

ORLANDO: I think Bryan raised a very good point and if you don't see me writing it down, it's not because I am not listening. It's I am listening and I am letting Jon over in the corner write it down for me.

But I think you raised a good point. I think it does show that there is value to having a framework type document like a Handbook. The best thing that I can say is I would like to again build a technical document first, and then once those technical requirements are well established between what we want and what is acceptable, then start figuring out if you need to give me that and try and go that route, so we will -- I think in the end we will have a good process together.

MR. DUVALT: Ken Duvalt. I have a quick question on this topic of documents. How does NUREG-1549 fit into this? Is it going to get rolled up into the technical basis document?

McKENNEY: Chris McKenney. The NUREG-1549 will still stay as a separate document. It will be finalized in nearly the same time period as the technical basis. It is not at the same level of detail as

what we want in a technical basis document, but it also provides a -- overall it is a general procedure of the same, so there is no reason to get rid of it and there is no reason to put it all in the Appendix from that point of view.

GREVES: 15.49 is basically the dose modeling framework and it is being used. Nuclear Fuel Services used that document in December. It is a roadmap of how you walk through dose modeling.

DARMAN: So it is an additional document that helps you list -- as you indicated.

GREVES: Yes, it is an additional document and I think it's quite useful. As I said, it is being used by the Licensees and I think it has served them well.

EID: This is Boby Eid. Regarding 15.49, it will be, many aspects of 15.49 will be included in the SRP dose modeling module. However, there are certain areas where it is not covered in the SRP dose modeling module. It still will be referring to 15.49 and as John said, it will be used, so it is not going to die. It is going to stay.

We are not sure if it is going to be -- I think it is -- it is not in draft. It is like, you know, we refer to it and we reference to it and it will include whatever is applicable in the technical basis documents. However, it will stay as an independent document.

ORLANDO: Okay. I would like to move on so that we can keep to the schedule as best we can. I suspect that we probably won't spend a whole lot of time on the executive summary or even perhaps the first module, but in the event we do, I don't want to run over.

Apparently there may be some weather issues tomorrow, so we will try and catch the Weather Channel maybe at the afternoon break, and maybe have to modify things accordingly.

The first module, and I have put the -- sort of the table of contents up on the screen behind me. The introduction, how to use

portion, is out on the web, and I sort of went through that. It talks about how we hope to use the iterative process and target the information that we need to specifically -- to each individual site.

The next section in the Standard Review Plan is Section 1, the executive summary. The idea behind having an executive summary is just to give the Staff a quick overview of what exactly you all intend to do.

One of the things we do in a document when a decommissioning plant comes in is we do a 30-day or we will be doing a 30-day acceptance review. One of the things we want to find out very quickly is are you using the appropriate -- or have you done all the necessary steps that you have needed to do, are you going with the right DCGLs or have you developed your DCGLs, how are you going to do your surveys, and if you are going for restricted use, have you undertaken all of the public outreach activities that you are required to do under 10 CFR 20.1403.

The executive summary is not meant to be particularly long. It is just the Staff in half an hour do a quick read and say, okay, looks like we can move on to going through the document in a stepwise fashion and check and make sure that all of the information is there.

What I will do, I guess, is just open it up and say does anybody have any comments then on the executive summary?

[No response.]

ORLANDO: See, I told you that that one wouldn't take a half an hour to go through.

Okay. The next module is the facility operating history. This in conjunction with the facility description is meant to give enough information to the Staff to allow them to understand the types of radioactive material that was used at the site and in some ways it will be incorporated almost into an environmental report type format. The idea here is to just make sure that the project manager who may be

coming on board, may be hearing about your site for the first time has some idea of what you have done, where spills have occurred, different types of radioactive material you have used, different activities that you have undergone, whether licenses have changed, whether you have gone from a very, very broad license down to a specific license, whether you have added or removed radionuclides from your license, authorized license possession criteria throughout the life of your site.

Does anybody have anything that they want to say about the facility operating history? Good. You're out there. I'll start at this end of the table.

CULBERSON: This is kind of a lead-in to one of the general comments I wanted to make. I will get to all of them eventually.

I think the SRP, if I were in the Staff's position I would use it as a go-by for what to expect to see from a decommissioning plant that is being submitted. In a sense, I think it is likely just logically going to become somewhat of a checklist of things to look for. Going back on some of the earlier comments, it should have enough guidance in there that it is a graded type of a checklist so that some items will not be viewed as required, if you will, minimum required information.

This facility operating history is an area where I think there is going to be a great deal of disparity because there's a lot of information that may simply no longer be available. It's never retained. It's never required to be retained. There is a new rule in the past few years that required facilities to maintain important to decommissioning. That requirement was not there before, so there is a lot of important, I think, operating history that for future Licensees would be available, for some recent Licensees probably is available, for some of the older Licensees probably not available.

I think the SRP should include words to the effect that it

should be a best effort kind of thing and if the information is simply not available then the effort shifts away from that so that there is an acknowledgement that certain information may not be available from any Licensees that have been around for quite awhile.

That carries kind of throughout, just recognition of that, and I think the SRP needs to include language that advises a reviewer that you may not see this and the Licensee needs to address the fact that it may not be available but just a recognition of that fact. I think that gets into that graded approach you were talking about.

ORLANDO: Right, and that also folds into the meeting with, the approach of meeting with the Licensee before you start to develop your decommissioning plan and developing a site specific list of things.

There is no point in us sending you a request for additional information that says I want to know everything you did from 1955 to 1965 and the response back is we don't have it. We can work that and through the process as you are developing your DP.

This is trying to mesh a lot of things, and again, to Bryan's concern, you know, the graded approach -- if we can't get it, if we need it but we can't get it, then we have got to work on something, so yes.

Now you are going to be submitting all this in writing, right?

CULBERSON: Yes.

ORLANDO: Okay, good.

GENOA: Paul Genoa, NEI -- really two comments.

The first has to do with language, talking about controlled releases or defining a controlled release as a spill. We have a real problem with that. We are authorized to make controlled releases. We do it all the time, and to try to turn around and report on those as if they were spills -- you need new technology.

Again, the comment is that in the definitions of a spill is included controlled or uncontrolled releases. That is inappropriate. Facilities make controlled releases, liquid and gaseous effluents, through their operations. They are not going to turn around and report on those the way it is described in the document.

A second comment would be a recommendation, and that is that at least reactor Licensees have two different information gathering requirements imposed on them already.

One is in 50.75(g) the need to maintain a decommissioning record or decommissioning file that would include spills and information important -- radiological information important for decommissioning, so I would recommend that the SRP direct the Licensee to provide that information rather than invent a new requirement that goes beyond that or is different.

There is also an I&E notice -- I believe it is 80-10 -- which instructs the Licensee to look at their systems and determine where cross contaminations could occur or have occurred, a record of those things so there are some tools out there that it would make sense to be identified and determined acceptable if in fact you think they are.

ORLANDO: Okay, in the context of the operating history and the spill, what we were looking for there is -- and yes, controlled releases are allowed. They are allowed in reactors and they are allowed in material sites also. However, in some instances a material, say, going out of a pipe or something, can result in some material being deposited at the end of the pipe. That is the kind of information we are looking you -- you know, is that going to be an area where there may be some -- over time that could build up from to a level that would need to be remediated. That is I think what we were looking for.

The idea of yes, there are controlled releases and gaseous

effluents in water, I am not looking to see you records of effluent releases over the life of the facility, but as you know, there may be some instances where material has within your facility property gone through a controlled manner off, at least in some of the materials sites, and it has ended up in pipes and things like that, and that is kind of what we are interested in.

GENOA: Okay, but a typical effluent release is -- I mean we have released the material. We have environmental monitoring around the sites. We have identified all that activity. We have done annual or semiannual reports over the entire operating life of the facility. We don't need to regenerate that kind of --

ORLANDO: No, not the release numbers, just, you know, is this where something may have happened?

GENOA: Okay.

ORLANDO: I think Felix had a question.

KILLAR: Felix Killar, Nuclear Energy Institute. I just have a question of clarification.

You had mentioned earlier that you are looking to combine the Standard Format & Content Guide with this SRP, yet in several sections in here you refer back to the Standard Format & Content Guide. Is that what you mean by combining them? I would have assumed that it would have been just one document, rather than being referred back to a document.

ORLANDO: That is something I have got to work on. I think the Standard Format & Content Guide that we have got out there now is going to be what we end up using, but I have got to make sure -- that is one of the things I am going to try and do as far as the content.

The format and content that is discussed in there, specifically when you look at the physical specification section of 3.65, that talks more about ink, margins, things like that.

KILLAR: I am referring to when you are providing suggested formats under say, like for instance, 2.2 you talk about it's just formats, and you say physical specifications, blah blah, yes, that is specifically what I was referring to.

ORLANDO: We will bring that in as an appendix then, and just make it one document, because that basically, yes, that section of the 3.65 pretty much deals with, like I said, headings and fonts and colors and how to submit stuff and things like that. Yes?

NARDI: Joseph Nardi, Westinghouse. I would like to build a little bit on the comments that Dave Culberson made about the complexity of gathering information.

One of the facilities I was involved with started in 1915, which predates all licensing kind of operations. It involved natural radioactive materials. The other complication that you get into is the problem of some of our facilities are licensed both by the state and the NRC, and when we are trying to do decommissioning, it is impossible really to separate those two, and we make no effort to do that in terms of surveys or documentation, and when we are writing things I would much prefer to have some mechanism by which the NRC recognizes this, that there may be multiple agencies involved.

In some cases we even get into the chemical issues, the EPA-type issues and our decommissioning effort is all comprehensive. I hate to start preparing multiple documents and keeping them all coordinated. I would much prefer to have one document, even though there's multiple agency review or interest.

ORLANDO: That is a good comment. One of the things we try and do when we do a decommissioning, at least the ones I have been involved with, have included the state as a co-regulator, both for the radioactive or the hazardous as appropriate. We actually have a couple state regulators here at the table, and I think one of the keys is they

would need to be involved in those early-on meetings also and if there are additional pieces of information that they may need.

Now what I will say is I wouldn't expect to see chemical remediation information detailed in a decommission plan. That would be asking NRC to review and approve something that it doesn't have the authority to do.

The mechanism to mesh all of that kind of stuff together is I think built on everybody who needs to be in the room at the same time at the get-go being there, so that is the NRC Staff's responsibility is to make sure that all the players are at the table.

NARDI: I think the point I was trying to make -- Joseph Nardi, Westinghouse -- I think it is appropriate to incorporate all that information in the same document and you have to be flexible enough to recognize that certain sections of it you may not want to comment on, and that particularly comes down to when we are preparing reports of what we have done.

One of my sites we are doing a tremendous amount of groundwater modeling and everything regarding TCE's contamination event, but it incorporates a lot of radiological information because it is convenient to do both at the same time, and we are submitting those documents one document. I don't want to separate things out because it just complicates the issue of trying to understand what is going on.

ORLANDO: Okay. Good point. Dave?

ALLARD: Dave Allard, Bureau Director, Pennsylvania DEP.

I would support what Joe has said. We are incorporating NRC regulations by reference once we approach Agreement State status here over the next few years, and I would utilize all the NRC supporting information here in reviewing these license terminations and decommissionings.

Where we do have overlap with our NARM licensing we would

utilize these documents also, and I would also encourage you, if there is chemical contamination, that helps the other side of the house as far as the chemical cleanup and review, if that is all in one place, if it makes sense to do that.

ORLANDO: Anybody else?

[No response.]

ORLANDO: Okay. The next section, three, is the facility description and probably the most detailed bunch of guidance in the first several sections is in the facility description. Yeah, there is a lot of stuff there.

There is also a lot of stuff that you probably didn't have to submit when you went for your license, but again the thrust here is I had to come up with every conceivable thing that we might need and to develop an acceptance criteria in the event we did need it, but I see Paul wants to make a comment, so go ahead.

GENOA: Paul Genoa, NEI. The best way to respond was are you nuts? I mean --

[Laughter.]

GENOA: -- when we looked at the amount of information we were overwhelmed and of course our comments are all colored by the fact that we don't know what applies and what doesn't. That is why we are having trouble, and I'm glad you gave the presentation early that you did that says that we are going to have a document that pinpoints what our requirements are but fundamentally our comment was if you looked at this and really worked at it, you would have on the order of 75 to 80 pages of detailed comments on everything.

You would have better characterization than we have on our current operating plants and probably more than you would have for a Part 61 disposal facility. That just seemed a lot. Now I guess if we are going to say that is the worst case or we're going to back off of

that to what we need I don't have -- then maybe you're not nuts.

ORLANDO: I won't argue with you on the last statement, although you are not the first who has raised that. When I handed it to my boss, he said "Are you nuts?" and I said, well, the issue again is -- you may not need to turn in but a tenth of that information and, quite frankly, a lot of that information especially for the more complex sites, already exists. I mean you had to have done it to generate the environmental report to support the EIS that was developed for your site, so as far as going out and, you know, doing it from wholecloth, apparently not. There are some facilities out there though that will have to develop some pretty sophisticated and in-depth information, especially if they are going to go for something other than unrestricted use.

We have some situations now I understand where Licensees are coming in with proposals or thinking about coming in with proposals for leaving some material on-site and going into the restricted use route. You know, that material will have to be or that request will have to be looked at pretty carefully to make sure that all of the different potential pathways are addressed and everything else, so again, yes, there is a lot of information discussed in there and that is how I would like to term this.

There is information discussed. It is not required yet.

GREVES: That is a good point that -- one of the things that I think is missing that I haven't seen in here is the guidance to the reviewer that this is a thought process to go through -- this is the kinds of things you have to address and that you scale down from that as appropriate for the site, for the conditions, for the plan for decommissioning.

I am concerned and I think others may be too that this 10 years from now to a new reviewer would become a checklist and you could

expect to see all of this without any guidance or direction to the reviewer to the contrary that says think about all these things but look at the site and the specific circumstances and meet with the Licensee and then decide what is appropriate and what is not.

I didn't see that in guidance for applying the Standard Review Plan. I may have overlooked it but I know that your intent is well expressed -- it is in the front part -- but I think that needs strengthening.

ORLANDO: Yes. Well, one of the things too that we are going to end up doing, as you can probably imagine is that I am going to, once everything is in place we will be going out to the regions and talking to them about this, training and whatnot. At least that is what I have been told to be thinking about, so yeah, you're right.

I have thought about exactly the things you guys are talking about. We do have a "how to use" section that says get with the Licensee, figure out what is absolutely needed, develop a checklist. In fact, you keep referring to that. I actually already have a checklist. It will be one of the appendices at some point to the document, and it will be -- actually, I am contemplating two at this point -- one, a technical evaluation checklist, and second, an acceptance review checklist.

The acceptance review checklist would be something that would be developed from the meetings, the early meetings that you would have with the Licensee where the reviewer and the Licensee would sit down and say yup, we need to send this in. That would be included on the checklist. That checklist would then follow the file, if you will, and when the decommissioning plan comes in, the site-specific checklist would be available. You would have it and we would have it.

I mean that is a concept that I am working with right now so that when the Licensee leaves the NRC at that initial meeting you'll

know what you are going to send in and will know what you are going to send in, so I agree with you and it didn't take much of a stretch just to figure out that you could take a bullet and turn it into a line and make a check next to it, but yeah, that was part of the thought process.

MAIERS: Bob Maiers, Commonwealth of Pennsylvania. Nick, I think this might be covered in some later sections, but I think it might fit well in either this section or the previous section.

But a description of historical offsite disposal practices would be a nice thing to know right up front. A case in point: One of our licensees in its history was disposing of their material at local land fills, and we caught that in a filing review.

But it just seem appropriate that some description of offsite disposal practices would be appropriate, in either this section or the previous section.

ORLANDO: I assume you mean non-routine? In other words, if it was going to a low-level waste disposal -- a licensed low-level waste disposal facility, I mean --

MAIERS: That's okay, yes.

ORLANDO: That would have been covered in the operating license anyway.

MAIERS: Right.

ORLANDO: Perhaps a section on unique disposal practices.

CULBERSON: Dave Culberson. A question there: Are you referring to just the radiological materials, or are you talking about everything?

MAIERS: Radiological materials.

ORLANDO: Anybody else?

DUVALL: Jim Duvall. I just wanted to point out that this particular module and the previous one applied to very critical information input into MARSSIM, in terms of the historical site

assessment.

And I think we should ensure that the discussion in those two modules, the discussion of those two modules does provide the appropriate information that is needed in MARSSIM in historical site assessment.

This is a critical area where the classification schemes and the whole planning process begins, and this information is very critical as to which path is proceeded on in terms of what the classification is.

ORLANDO: Yes, and that is one of the things that we have tried to do, is make sure that as best we can, although as you can probably tell a little bit from the style, the modules were not all written by the same person.

We tried to make sure that all of the information that -- it may appear in separate sections, and we'll try and reference back where, if you supplied it here, you don't necessarily have to put it here, or maybe you could just reference it on a section of your own decommissioning plan.

Anything else?

ZINKE: George Zinke, Main Yankee. You know, one of the items asked for is list of minority populations by compass vectors and demographic data by Census block group to identify minorities or low-income populations.

For a Part 50 plan, I mean, that's not something that we did or do. Is that something that you really are expecting all licensees are going to provide you?

ORLANDO: No, not necessarily.

ZINKE: What's the criteria?

ORLANDO: At the beginning of that document, of that particular section, it does say that the majority of the information here would be applicable to sites that are going for restricted use.

One of the things that we have to keep in mind is our information notice 95-50, I think it is; the one that deals with minority populations, that we do have to take a look and ensure that there are no impacts from the decommissioning.

Now, again, if you're going for unrestricted use, you probably wouldn't need to turn that in. But if the situation was such that there was going to be large amount of material left onsite, under a restricted use scenario, that information might be important.

And we do have to make -- and I can't -- I feel bad that I can't remember the name of the document. If anybody from the NRC staff can help me.

We do have some requirements to take a look at the impacts on minority populations.

ZINKE: Would it be the Handbook that would then say this doesn't need to be submitted if you're going unrestricted? Would that information be there?

ORLANDO: That would be an appropriate place. That would be sort of the core information for, say, somebody who was going for a restricted use type scenario; it might be. It also would end up possibly being in the environmental impact statement that we would have to generate.

EID: This is Bobby Eid. I believe this is because of the NEPA requirement in case you need to prepare the EIS. It is required to assess the population and the minority population within that area. It is required, I believe, in NEPA.

There are some computer codes that EPA developed where you could, based on the distribution of income and sources, you could actually classify the areas and indicate whether there will be minorities in this area or not.

The concern is that maybe there are certain actions that

would be taken that may impact minority groups more than others, and then other areas where they have lower income.

I think it's related to the income rather than to the specific minorities.

ORLANDO: It's all of those.

EID: I think it's both the income and the minority groups, so it is a NEPA requirement. What I want to say is that it is a NEPA requirement that you need to address this issue.

ORLANDO: It's actually covered under our requirements to go for environmental justice, so -- Well, that one raised several hands.

GOODMAN: Lynn Goodman, Fermi I. Just looking through the words here, I think it needs to be better explained that some of this is needed more for restricted use. I don't see that in the introduction to that section.

ORLANDO: Okay, it's on page 2, up at the top. It talks about specific -- it's rather vague there, I'll admit. I was looking at specifically the last one on there that says having onsite disposal cells for radiologically contaminated decommissioning waste.

But if you didn't catch it with the first read-through, then it does need to be better pointed out. That's one of the things that -- one of the criteria I hope to include in this thing is that if you can't catch it the first time, then it obviously needs to be polished.

GOODMAN: Thank you.

SEXTON: Dick Sexton, Connecticut Yankee. I guess I might have a similar comment, but I guess it's from the perspective of other stakeholders that will use this standard review plan to evaluate adequacy of that license termination process.

But I think it's important that also consider other audiences other than NRC or the licensee. The document in some sense has to at least address the possibility of other stakeholders -- this

document as a way to evaluate the adequacy of license termination plans that are being submitted in their community.

And they want to understand if the license termination plan is being submitted by a licensee in their community is adequate. I guess, as I would look through this document as a member of the public, and then look at even the license termination plans that have already been or have recently been submitted, find that they would appear to be inadequate, just based on a quick read of this document.

ORLANDO: That's a very good comment, thank you. I think it stresses the need, I think, to make sure that the process is understood, as well a what the information is, and that process is to tailor everything for the site. But, again, that's a good point.

Paul?

GENOA: Paul Genoa, NEI. We're kind of revolving around a theme, and there are several elements to that theme. I think one of them you just heard is that the external world will look at this and judge the adequacy of the licensee and the NRC's action.

The second thing, and it was sort of alluded to earlier; we applaud your interest in trying to do a risk-informed approach to this. We want to encourage that.

However, we also need some kind of certainty. There have been experiences in the past where licensees get ratcheted by different people reviewing it because there was flexibility to do that.

We certainly would like to know that you are willing to remove requirements that aren't appropriate. But if it's sort of nebulous -- you know, if we have to come in, everyone has to come in and do a meeting, then that changes over time, what are the constraints on the staff to be reasonable in their request over time?

What is the regulatory basis to ask for this additional information? And out of pure expediency, the licensee could be held

hostage to these requirements. We're nervous about that, I guess.

So, on the one hand, we'd like it real prescriptive; do X, Y, and Z, and you're okay. We know how to go do X, Y, and Z, but on the other hand, we'd like the flexibility to say, well, in this case, Z makes sense; in this case, it doesn't.

So, that's the dilemma, and I think that is where you're getting some of this feedback. It's fear.

ORLANDO: I understand that. You know, that's what I'm hoping that this will do. I like your analogy that you're good at doing X, Y, and Z, build in the flexibility to determine what X, Y, and Z is, and that's what we're -- I'm trying to lay out what X, Y, and Z is.

Now, do you have to actually do X, Y, and Z? So, I'm hoping we're not two trains heading towards each other; I hope we're two trains going in the same direction.

But where you're trying to get to, and where I'm trying to get to, I think, is the same point.

Anybody else on facility description?

[No response.]

ORLANDO: Okay, we are moving right along. It is 9:53, and we are well ahead of schedule, which is good.

Okay, radiological status of the facility. Does anybody have any questions of comments or thoughts about that? Please, as you come to the mike, state your name.

DARMAN: Joe Darman, Maine Yankee. I guess, just building on that X, Y, Z philosophy there, it seemed like we could maybe get ratcheted into a lot of things that weren't necessary in the radiological status of the facility. And I'll just give a couple of examples:

It seemed to want detailed description or characterization of systems, and even talked about the crack between the wall and the

floor for ALARA purposes. You know, if you have a 50-R high-end exchanger in a room, it just doesn't make sense to go and do a detailed characterization on that, on the floor.

And also for systems, if we're just going to take them out, maybe we don't need that detailed characterization on it; we just need a characterization good enough for shipping purposes.

ORLANDO: I agree. One of the things that I found in dealing with some licensees is, you know, contamination does get down in the cracks. And sometimes what you want to do is not dig that out until later on in the process.

DARMAN: Right.

ORLANDO: And one of the things that has occurred, or could occur, is if, especially in a higher radiation area, if you've got a spill, a legacy that's in the crack, if you go in there and start trying to dig it out, all of a sudden, you could end up with a significantly larger amount of radioactive material than you originally thought about.

Normally, that could be taken care of by, you know, appropriate health and safety issues and whatnot, and reaction procedures from your technical staff.

But one of the things that we need to be able to do is, if you want to start taking things down with materials potentially still in place, you know, sort of decommission-as-you-go, or dismantle-as-you-decommission, that kind of information is important.

But again, it needs to be tailored to the site. And if you've got a room that's got a ridiculously -- I won't say ridiculously -- but if you've got a high exposure rate, well, if you're going to take the whole set of systems out, that's fine, and you can just say it's being disposed of as rad waste.

DARMAN: I think it was maybe in section 14 that it actually had a note that all the information doesn't necessarily need to be

available, won't be available up front, and it made that allowance to find that information out later.

ORLANDO: And in a lot of case, as you know, with the MARSSIM process, you are developing some of your final survey stuff as you go. And we've tried to make an allowance for that in Section 14 for not knowing how many samples you're going to be taking, or to give you at least a strategy for doing that.

KILLAR: Felix Killar, Nuclear Energy Institute. One of the concerns we have in looking at this section is that a lot of the buildings and what have you, we're going to tear down and go off to a low-level waste disposal facility.

And we're providing you a lot of detailed information, doing a lot of detailed characterization of that building, just to tear it down and move it off to a low-level waste facility, doesn't make a whole lot of sense to us.

And it doesn't appear that it gives us a lot of flexibility here in dealing with the reviewer to indicate that. All we need to do is make sure that our workers are safe while we're tearing this building down. We have minimal impact offsite and things along that line.

This Section doesn't give us a whole lot of flexibility, we don't think, and it doesn't appear to be moving in the direction as a risk-informed as you've indicated.

ORLANDO: If you had to turn in all the information there and you were going to tear down your building, I'd agree with you.

The idea here is that this is supposed to also take care of those buildings that are going to be cleaned up and left standing. If you're decommissioning alternative is to remove most of the material to a low-level radioactive waste disposal site, that would be discussed up front in the development of your decommissioning plan when you're talking to the staff.

And you wouldn't necessarily have to turn in all that kind of information, just enough so that the staff could determine or make a reasonable assessment that whatever health and safety and environmental and contamination control procedures you have in place are adequate.

So, if you know a room is real hot and you're going to put a HEPA tent over it and go in and scabble it, or just dismantle it and send it off essentially in cans, we probably don't need to know that information, just what type of radionuclide was in there would be sufficient.

But again, the idea of coming in early on and saying, you know, here's what we're going to do, what do you think? You don't have to give me that one, you don't have to give me that information for that room.

But, no, I agree with you.

NARDI: Joseph Nardi, Westinghouse. I'd like to reemphasize also, the concept that you can't always get all of the status up front. We have two facilities -- two operations which have essentially water-filled pools that are contaminated.

And one of the questions we had received from the NRC was, well, is there any groundwater impact adjacent to those facilities?

I didn't want to do any of the groundwater characterization until we emptied those pools and cleaned them. To try to get into an operating facility and do probing down in, core-boring, and water sampling and everything else, while we were still not in an operational state, but in a contaminated state, just doesn't make sense.

So it could be in many situations that we would want to say that we'll tell you later, what the radiological status of that aspect is. We don't have it now; we're going to have to go into decommissioning and clean up before we can get to that.

Another facility we had related to trying to do some surveys

with the high background, because a lot of the equipment was in there.

It was, you know, pretty much impossible to try to say what's the radiological status of the floors, walls, ceilings when you have a lot of equipment in there that just masks everything.

We had to do the initial decommissioning step of emptying the building of all facilities before we could even approach trying to really know what the walls, floors, and ceilings were.

ORLANDO: Did you do it in like a phased approach?

NARDI: Yes.

ORLANDO: Here's what we're going to get out?

NARDI: Yes. And that just has to be recognized when we talk about radiological status. We might not be able to give it to you all up front.

ORLANDO: Right. That's a good point. We have several facilities, I think, that are going to be in that boat where they are going to want to remove a lot of things before they get -- especially if they're going to be going for unrestricted use of a building, you know, because it's a capital -- biggest piece of capital equipment you've got -- and just move the equipment offsite, and some of your other systems. That seems reasonable, so that's a good comment.

Dave?

ALLARD: Dave Allard, PA DEP. One thing your staff may want to look at in reviewing facility radiological conditions is the chemical nature of the material also. We ran into a surprise.

We actually ran into a surprise. We actually have an SDMP site that we own, that the Commonwealth owns, and ran into a situation in a hot cell facility where some Strontium 90 was in a very dispersable form, and ended up contaminating some individuals with some minor contamination.

But it was a bit of a surprise in the review process,

looking at the chemical processes that were involved.

ORLANDO: Okay.

GOLDIN: Eric Goldin, Southern California Edison. One option you might want to consider is to be able to use operational surveys to determine a reasonable estimate of what the existing contamination and radiation levels are, rather than having to go out and do new surveys of each room.

ORLANDO: Okay.

DUVALL: Ken Duvall. I just want to point out that in this particular module where you're collecting data, this is a perfect opportunity to employ in the language of the SRP, the data quality objectives process.

I mean, here you have a number of purposes that you're collecting data for, and to identify those purposes and to identify the objectives that you're trying to meet with these specific survey -- specific data, it allows you to tailor, specifically, how good the data, what quantity, quality, and how good the data that you're going to be trying to obtain for it to meet specific objectives, I think is very important when you're collecting data, that you have a target.

And here, clearly, in this particular module, you have data being collected for a number of different purposes, and I think taking a data quality objectives approach would allow you to tailor specifically what the data needs are.

ORLANDO: One of the things that I tried to do in this particular module was not get into the MARSSIM too much because that's, as Ken said, where we get into our data quality objectives and everything. This was principally to give the reviewer an idea of what's out there, what's messed up, and about what level. What are we dealing with?

However, I think that your comment is valid, and there might

be some utility in putting some of that information up here.

DUVALL: This is not particularly a MARSSIM issue. This is a data collection issue.

There are MARSSIM objectives, just as though there are objectives for sending out for waste characterization and such. There are a number of needs for data in addition to MARSSIM, that the data quality objectives were very useful to be applied there. I think that's the important way to collect data to employ the data quality objectives process so that you can target the data to sort of the right type, right kind, right number of data.

SEXTON: Dick Sexton, Connecticut Yankee. I kind of had the same comment when I read this section, Section 14, which talks about site characterization. I guess my comment might be, as looking at putting those ideas together.

When I read the radiological section -- when I got to 14, I said, well --

ORLANDO: What's the difference?

SEXTON: Well, yes. I mean, it's the same radiological survey, and actually in the Section 14, I think you're getting closer to identifying the data quality objectives in that section.

ORLANDO: Yes, 14 was drawn pretty much from a MARSSIM approach. And, again, the idea in 4 was more of a review of what, exactly, the status of the facility is.

[Alarm sounds.]

ORLANDO: That's a door alarm that you hear.

I think somebody may have come in from the garage. The door that's over on the side there. The guard will come over and turn it off in a minute. I hope. If it's not, I hope everybody has their coat.

So, yes, I think that one of the things we can do is take a look and see if there's -- I don't think we need to see the information

too many times in too many different places. Once is enough.

Perhaps if that can be merged, that might be a good way -- two good ones to go together.

I had written it that way for, again, a wide scope of licensees. Some licensees may not be doing necessarily a MARSSIM type approach, but the detailed MARSSIM type approach. they may be just coming in with something a little less intense than that.

But I hear your comment.

SEXTON: I guess the reactor community, what I've seen from a scoping survey, is a combination of operational surveys, and then some augmentation of data, but it looked to me that this section was really kind of talking operational type radiological surveys that -- a facility.

And then you go to Section 14 that is talking about site characterization. In fact, what -- at least from the reactor side, it's -- the documents that are typically put together, combine the historical site assessment along with the site characterization -- document.

ORLANDO: Yes. Now, there may be some utility in -- it looks like it went back out. There may be some utility in having some language in there that will allow you to merge 14 and 4.

Again, this isn't saying you have to have every one of these modules exactly the same way. But if the information is there, this is how we take a look at it.

Anybody else on Module No. 4?

ZINKE: I think it's the same thing, but just as an example, you know, one of the information requirements is the maximum and average radiation levels in each room. For Part 50, you know, the guidance also says this would be not to exceed three pages. We couldn't get that amount of data just for that one thing, in three pages.

ORLANDO: Okay.

ZINKE: So, I'm not sure if this is, again, one of those things that would say, well, for Part 50 plants, you don't need to send this, or it's hard to tell whether there is some middle information that maybe we don't need to do this, but you still want something.

ORLANDO: Okay. Anybody else on No. 4?

[No response.]

ORLANDO: This is where we had scheduled a break, at least in the modules. It's not where we decided or where I had expected us to be at this time. Since I suspect that -- let me ask you a question: Are there a lot of things you want to talk about on Modules 5 and 6, which are dose modeling and ALARA -- alternatives, I'm sorry; excuse me.

Is that an area where we think we may spend a fair amount of time? Okay, I'll tell you what then, let's take a break now for about 15 minutes.

I'll go find the guy to turn off the door, and then when we get back, we'll go straight on through to lunchtime.

[Recess.]

ORLANDO: Okay, if everybody is ready, just a couple of things that we sort of talked about a little bit over the break: I want to apologize to anybody who gave me a comment that I may have just shaken my head or said yes to or something like that. Please understand that I probably don't have a response.

But we will take the comment, and in many cases, I think the comment was valid without any type of response back from me. So if I didn't respond to you, please understand that it's not that I'm not listening. In fact, I'm paying somebody to write all this down so I can think about what you're saying, as opposed to having to take notes, which, for those of you that know me, you realize I can't do both at the same time.

Larry Pittiglio asked me to make an announcement at my convenience, and now is the that time: The Commission paper, use of rubble-ized concrete dismantlement to address 10 CFR Part 20 Subpart E should be publicly available the first part of March. Check the NRC web page at that time. That would be SECY 00-0041.

One other comment, I think, to John: The concern about the specificity in the suggested format as to the number of pages. Understand that that's in there as a suggestion to give folks who may need the guidance, some idea of the level of detail we're looking for.

Again, this is very, at this point, going to be very inclusive, and so I've got to think about licensees who don't have the faintest idea what to send in, and may want some guidance on that.

Clearly, there are going to be licensees who look at that and say, you know, 80-100 pages, minimum here. Maybe we need to talk to NRC and come up with a better way to get that information to them.

So that you had a very valid point, and I just wanted to finalize that one or go over that one.

It looks like -- is Bobby back there? No. We may want to -- do you want to -- okay, Chris, to my right, is Chris McKenney. Chris has been one of the principal authors and principal members of the Dose Modeling Work Group, the folks that are putting together the dose modeling section.

Most of you know Chris from some of our earlier workshops. He is the author of the modules on dose modeling.

There are two more modules that will be posted on the Web very shortly, Module 5.3 and 5.4, and the answer to the question that's probably in everybody's mind is, yes, we'll take comments on that for awhile, so you don't have those in by the end of February.

The dose modeling folks are going to be focusing on the technical basis document, which is the actual detailed document that

takes you through dose modeling. So be looking for Modules 5.3 and 5.4.

Having said that, we'll go ahead and start with the comments or questions on dose modeling, and for the most part, I think I'll be just looking at Chris every time he throws something at me, because he's the principal author.

So, if you want to start, go ahead with any comments on dose modelling. Which set of comments do we want to address first? Go ahead. Ken, why don't you start out?

DUVALL: Ken Duvall. I'm interested in how 15.49 is being applied. There is what is called a D&D decision framework within 15.49, and 15.49 discusses the process in which you do your modelling, you do your screening, and then if that doesn't meet the criteria, you go off to site-specific evaluation and then come back, and there's a diagram of that.

It appears that this diagram represents more of what the D&D framework itself is, which includes the dose assessment, the ALARA, the MARSSIM, the remediation process. There are all these steps that are a part of the D&D process, and, in fact, it's aligned somewhat, it should be, with the reactor decommissioning process.

And there's a whole process that's in place here, that is not evident when you have 16 discrete modules. And so my question is, it would appear that one would want to pull this D&D decision framework out of 15.49, which appears to be not one of the critical documents within this package, and to pull that decision framework out and put it into some kind of overview module that would describe the process so that everyone could see what the steps are, how the modules are integrated together.

McKENNEY: This is McKenney. The one I did put the decision framework into Chapter 5, but the decision framework was actually written the way it was to show that it was mainly for the licensees, and

it was to show that even if you didn't pass -- if you didn't pass screening on your first attempt, that didn't mean you had to automatically clean up your site, or that didn't mean you had to spend a lot of money to do site-specific modelling.

You had choices to do, and you had to weigh the benefits in going around to decide. We may be able to pull in most of those aspects, and with having pulling in 4006, I'll take that into consideration, to try to do that, and to at least for the dose modelling part of the discussion, and to Chapter 5's introduction, but we will consider the overview also of the entire process.

DUVALL: Okay, so you're saying that this diagram describing the modelling process is actually also the diagram describing the entire D&D process?

McKENNEY: In a symbolic sort of way, yes, you know, it's saying you need screening right away, and then from a dose -- from a radiological risk standpoint, there is nothing much more you have to do for that, except do all the surveys and everything else.

But if you don't meet the first criteria you use, then you're going to have to do something. You're going to have to either look at site-specific models or do some cleanup, or do some other things, take more data.

DUVALL: In this framework, I don't see where MARSSIM is placed in here.

McKENNEY: This is creating DCGLs.

DUVALL: This is the question that I had, was, is this a description of the dose assessment process, or is it a description of the D&D process itself?

McKENNEY: It's more the dose -- the dose to set up the DCGLs. But if your site doesn't meet the DCGLs, that doesn't mean you have to do dose modelling, because the end result of the framework is

for you to come up with DCGLs that you're going to be able to use at your site, and meet to finish your decommissioning.

DUVALL: I guess my comment is that I would suggest that there be in place, a D&D framework to integrate all the modules, or integrate all the steps, and that it include MARSSIM, and that it does not indicate or appear that the ALARA process is placed after you've actually met the criteria.

I think the ALARA, certainly prior to meeting -- demonstrating that you've met the least criteria. And, in fact, if the ALARA, the dose assessment, and the MARSSIM, I believe, have a relationship in that they can be optimized, that they should be indicated in the overall process so that the optimization can be intentionally applied.

ORLANDO: Okay, well, thanks for that comment. Paul, did you want to start off?

THE WITNESS:

GENOA: Paul Genoa, NEI. What I'd like to do is, I'm going to read through some bullets to make sure we capture them. But they are necessarily brief, and if I don't recall exactly what it is, I'll ask someone to chime in who helped make these. There are a couple of comments.

One of the issues has to do with an indication that the screening values cannot be used under certain conditions. And there are probably a range of those conditions.

I can recall one specific that comes to mind. It has to do with the use of soil screening values for subsurface contamination, and that that wasn't part of the design of how those screening values were built.

In the recent supplemental information that we commented on, and you guys are probably chewing on and digesting now, we asked you to

consider that for some definitive finite zone of subsurface contamination, some small lens of contamination, subsurface, that if it met those levels clearly, you shouldn't have to model it a whole lot more than that.

But we could understand that there are situations, subsurface, large volumes, contaminated, even meeting those levels may not meet your objective. So we're not asking you to compromise the assumptions, but to recognize that there may be -- you may be able to use the tool in other ways.

And one way I envision is some small subsurface zone of contaminated soil that is below the screening values, that you wouldn't have to go a whole lot further. So if you would look at some of those issues --

ORLANDO: You're saying to include that type of discussion in here?

McKENNEY: Actually, what Paul is discussing is actually already to some degree in our technical basis document of how to provide the justification to be able to use the models in a different situation than they were originally intended to, and how you'd have to provide justification to do that.

And the wording in 5.0 and 5.1 is going to -- on a list of things that these are areas you can't use screening, is going to be more of that without justification, you can't use these for screening values.

GENOA: Excellent.

McKENNEY: So, that was, in truth, the intention, because in some situations, we've been able to use the D&D screen and situations. It wasn't truly modeled when we sat back and look to make sure that the assumptions were actually being compromised.

Now, that would obviously have to be a site-specific case for us to look at it and say, yes, in this case it's still okay to use

it.

GENOA: Again, anyone chime in if I don't quite characterize that right. There was a notice that there was no reference to RES/RAD build. There was reference to other RES/RAD, and I guess related to that, there were some references associated with which versions of which code.

We had some concerns about that, the idea that you're doing this work several years before decommissioning, and maybe you're developing the plan even before the act of -- before you are fully ready to submit, for instance, a reactor license termination plan; that there is going to be a period of time, a year or maybe more.

We certainly wouldn't want to have to go back and redo the work, if a new version came out. We would hope that you would have language in there that said that unless the agency found that the previous version of the code was flawed in a way that could be a risk to public health and safety, that you wouldn't have to go back and revise the code you're using.

ORLANDO: You'd just find out in the dose model.

McKENNEY: Actually, that was actually the intention of why I said to put in the version. I didn't want people to sit there and go, well, I ran the next version and I got a slightly different number, so your whole thing is flawed.

If we know what version you ran, then we can make a better decision of whether there really is a difference or not, rather than, and especially when it's three or four years down the road when you've set up your DCGLs years ago, and now you're at decommissioning, and that's the -- your final survey. That's the last thing you want to do, is have to argue the differences in models.

GENOA: So we recognize that you need to --

McKENNEY: Retain the ability to say, hey, look, you know,

we revised it because there was a fatal flaw in the previous code, and no one is going to be allowed to use that anymore. We understand that, but barring something like that, we'll document the version and that will be good.

There was a reference to an appendix, but it wasn't available.

GENOA: That's the technical basis document, and we'll --

ORLANDO: And we will get an opportunity to review and comment on that, but it will be later on in the Spring.

GENOA: On the screening values for the building occupancy, we recognize -- I think that first of all you should know that I don't think the tables came out when we downloaded things, so we don't --

McKENNEY: In the WordPerfect version it does, but it may have been a conversion. When I download it, it does.

GENOA: We all deal with these things.

McKENNEY: In the final version, it will go into an PDF format, which will the -- it should, and we'll test it on different versions.

ORLANDO: Were you able to get the tables?

GENOA: No, but that's okay. We knew what they were.

ORLANDO: Did you know what they were? Were you able to eventually see the numbers?

GOODMAN: Lynn Goodman, no.

GENOA: When I said we knew what they were, it was because they were previously published in the Federal Register, but, no, we could not look at the tables.

ORLANDO: That was my point; that is if you don't know what they are, the surface soil and surface numbers are in the Federal Register.

McKENNEY: There is a reference to the Federal Register in

there before the table.

ORLANDO: And I can give you those references again if you need them.

GENOA: No, that's fine. But what we did notice is that the transuranic isotopes have not yet been added to the table.

ORLANDO: Right.

GENOA: We recognize that there were some issues there with resuspension and conservative assumptions. We encourage you to keep working on those. That's pretty much it.

McKENNEY: The table that was put in there for building surfaces was exactly what was put in the Federal Register Notice. Because of the work still in the -- and also the draft has been up since early -- since basically late September, so there is obviously a lot of things that have happened since then even, like the soil surface ones weren't in there because they weren't out yet.

So, we'll look at both the problem with the computer code and the graphics and making sure that it -- in the smallest thing, that there is a double reference, not only the table, but there will be a separate reference to the text, in case for some reason you can't get the graphics.

ORLANDO: Bobby Eid -- in setting up the workshop, I had been talking to some folks, and they wanted to have perhaps an update or just some information on where we were the RF, resuspension factor, so I asked Bobby Eid to be able to answer that, and it seems now is a pretty good time since we were talking about the RF, the resuspension factor.

EID: Yes, the RF status, now we are developing a NUREG. It is in a draft form. And we are trying to address the RF.

We tried to use the licensees' data, two licensees' data that were included and in establishing the RA value. The RA value, it is at least restrictive as it was before, because our PS values were

based on some kind of experimental conditions that they are not consistent with the decommissioning sites.

And the 10-percent with loss contamination was assumed, which also the basis for that is not really clear. We tried to establish a better technical basis for the RF, based on additional data, and based on analysis or literature values.

We developed, as I said, the draft NUREG. It is being now reviewed. We have internal peer review for the first phase.

After we go through the process of the internal peer review, then we will put it on the website for expanded peer review and for comments from the public.

The schedule for it depends on when we will complete the internal peer review for the RF. If we are done and we get the permission to go ahead for the expanded peer review, then we'll go ahead and put it on the Web.

If everything goes well, of course, you will find this hopefully in June, and then we'll make conclusion, whether we will be able derive a screening value for all parameters or not.

For your information, the values that they are proposing in the NUREG, I cannot quote them exactly, but they are less restrictive and could be by on order of magnitude or more than the current values in the D&D.

That's the best I can tell about the status of the RF. Again, if you have any additional data in there, good data on the facilities, again, I renew my request to please provide us with this data, and still we could accommodate this data if it is good quality data for this.

Also, we encourage the users, those they have provided the data, to go ahead and publish it, and this will make our task much easier to refer to the data as data presented in the workshops or given

to NRC staff, or through the decommissioning process.

So if you could publish this data, we would encourage that and will make our job easier to refer to the data given to us.

ORLANDO: Thanks, Bobby.

GENOA: Paul Genoa, NEI. This is a general comment, but it fits into this section. And obviously I want to commend the staff and the NRC for looking into and reevaluating old data to factor into these discussions.

I think the resuspension factor is a good example. But I want to caution us to keep the big picture.

What we're doing is, we're dealing with these second and third order impacts, such as, you know, how much walking over floors is going to scuff the floor and kick up contamination.

I understand we're trying to deal with uncertainty and quantify it. But we need to look at the first order effects. The assumptions in the beginning is that someone is going to re-habit a building that is a decommissioned facility, and there is no probabilistic assessment of how likely is it that they're not going to paint the walls, put new flooring down, put a dropped ceiling in it, which is going to completely eliminate that pathway.

And so it's nice to work down in the third order effects, but it would be nice to also be able to address up front, some of those concerns which will completely eliminate those second and third order issues.

EID: I agree with Paul. I think those are issues we're struggling with. Unfortunately for generic cleaning analysis, we cannot make certain assumptions. We have a scenario which is the building occupancy scenario, and in that scenario, you assume light industry.

So that's what we are trying to approximate, the situation. But if there are site-specific conditions that indicate that the RF will

be less, of course, it could be accounted for when you conduct the site-specific analysis.

LITTLEFIELD: Pete Littlefield, Duke Engineering, Yankee Rowe. The other medium that you seem to have ruled out the use of screening factors on was surface water sediment.

I guess I would ask, the same as Paul has, if this -- if you have considered whether there is anything inherently non-conservative with using those surface screening values for sediment.

And maybe you could address something on that.

McKENNEY: Right. The main thing is the initial conceptual model, unless, of course, it was soil that leaps through an unsaturated zone and the into the groundwater. And then it was put back as irrigation.

If it's sediments, then there are a lot of issues of, well, that would contribute direction to the concentration in the water, possibly, or to the plant material there that the fish would eat, and the primary pathway changes quite a bit, too.

It would have to be looked at a bit. We haven't really explored too much of how far off or how inappropriate it would be to use that situation, but it was more of that is a situation that is quite different from a conceptual standpoint.

For certain primary transport mode mechanism, then the -- what is in D&D right now. It's actually significantly different than just being buried a little bit more than the 15 cm.

There is significant difference, too, so -- but again, that -- if further looking at stuff like that, the new thing is going to be changed to say without justification, so that if you can justify why it would be able to be used in that situation, then we --

LITTLEFIELD: Then, again, the words, as they are worded now, seem to imply that you couldn't use screening values anywhere on

your site if you had sediment that was contaminated.

McKENNEY: Right, right. I'll look at to makes sure that that is not as harsh, cut and dried issue.

ROBERTS: Rick Roberts, with Rocky Mountain Remediation Services. One of then things you've looked at here, and in D&D, is really looking at a screening level where you really max-out everything, where you say, okay, you know, we're going to the 99th percentile of everything and if you did this, then these are your screening level numbers.

And one thing you have in here is your average member of your critical group where you can justify using other parameters than were used in D&D. And you may be doing this in your technical document, but I would recommend that you not leave that as open to interpretation as people can just put in any number and try and justify it.

You give some precise criteria on what someone could be in that average member of the critical group, and going as far as having some values in there that would be acceptable for that average member as well.

Things like in building scenarios, you're going to start looking at them and you have that renovation work and you have the office worker in there. But also in the environment, going even further than just the residential scenario and recommending values there, there are other scenarios.

There are industrial use scenarios that may be applicable as well. And you may be doing this in your technical document that's coming out by just -- would recommend that you be a little more precise.

Even when you go back to the ICRP documents on the average member of the critical group, it really doesn't help you at all.

McKENNEY: It's not designed very much -- remember, the ICRP documents are designed for current populations that you can actually go

out and find these people. And it's not for a future-based analysis.

Was the initial use of the critical group -- there are documents underway on actually how to derive a critical group for the future based on current populations, being done for -- by a subgroup of the IAEA, International Atomic Energy Agency, which I'm part of, on the -- it's call Biomass.

And it has a document. There is a limited release version of a document on how to select critical groups for future populations, and that will be attached and put on the website when we put up the technical basis document on critical groups.

So that reference will be there which describes how to do it in general form. For giving out specific values for different people, that can end up to be a long process.

In the screening values, we didn't even use the 90th percentile for the people; we used the mean values or of our parameter ranges for the people's habits.

For anything that we considered to be behavioral or metabolic process, like breathing rate, and food intake, they were based on the mean values of the range that was developed for the code, rather than some X-percentage along the lines of what is suggested in ICRP-46 and other ones that you take the mean value of the group's activities.

ROBERTS: I guess I would ask if you don't give a number, that you could recommend at least like you were saying, say that it would be acceptable to use the 50th percentile or the 90th percentile for this, for distribution in order to do the dose analysis. That would even help out a lot.

McKENNEY: Right, the IAEA document I talked about goes into quite a bit of detail of how where you might want to take an initial cut if you had just national data on something, or if you had Regional data on something, or stuff, so that you can tailor -- because, of course, if

I have national data on just the habits of people on how many hours a night they sleep, for example, well, not all of those are members of a critical group.

The critical group is a much smaller subset of people who do some activity a great deal. So you may take a higher percentage from the national data.

But if you had actual data of that critical group like industrial workers, that situation, then you may be taking the mean of that activity, that they worked so many hours.

So that sort of stuff will be in the technical basis document, and the supporting document that I'm referencing.

ROBERTS: All right, thank you.

GENOA: Paul Genoa, NEI. That last conversation brought up another issue, and maybe this is the right time to discuss it.

And this has to do with sort of guidance on parameter selection. If you were looking at the KD values, which I think was discussed, and you go on your site and you put 100 borings or whatever and you come up with, you know, three or four values at each one of those.

How would you like to see us document the decision process that selects what is the number you put in the code, based on that kind of data?

McKENNEY: That is actually the chapter before that, right on selecting parameters or changing parameters. There is also already some discussion in 1549 on something on selecting site-specific analyses. It's like Appendix C or something of the document. It goes through the various variables and says if you have this sort of data you may want to take this percentage from your range or if you are going to modify this parameter, then you may want to look at these parameters also.

That will be covered in the --

KONIG: John Konig, ABB. The 15 centimeter criterion gives me some concerns from the point of view that some sites will generally not be contaminated below 15 centimeters, but those sites may also have pipelines. They may have burials. I am concerned with how the reviewer will interpret the 15 centimeters.

You also may have situations where it is 20 centimeters or 30 centimeters and that criterion triggers a lot of things. It triggers site specific and it triggers other requirements to be carried out, especially geological, geomethodological studies to be done when maybe they are really not necessary, or only minor efforts are necessary in that area, but I think I would be concerned with how it would be interpreted by the reviewer five years down the road who is reading this for the first time, like Dave Culberson has noted earlier.

I think I would like to see in the SRP something that addresses that type of issue where you shouldn't go by 15 centimeters specifically. You've got to look at the situation at the site.

McKENNEY: That was the discussion I had earlier about saying that I was going to add that it does not just absolutely keep you from using that model and that screening value, that you with justification and showing that it is still viable for your situation you can use it, but piping is actually a completely different thing for the conceptual model but like if it's 20 centimeters in a generic form you probably don't have a problem with it, but that is -- there will be ways not to have to do a great deal of work to provide a justification of what it is still viable and not actually kick off all these intensive processes and procedures.

KONIG: I think a corollary to the comment is some sites will very likely be undergoing EPA actions, voluntary corrective actions, that sort of thing, and in many cases those actions will drive

some fairly significant geological or climatology studies to be done.

McKENNEY: Right.

KONIG: And I would hope and expect that anything approved by another legitimate agency would not require a great deal of review by the NRC, especially in circumstances where you think you are limited to surface and maybe pipeline contamination, that sort of thing.

I would like to see reports that have been done on the geological structures of a site, for example. It would be pretty much accepted as is and not require a lot of review.

McKENNEY: That would be our hope too.

KONIG: Good, thanks.

GOODMAN: Lynn Goodman. I have got one very detailed comment. I will put it that way -- a specific comment. That's where two places in the review plan it talks about that if the total dose is greater than 10 percent of the respective limit, removable fraction needs to be 10 percent or less at the time of decommissioning. I think that should be at the completion of decommissioning because I think that is really what is important about modeling and what is left, not is what is there when you start your decommissioning.

McKENNEY: No. At completion meant that -- is it actually at the time of decommissioning or is it -- oh. Confusion on my own part.

What I really meant was -- it should actually say at the time of proposed license termination but you're right, that will have to be changed.

ORLANDO: John, did you have something you wanted to say?

[No response.]

ORLANDO: Anybody else have anything they want to talk about with respect to dose modeling?

[No response.]

ORLANDO: Okay. I thought that that would last a little bit longer than that, but that is good. We will have a nice long lunch.

The next section in the Standard Review Plan is entitled "Alternatives Considered and Rationale for Chosen Alternative."

It is important to realize for this particular module that this only really applies to the sites that are going to be undergoing requests for license termination with restrictions in place or using the alternate criteria. We need this kind of information in order to develop environmental assessments or EISs depending upon the particular decommissioning option that is proposed by the Licensee.

If you are going to be going for unrestricted use, there is no real need to do any kind of detailed alternatives analysis, so having said that I will say does anybody have any thoughts about that module section, Module 6 alternatives analysis?

GENOA: Paul Genoa, NEI. I'll kick it off. I want to just sort of tee this one up and other people can weigh in, but there is language in there about selecting the environmental superior alternative, and that is a whole new word --

ORLANDO: Right.

GENOA: -- that I don't think is found in EIS space in other things and I think it even has some definitions of what that means and I think we had some concerns about how that was defined. I would ask you to take a look at it.

ORLANDO: Could you voice those concerns or are you not ready to do that?

GENOA: No, no, if I can find it.

ORLANDO: It's on page 3, down at the bottom -- my page 3, I'm sorry. It may be on your page 2, but it is under Section 6.1.

GENOA: Yes, there is a footnote at the bottom as well.

ORLANDO: Generally where that comes from, you see, is that

we put together some -- and again this is a draft document, but we had put together some information on Environmental Impact Statements and the language that Paul is referring to says that the Staff typically looks to see the environmentally superior alternative chosen, and for this context, environmentally superior means it is the one that results in the lowest dose to the average member of the critical group or that could turn the site to as close as a pre-licensing stage as possible.

That is sort of the definition or the context we used it in in the document.

GENOA: I will give you a general flavor of the concern. It just hit a couple nerves and I guess in a way what -- carried to extreme what it could do is conflict with really the ALARA analysis. It could in fact say that -- well, clearly the environmentally superior alternative is the one that removes all radioactive material, all residual activity from the site, digs up the entire site and transports it to Utah, so I mean, you know, that would be an extreme situation and that would ignore the other societal risks associated with it.

Radiation is not the biggest risk from decommissioning, so we don't want to lose sight of that. Industrial risks and transportation risks and a lot of other things, fugitive dust and noise in the community and a whole lot of things are far more environmentally sensitive than the residual radioactivity some people would argue, so hinging the environmentally superior issue only on radiation is one element.

The second one has to do with returning the site as close as possible to its original state may or may not be the best choice for the stakeholders in the group. They may want the facility to remain an industrial site. They may want the buildings left up for one purpose or another and I just wanted to recognize those kind of flexibilities.

ORLANDO: Henry?

MORTON: Henry Morton. I think in terms of the sites that are looking at restricted release and which the evaluation of alternatives is a leading issue, it would be helpful in the regulation mechanism if there was a way in which the Licensee and the agency could work through the alternatives to the chosen or preferred alternative that would help focus the remainder of the decommissioning plan so as to focus it and not to spread out the work too much after that point.

ORLANDO: So you are saying maybe an approach would be for a Licensee to do the alternatives analysis before they send in the decommissioning plan, then meet with the Staff and discuss that?

MORTON: It would be useful I think if there was a provision to do that in case the Licensee has a situation that is complex enough that he thinks it is warranted.

ORLANDO: I think that is a pretty good idea. In fact, that would be one of the things that I would hope would happen just as part of this idea of meeting with licensees and discussing things as the decommissioning plans are being developed.

I am not sure how the mechanism for getting, quote, approval of what your proposed alternative would be, because that tends to get wrapped up into NEPA so you are kind of in a situation where we can't approve your proposed alternative before we do the NEPA activities including developing an Environmental Impact Statement and we can't really do an Environmental Impact Statement until we get a decommissioning plan, so we are in a little bit of a bind, but that is one thing that I think we -- it would be good for us to come up with a way to accommodate that, because I think I see your point that you don't want to go off and spend an awful lot of money coming up with a decommissioning plan option that is not going to be -- that doesn't have a chance.

KILLAR: Felix Killar, NEI. I actually have a question because my mind is getting foggy and I don't recall what the outcome of it was, but if we have an alternative site because we are going to a restrictive release I believe we have to have a Site Specific Advisory Board, is that correct?

ORLANDO: We get into that a little bit -- well, it is discussed in detail in the DG and it is discussed in detail in the statements of consideration.

The final rule did not require an SSAB or Site Specific Advisory Board. However, the guidance that is out there in DG and I believe the Commission's intention was that was probably a very good starting point.

The reason that it wasn't, my understanding is the reason it was not specifically included in the final rule was that it didn't acknowledge that existing groups may already be in place at a site that could perform the same function and when I say existing groups at a site I mean those that would include a broad cross-section of community interests and all the others, so to say specifically that you always have to have one I think is contrary to the rule, but I think that is one of the things that we would look at and expect to see.

If you don't have one, you know, why not, and then how did you go about getting all of the information that you are required to get.

I am not saying you are going to justify it every time why you didn't have one, but I think you need to have that starting point in your mind as to the SSAB is probably the best -- that small group dynamic is considered to be the best way to get the information, but if you don't have that what did you do to ensure that you got that information.

KILLAR: Well, that goes to my question then is I didn't see

in six, and maybe I read through it too quickly, how the considerations and the SSAB interact.

ORLANDO: Well, the Site Specific Advisory Board or the public input information is discussed back in the institutional control part because that is where in the regulation under 1403 you start talking about what the public input activities, at least for the Licensee, what they have to do -- the gathering of information on the proposed institutional control and whether it will maintain doses as to 25 millirem and whether the restrictions will be enforceable and on down the line. There's about three or four things that for lack of a better word I will say SSAB has to do for the Licensee, but I discuss that in Section 16.

KILLAR: 16? Okay. Along those lines though, back to the footnote we started talking about earlier, about the superior site, by having that footnote in there I think it actually takes away from some of the let's say review and expectations of the Site Specific Advisory Board because it then sets up an expectation that this is the way that has to go, and so then it takes away some of that flexibility t hat they have in providing other alternatives or discussing alternatives.

ORLANDO: Okay. I think perhaps the wording of that may be somewhat misleading and I will try and work on that.

I think the idea here was to try and make sure that we have a starting point that says, okay, what is the best that can be done, and then see exactly what is the proposed alternative and try and benchmark them against each other to see what we end up with.

NARDI: Joe Nardi, Westinghouse. One of the things that we are participating in is in the NRC's decommissioning pilot program. The thing that I have found in that, and we will be preparing a report to the NRC that tries to incorporate many of these comments that I am going to just summarize right now, but my biggest problem with this process is

that we kind of assume that you are going to have a decommissioning plan that knows all upfront, and that you make all these decisions on alternatives and everything in the beginning, and what we found in the pilot program, and what I really strongly recommend is the flexibility to come in in phases with information.

We were able to start our work and do a lot of things to get us far enough along to make measurements that were realistic -- for example, like walls, ceilings, floors, everything -- pretty far into the process, after we had emptied the building and done a lot of initial cleanup, and then we could make the decisions necessary to consider which alternatives are appropriate.

If I had tried to make that in very beginning the decommissioning plan would have been so vague with so many alternatives to be meaningless. That is personal opinion.

It is far more appropriate I think to delay some of that decisionmaking until you have more specific information that isn't complicated by many other factors such as the high background that was associated with that facility due to the equipment that was in it. It was very simple to take out but if you followed the decommissioning plan process you can't necessarily just remove all that.

ORLANDO: I think the rule, and I know one of the folks from OGC is in the audience and perhaps if I am going to misspeak here they can correct me, but the rule outlines, the timeliness rule -- you know, cessation of operations, 60 days later you let NRC know, you know, with the next amount of time you will decommission your site with a year or with the two years you will send in the DP or whatever.

There is also the provision in there for an alternative schedule and at least in this person's mind, my mind, if a Licensee wants to take an approach like you have described where you do things in phases, and submit the information as it is developed and what-not, I

think that is something that could be worked out sort of in that context of an alternative schedule.

Now clearly then you would have to establish that schedule, and I think that is where, you know, the Staff and the Licensee need to work together to say, okay, it doesn't make sense to do -- to give you a 10-page document that tells you nothing when in six months we are going to have all of the information for this section, this section, and this section, but I think the rule already allows that, so perhaps we can put something -- how to use or something in the Standard Review Plan that acknowledges that that exists.

Jim, is there any concern with sort of fractionating the submission of material like that?

LIEBERMAN: I am Jim Lieberman, OGC. Maybe not in approving the decommissioning plan, but I am concerned how that is going to interact with NEPA, because when we make our decisions we have to consider the environment, and so we have to couple these things so there may be a little tension between the details you need for NEPA and the details you need for decommissioning, the timing, but I think it is a good issue that we need to think about.

NARDI: Joe Nardi. That's exactly my point. It is a very difficult situation when you are trying to do this in what I consider a logical fashion from a technical standpoint versus the administrative standpoint.

ORLANDO: I guess we are somewhat in a position of having to have the information sufficient to do the analysis and again, you know, to actually have the decommissioning plan in place, so that is a tough nut. I think that is one we are going to have to work on.

NARDI: Joe Nardi again. My focus again is the Materials license side. If you look at the big licensees it becomes very obvious you have to do a lot of work. One of the other comments that I would

like to make is there is also the provision in the regulations that you may not need a decommissioning plan.

The guidance for that decision is very vague, trying to decide whether -- you know, if you are a radiography facility, it's real easy. If you are fuel fab plant, you know you are on the other side of the line. Many of my operations fall into that gray area where it is just not clear whether I do need to follow the regulations with respect to submitting and of getting approval of a decommissioning plan and when I don't.

Some additional guidance in that somehow would be very useful, I think, to a lot of licensees -- not the ones that have the big cost of decommissioning and not the ones that have the big cost of disposal, but the middle ground.

ORLANDO: Yes, that was one of the things we tried to tackle in the decommissioning handbook and it actually laid out which types of licensees, again based on what they had done during operational phase.

I still see that kind of -- and it is actually included as a table, a matrix in the NUREG -- I could see, I think that the same type of document, same type of matrix will be generated for the revised handbook, which will show exactly which types of Licensees based on what they are going to do to clean up or in some cases just terminate, request termination, whether they need to submit decommissioning plans and whether the Staff will or will not be going forward with the EAs and EISs, which is important for you guys in determining your schedule because if we have to do an EIS, that adds a significant amount of time to the process.

NARDI: You're right, and I lot of times -- I look at some of those matrixes, I have reviewed that kind of documents and I find it a little bit wanting for the real situation.

They are good when you are thinking about big picture, but

when you are down to do I or don't I, I find it wanting sometimes. An example of this -- we got into the decommissioning of this facility under the pilot program and we assumed that the ground under the building was going to be contaminated, just for purposes of decommissioning cost estimate and others, but we had no real information.

I did not want to go through that building when we had the operations still going on, when we still had the equipment and core bore the building. We went on the basis of what we were going to do was not do a whole lot of characterization in core bore. We were going to clean the inside of the building, pick up the floor and see what was under there, and that was the approach we took, and under the pilot program we had the flexibility to do that, so it was very late in the game before I found out what was under that floor.

I would have loved to have known upfront, but it made a lot more sense to do it in the fashion we did it.

CULBERSON: Dave Culberson. Just a question that goes back to some earlier comments about the process for going into the decisionmaking and that was a comment that it is a good idea, and I think it is a good idea, for the Licensee and the NRC to meet early on in the process, make some of the decisions, and decide what would be in the decommissioning plan and with respect to the alternatives make those kind of decisions.

My question is who would you envision being involved in that decisionmaking process from the NRC -- well, who -- I know the Licensee representative but is that -- who at the NRC, what level --

ORLANDO: What level of signoff, is that what you --

CULBERSON: Yes. What level of signoff, who is involved in that decision process -- is it technical people, is it Staff, is it management? Are there other interested parties included in that

process?

What is today your anticipated --

ORLANDO: Well, I think clearly the people who would be involved would be technical staff, to go through and determine what kind of information is needed.

I think it may, depending upon which group in NRC you are working with, the level of signoff of the letter, if you will, may vary a little bit but as far as other interested parties, I would think that, you know, we would want to at least consider co-regulators, say states, to see what they have to say. Make sure, because don't forget one of the things that we have also heard is that we have been encouraged to make sure we take and not make somebody have to submit two documents, so if there is some way to bring in some information in an easy way that both regulators could sign off on, that would be good.

As far as the specific of how far up in the chain it goes, I would have to check that for you. It seems to me it might be at, say, maybe the branch level, but that is no commitment. That is just based on some of things that we have done.

CULBERSON: Would you anticipate just in the decommissioning branch or division or it depends on who is licensing, Research --

ORLANDO: It would depend on who is assuming responsibility within NRC for managing the decommissioning.

We have sort of a process where the sites will be switched over to either Headquarters or they'll go from one group in the region to the other for decommissioning and at that point that is where that decision would be made.

Usually those kinds of things or those types of letters, as you probably know, like I said are signed off at around the Branch Chief level, but there may be some, depending upon what the decommissioning alternatives are and everything and what you are going to do, we may

have to float it up a little bit higher, but I hesitate to say exactly where in the process that is going to happen or where that signoff is going to occur, but that is a good question.

That is something I think we need to try to work on at my end. Don't identify any more holes in my process.

[Laughter.]

GENOA: Paul Genoa, NEI. Following up on that, would you envision after this meeting and the discussion of what the decommissioning is going to look like and what you think your information needs are that that would ultimately be documented in a written letter?

ORLANDO: The way I am envisioning it now, yes. Some kind of -- something that lays out what the expectations of the Staff are. It may be a meeting summary that says here is what we agreed to. I mean we do that quite a bit.

There may need to be, depending upon what the decision is and the interest and what-not, there may be some other things that have to be taken into consideration but I would hope that we could do it in a well-documented manner, because there is no point in you having a checklist and us having a checklist and then all of a sudden saying well, no, we changed our mind. That's not the way I want it to go with this.

GENOA: Do you envision as you move through this that for certain facility types, obviously reactors comes to mind for me, that you would very quickly see that there was some minimum set of information that is going to be required from everybody all the time and so you don't have to go back and hash that out and then what else is there, you know?

ORLANDO: Yes. In fact, one of the things we will do in the Handbook is actually lay out or try and lay about sort of what we call

the core information needs and then depending -- say, for example, everybody is going to have to come in with their DCGLs. Everybody has got that who is going to do decommissioning where they are actually going to have to come in with some numbers, will have to submit DCGLs so that one is an automatic check, but yes, I think there is going to be or what I hope to have is something where there is an actual core set of information that everybody would need to turn in depending upon what they were doing to decommission.

GENOA: Okay, and then this, finally. It sort of ties back to a little bit of the discussion we heard earlier.

ORLANDO: Right.

GENOA: Because what we are not saying is, hey, go out of your way and finish this decommissioning manual or whatever else, but from a reactor's perspective we have got this 1700 SRP that tells us what to do. We thought we had a pretty good handle on how to give you that information.

It appears that you want to give us some more definitive information than that and you are going to reference it over. It would be nice that somewhere between that referencing -- well, what we would really like is to see 1700 just tell us what we need to do or at least the minimum stuff and then perhaps create this mechanism to identify, well, you have a significant spill or groundwater contamination so you are also going to need x, y, and z, and that would be documented in some meeting.

ORLANDO: Well, now remember, all of my discussions of the Handbook, that is a Materials document, so unfortunately Larry Tiglio is not here, so I am not quite sure exactly how they are going to work that mechanism under 1700 but I will see if he can't come back this afternoon to answer that.

GENOA: There are a couple of things we'd like to ask about

that.

ORLANDO: And we'll make sure we get them.

GENOA: Thank you.

GOODMAN: Lynne Goodman, FERMI-1. There has been some discussion that it would be nice to be able to have one document that you could have all the considerations; that the different regulatory bodies would be interested in one document, rather than have multiple

I also would like to keep the flexibility of having separate documents and not just go the way that it all needs to be in one. For example, our local building commission, they need just a very small piece of what we're leaving in underground structures, and not the whole thing.

ORLANDO: Understand, I wasn't saying that there would be one giant document that takes care of every conceivable regulator's need. What I was more concerned about is a situation, for example, some sites that I'm dealing with in Pennsylvania, where there is state interest or state responsibility for radionuclides that we regulate or for some other -- there is some chemical contamination that we don't regulate.

Clearly, in a decommissioning plan, we're not going to be approving anything having to do with chemicals, but there's often a meshing of activities that occur -- to clean up one, you're cleaning up another. We need to make sure -- what we want to make sure happens is that one isn't counter-productive, so you dig up all the radioactive stuff and you've now gone and violated a law pertaining to chemical contamination or vice versa.

So that's what I'm trying to get to, is make sure that everybody that's got a stake in the issue or in the decommissioning is there to say, well, that would work except for this. So that you don't go spend a whole bunch of money, because the one thing that I have found

in taking down a -- in the decommissioning of a couple sites, is the more people that are at the table that have a stake in the matter early on, the smoother it goes.

So that was sort of what I was trying to get to. State, do you have any comment? Dave?

KARHNAK: John Karhnak, EPA. Just kind of an informal question and straw vote, if you will. How many of the licensees are planning to make use of the restrictive condition or restrictive release of property? I'm just curious.

[Show of hands.]

KARHNAK: Okay. Thank you.

ORLANDO: Any other things on alternatives considered and rationale for chosen alternative? Module six.

[No response.]

ORLANDO: The next module is subpart E ALARA requirements. We had scheduled to do that after lunch, but what I would like to do is go ahead and do that now and simply because Chris is the principal author of that and since he's up here and primed, perhaps we could answer that, and then maybe take our break and adjust the schedule a little bit after lunch.

The thing I'm wanting to try and make sure, just so you understand, we have a segment tomorrow from 9:30 to 10:30 for sort of an open discussion and as John Greves and I indicated, we did target some non-industry stakeholders to come in, and I did sort of say if there's anything they want to talk about outside of the SRP, we'd give them that opportunity.

I just want to make sure that that opportunity still exists. I'm not sure if any of the non-industry stakeholders are in the audience at this point and I'm hoping that they didn't intend just to show up tomorrow. But I want to go make some phone calls at lunchtime and find

out.

If there is no interest by some other folks in showing up, then maybe we can accelerate the schedule a little bit. But if not, I'd still like to try and do some things tomorrow. But we'll see how that goes.

Having said all of that, subpart E ALARA requirements. Now, this one was written very specifically. One of the things that you've got to do as part of the decommissioning, the 25 or the dose criteria that are chosen include -- take a step back.

NRC's requirements for decommissioning or license termination are 25 millirem plus ALARA. As you know, there are ALARA programs that you have to have during operations to keep doses to your workers down.

This is not meant to address those types of ALARA programs. This ALARA program here is how do you determine whether the decommissioning target that you're going for is ALARA.

Having said that, since Chris is the principal author, I'll open it up to him.

McKENNEY: And the other thing to remind is that when we wrote this, we hadn't made the decision on 4006. So a lot of things are referenced back to 4006 and the way it was written relies on 4006 in a way, or some of the stuff that's said in there. So that will all have to be incorporated into one document, so it's one cohesive part.

ORLANDO: And just to mention that we did say we were going to try and incorporate the 4006 document into this document. I'm still kind of wrestling a little bit with whether I'm just going to cut the -- make the changes based on the comments on DG-4006 and just bring the words in or perhaps take some of the information and put it in as an appendix.

I just want to make it so that the -- I want to enhance the

readability of this thing and the utility of this thing, not bog it down in just too many words in one section.

But having said that, anybody have any comments on the Section 7?

GENOA: Paul Genoa, NEI. I've got a couple of comments and then I have a real question that will help us focus on it.

The first is in the document, there is a discussion that if you meet the screening criteria, then by default, you've met the ALARA goal, and that was intentional.

In the screening, the supplemental information on the screening factors for soil, it made a contrary statement that said that you still have to show --

ORLANDO: Demonstrate ALARA.

GENOA: Demonstrate ALARA. And our comments -- maybe we read it wrong, but our comments were that, in fact, because of everything we've seen in the GEIS and other things, persuade us that it probably will not be ALARA, to go below screening values for soil.

McKENNEY: And I'm surprised by that, because both the statement of consideration and the GEIS and others put forth that it looked like, for soil, that if you got down to this screening values or even just down to 25 millirem even for site-specific, that in most cases, you would -- there's very few credible scenarios you could think of that would make anything else ALARA.

GENOA: Great. That's what I wanted to hear. And you may want to go take a look at that Federal Register. There may have been not in there, that didn't belong there or something.

I guess -- and if this gets too long, we can cut this off and do it somewhere else. But when we went through the ALARA concept and talked about our comments, it became evident to me that across the industry, there was differing perspectives on what you want out of an

ALARA evaluation and what will be required.

Let me just throw out a strawman of what I thought you wanted and then something else that -- someone else's at it.

The concept was that you first decide on a decommissioning plan and let's say that plan is to go to building occupancy. I've got the building, I'm going to rip and ship everything that's radioactive and what's left, I'm going to evaluate the residual contamination and see if it meets my 25 millirem. Then I'm going to make a determination what other steps I can take to further reduce the residual contamination and I'm going to evaluate the cost and the benefit of those additional steps and see whether it's warranted.

All of that is being done before I even do anything. Okay. And let's say that I believe that going into the facility, ripping everything out of it and wiping down the walls once will get me below the level of my DCGLs that I would need to meet the criteria and I go back to say, well, my alternatives could be to go in and wipe the walls twice, might be to grit blast, hydrolaze, whatever.

I go through all those evaluations and, coincidentally, I find that none of those evaluations are justified based on ALARA. I document all that stuff, I submit it, it gets approved, I go forward, and I'm done and you're happy and I'm happy.

McKENNEY: Yes.

GENOA: Now, let's say I go through all that, you approve the LTP, I'm in the actual act of wiping down those walls and I find a hot spot on the wall. I believe it still fits in through the MARSM approach, dealing with elevated areas of contamination and all of that, and when I'm done the evaluation, everything is fine and I continue.

The question is, does an inspector have the purview to come in and say why haven't you done an ALARA evaluation on that hot spot? Couldn't you have just gone in and wiped down that hot spot for eight

dollars and it was worthwhile? And the question is, do we need to document those interim decisions out in the field or did we address them up front in a global ALARA analysis that handled all that?

McKENNEY: That gets into a sort of gray area. There's two approaches taken allowable for ALARA. One was for sites that had -- looking at this from the point of view that they do know what's at their site fairly well. So they say that, yeah, based on my analysis of what the contaminations out there were, so what our basic DCGLs are to meet the limit are, and a little more activities like this is warranted and we're saying we'll do these, and then if you do those, you're going to be fine.

So that you could have pre-approval that whatever you do is going to be ALARA. And the second one was almost sort of what you had talked about the second time, which was for sites that don't know exactly what's out there and have an idea that they might be finding stuff that they didn't know was necessarily out there in the first place or had complex situations where there's certain rooms or certain areas that have configurations that would be completely opposite of what the ALARA analysis showed on a generic scale, that you could actually do these intermediate ALARA analyses basically in the same way you do ALARA analyses for operational, and just keep a record of them.

Now, that, of course, opens you up for a little more risk at the end, but it depends on your level of site characterization and whether you want to go a phased approach or whether you can justify which way you can do it.

Now, if you did the first one and you had the pre-approval and you had said that you were just going to clean the walls and then you found a hot spot that met the EMC criteria, but didn't -- those sort of things weren't necessarily specifically taken into account in ALARA, whether that would be -- require a new part of an analysis or something. That's

sort of --

GENOA: Let me help you out. If we were to go ahead as a reactor and do the license termination plan and include in there a robust ALARA analysis, as I first described, and put in a section that described how we would incrementally deal with those kind of issues and if, in fact, we followed what we said in our LTP, would that be adequate to ensure that we wouldn't get in trouble?

McKENNEY: Yes.

GENOA: We would be able to explain to an inspector that, in fact, we are following our plan, which is approved and was found robust.

McKENNEY: Right. It's basically that you could either set up the absolute goals that you meet up from the start or you can set up a program that says how you're going to determine ALARA during decommissioning and generally, which I didn't -- I hadn't thought that detailed, that if you do set up some absolute sort of goals in the global sense, you may still need to have, at least at some level, a fallback program that's approved also that says if we do find something different, then this is how we're going to analyze it.

And, yeah, we want either the program or the goal to be up front so that everybody knows that if you follow these procedures or you meet this number, and you did the steps that you said to get to that, we're going to be fine.

SEXTON: Dick Sexton, Connecticut Yankee. I guess that it seems to me the ALARA analysis should be a graded approach and that's what I'm hearing you say. For the most part, there are probably, as you referred to, pre-approved ALARA analyses that we could all agree upon.

McKENNEY: Right. I think it's really the question that we're looking at is kind of the more unique situation and I guess what we're hearing is that if we had unique situations, some type of an ALARA analysis -- and what I've seen in the past, there would be some type of

a -- maybe a simple ALARA analysis that would be included in the final survey report on that particular area.

McKENNEY: Right. It mostly likely will span the length of your decommissioning. Those things also may be reviewed by inspectors during decommissioning, if you get inspected during that period of time, but you'd need to document any variances that you did off of the base ALARA analysis; you left areas different than you said -- in your global analysis, you said you'd do this; well, in this one area, we didn't do this because it wasn't really warranted at all, and so you just have some sort of documentation of how you made that decision.

GENOA: Okay. Because I could see it go the other way, too. You were going to wipe down everything, as I said, and, in fact, you found out, boy, wiping down this area is such an industrial risk to my workers that it just is too dangerous, we're not going to do that.

McKENNEY: Right, right.

GENOA: We're going to do something else, or we found the activity wasn't high enough anyway, but we're going to document all that and ideally have a decision process pre-approved in the LTP to do those kind of things.

McKENNEY: Right.

GENOA: That seems flexible. There was a discussion of good housekeeping in one section as opposed to radiological ALARA, radiological issues, and we weren't sure what the intention was there.

ORLANDO: Let me take a shot. One of the things that it was concerned about is the potential for somebody to go into a room that hasn't been inhabited for a significant period of time and do a survey and come out and say, well, it's clean, it's at the screening levels, it's done.

We would expect some type of removal, some type of housekeeping to be done, removal of dirt, things like that potentially

in buildings and whatnot prior to going out and doing the actual evaluation of the room to demonstrate that it met the screening levels.

I'm not saying -- what I'm envisioning is a room that's full of oil and got all kinds of stuff all over it and you go in and do your survey and say, well, you know, we meet the screening levels here. Well, there's lots of things that can be masked by just surface dirt.

GENOA: All right. That's your concern.

ORLANDO: That's what I'm thinking. Those kinds of things, perhaps some wiping down, if necessary, just to get it to the point where you can actually do a reasonable survey.

GENOA: So the purpose of the housekeeping is ensure that the physical condition doesn't impede your ability to do an adequate survey.

ORLANDO: Right.

SEXTON: But you would not have to implement any housekeeping -- just for optics, just for visual appearance of the area?

ORLANDO: I wouldn't think so.

McKENNEY: That's always in the eye of the beholder anyway. We're trying to be flexible, but also allow you to know exactly what we're trying to think, what is going to be a pass.

We don't want to set up too many situations where you're going to be -- it's going to be completely a shot in the dark whether you're going to be able to get through it. So optics, that isn't a real concern for us. It's more that you're cleaning everything up so that you don't -- you aren't basically surveying the wrong stuff.

ORLANDO: In addition to that, some general cleaning should be done anyway. I mean, you know, you're going to go in and you need to remove some material so you can do a good survey, but by the same token, as part of doing that, if you push a little harder on the mop, you can end up taking away some contamination.

So that's sort of what we're thinking about; not just that you go in and wave a pencil at the room and say, oh, it meets the screening criteria.

GENOA: I need to focus our concerns for you, and that has to do really with the experience at Fort St. Vrain in the past, where they essentially were required to vacuum dust off of the entire facility at great cost and some risk to workers for what appeared to be an optics issue, not what appeared to be a compromised ability to survey.

ORLANDO: I'll put that in there so we can consider it when we're reviewing the document. I don't know that I can answer it right now.

McKENNEY: And how we would want to re-word it to --

GENOA: I fully concur that there could be conditions that would be unacceptable in a facility that would impede your ability to do an adequate survey.

ORLANDO: Again, I want to emphasize, that is one thing. There is also just the concept that if you have a facility -- let's just take a room in a facility, you can achieve a fair -- you can reduce the dose, the potential dose by just doing normal cleaning and that's the type of thing we were thinking about, to show that, hey, we're at the DCGL, but we're not going to pick up a grain of dust because we're already there, when you could just -- just by cleaning the floor, mopping the floor normally, you would take up some of the material, and that's what we're talking about.

FORD: This is Brian Ford. Wouldn't that be covered under your ALARA issue earlier? I mean, if I should clean it up for ALARA, then I should clean it up, I shouldn't be cleaning it up for housekeeping. It should follow that path. I guess that would encompass that concern.

GENOA: I guess I would get back to the issue earlier. If I

met the building occupancy screening values without doing housekeeping, then I met the ALARA principle, would there be an additional regulatory --

ORLANDO: That, I think, is the question that we've got to answer, and I'll --

GENOA: That's what I will work on.

ORLANDO: Yes, provide some guidance on that.

GENOA: We're not going to really look for an ALARA analysis, because of that statement, so in those cases, it may -- that's one of these things we'll have to clarify.

ORLANDO: Okay.

SEXTON: Just to add to that. Some of these scenarios, we may be doing housekeeping on a building that we're going to take down and that clearly would --

McKENNEY: Right. That clearly wouldn't make sense at all.

ORLANDO: You've been waiting patiently.

DUVALL: Ken Duvall. I want to just make a suggestion within this discussion of overall concern about what's the objective of the ALARA requirement and basically how do you demonstrate that good practice has been considered.

I'd like to offer the suggestion that the ALARA process can also be viewed as a way of helping meet your survey objectives. Once you meet the release criteria, the additional remediation will allow you to have a higher probability of passing the statistical test.

And as you know, when you're doing sampling, if you just meet the criteria, you have a 50 percent probability that you're going to fail and any additional ALARA remediation goes to improve your ability to pass that statistical test.

So it could be a consideration in your overall optimization of your survey plan and I would suggest that that might be one benefit

that one could gain from this ALARA step in the process.

MORTON: Henry Morton. As to Paul's comment and the general conversation, it seems to me that this is a question of how finally do you resolve ALARA. The general guidance in DG-4006 seems to me to basically go to resolution level of about the facility or, at most, the survey unit.

Then if you bring up the issue of do you resolve ALARA more finally than that, it has seemed to me that basically the statistical methodology and the hypothesis testing of the final survey basically provides the remainder of the assurance; that is to say, if you're at ALARA, by the 4006 guidance, on a facility or a survey unit basis, then the fact that you'll be well below the limit in some particular spots to compensate for those that may be up in the range of above the average, but not above the elevated measurements criterion, on the whole, should be sufficient assurance that you've met the ALARA test.

I don't see personally why one should have then to go to resolve it to increasingly finer geographical spots.

ORLANDO: Okay. We will keep that one in mind, too, because I don't have a response. Anybody else have anything on module seven?

[No response.]

ORLANDO: All right, then. It's about ten of 12:00. I would suggest we meet back here at about 1:00 or so and we'll start up with module eight.

[Whereupon, at 11:55 a.m., the workshop was recessed, to reconvene at 1:00 p.m., this same day.]

A F T E R N O O N S E S S I O N

[1:15 p.m.]

ORLANDO: Just a sort of scheduling thing I wanted to bounce off everybody. We currently have a -- the agenda shows that we'll go through modules 14 -- to the end of module 14 by about 4:30. We seem to be moving along at a pretty good pace. I don't know if we're going to be ahead or behind that.

The question that I have is, we also were going to do modules 15 and 16 tomorrow, from 8:30 to 9:30, then have a sort of an open discussion, where anybody could bring up any issue they wanted to talk about and then from 10:30 to 11:30 or so, Boby Eid and Mark Thaggart had a couple of technical presentations they wanted to put on, and then we were going to try and adjourn by about 12:00.

There's a potential for some nasty weather tomorrow, at least in the early part of the day, early part of the morning. I don't know if that's going to happen or not. Those of you that live around here know that if it gets cloudy, we have traffic jams. So I don't know how that's going to play out tomorrow.

In addition, if we end up finishing up today, I don't want to penalize anybody who could conceivably get back home early. So what I propose to do is this. We'll continue going over the modules the way we have been going. If we get through 15 and 16 today, that will be it. Tomorrow, I will be back here at 8:30. I will make the announcement to whoever is here that I am willing to sit for an hour and talk about module 15 and 16 and then open it up for an hour for anybody who wants to make any comments about anything else that they can, and then Boby and Mark will give their presentation.

If somebody is here today and we finish up everything, discussions of the modules today, and wants to leave, leave me your card and I will send whatever handouts Boby and Mark use tomorrow to you and

then you can, of course, call them and ask them any questions about it.

This way, if you want to stay, you can. My concern is that we do have a Federal Register notice and an agenda that's out in the public and there may be individuals who are showing up tomorrow specifically to say one or two things and then if we're not or if I'm not here, then that robs them of that opportunity.

So does that seem reasonable to everybody? Okay.

All right. We left off on subpart E ALARA requirements and module eight is planned decommissioning activities. Does anybody have anything they'd like to comment, any questions about module eight? We're going to get done a lot earlier than I thought. We're now an hour ahead of schedule.

Go ahead.

GOLDIN: Just one quick comment. Eric Goldin, Southern California Edison. You should consider putting some provision in there that takes into account that many, at least at power plants, many activities undertaken during decommissioning or actual dismantlement are fully covered by existing license and FSAR type activities. So we can conduct business as usual without needing to describe a great deal in a new document to the NRC.

ORLANDO: And one of the challenges in looking at the decommissioning plans and then writing them, in your case. The decommissioning plan is required for those activities that have not previously been approved and that can potentially increase dose to the public or workers.

So if those kinds of activities are already included, then, yes, they may not necessarily need to be in a decommissioning plan.

GOLDIN: I guess in the PSDAR that we submit, we give a general description of the kinds of things that would be used as part of the decommissioning and dismantlement process, but those are very high

level generic type statements.

ORLANDO: Anybody else have anything they want to -- yes, sir.

SEXTON: Dick Sexton, Connecticut Yankee. I guess I did struggle with -- maybe it's more of a generic question -- what is the purpose, at least for the power reactors, of PSDAR, of including the remaining decommissioning activities? Because it's very dependent on when you provide that license termination plan as to what would be included.

Some of the licensees may wait a lot longer in the decommissioning process to submit their final status or a license termination. Therefore, the --

ORLANDO: Larry, could you wait just a second? I think this is -- this is a question that I think is right up your alley. I'm sorry. Could you restate it?

SEXTON: Okay. The question or the comment was on the planned decommissioning activities and I guess I'm struggling with the exact purpose of that section or how much detail has to be included, given the fact that a license termination plan can be submitted to NRC kind of at pretty broad range of stages within the decommissioning process.

I think Maine Yankee and Connecticut Yankee have elected to submit the license termination plan relatively early in the decommissioning process and I think that's an appropriate time if you want to nail down what your cleanup values are.

But at the same time, you could wait, in the case of the reactor or with your PSDAR, you could essentially complete almost all of your decommissioning. Therefore, the description of remaining decommissioning activities would essentially be there are none and all we have to do is perform the final status survey.

So I guess if you have any comments on what is the purpose of having a description in the license termination plan for the remaining decommissioning activities, just given the backdrop that you already have a PSDAR that would essentially allow you to perform all decommissioning activities.

PITTIGLIO: Larry Pittiglio. First of all, under 50.82, the regulation says that -- and NUREG-1700 clearly says all you have to do is identify the remaining dismantlement activities, whatever is left now. It could be that you come in shortly after the PSDAR stage and there's a significant amount of work to be done or it could be, as you said, you're done with decommissioning and basically what you're submitting is a final survey status report, and that's where NUREG-1700 comes in specifically to the reactors and said what you need to do is only identify the remaining dismantlement activities that need to be done and that's what you'll do in that particular section.

I think that's what you need to recognize. For example, in the new version of 1700 that's coming out, we reference back specifically to the module for additional information on final survey and dose modeling, but because of the fact that the 50.82(a) requirements were a little unique and only remaining, what was left.

Remember, we recognized that once you get in the PSDAR stage for reactors and you can do early component removal, many times steam generators are just up at CY, the steam generators are being ready to be shipped, we recognize all that.

When the PSDAR comes in, that's somewhat addressed. But when we see the LTP, we don't expect them to go into a discussion on steam generators. They've gone. All we want to see is what's left, what has to be cleaned up, and so forth and so on.

Again, you're right, it will dictate -- and that's the difficult part for the reactor, depending on when the licensee elects to

submit it. But we're only asking for what's going to be left and how it's going to be done. We also recognize that in 1700, that a majority of the decommissioning early component removal and so forth, for example, was done under an improved rad protection program.

If that program remains in effect, the approved program, that's all -- you're going to continue to complete dismantlement activities under your current approved decommissioning rad protection program.

It's only the changes in the program we'd be looking at. I don't know, does that help clarify?

SEXTON: Absolutely.

PITTIGLIO: And that's why we do have 1700, which, again, specifically references sections back to the NUREG which Nick has developed in greater detail, but it has specific sections also that are unique to address areas under 50.82(a)(9) that are unique to the reactor.

ORLANDO: Thank you, Larry. Didn't mean to yank you back there.

GOODMAN: Lynne Goodman, FERMI-1. I think it's likely that there's going to be changes in a decommissioning plan, depending on how complex the decommissioning is. I think either this SRP or one of them needs to address the change mechanism.

It may be that as you get experience, one method isn't as effective as you wanted -- you had thought, so you decide to use a different method. If you've locked it in in the decommissioning plan for the material licenses or a license termination plan, I don't see how you -- especially for the material licenses -- how you accomplish changes in an expeditious way.

ORLANDO: Usually through license amendment. There are some mechanisms to incorporate a 50.59 type process and, in fact, in the

health and safety plan portion, we talk a little bit about how, if a licensee wants to try and set up a methodology to do that, what things they need to take a look at.

I think for most decommissionings, we're more interested in your process for developing the RWPs and reviewing what the activities are going to be. I mean, from a personal perspective, I don't care if you're going to use a McMichelson front-end loader versus a Johnson front-end loader to put dirt in a truck. I don't care about that.

What I'm interested in is do you have a method to figure out which is the best front-end loader to use and you've got some process in place to make sure that when that dirt is moving around the site, things are taken -- safety precautions are incorporated.

Some of the discussion in here about tell us what you're going to do is not meant to be so detailed as to be an exact discussion of everything that you're going to -- every manipulation, I'm going to use this scoop and pick it up to this height of four feet and take it -- that's what RWPs are for.

So I think the amount of information is really dependent upon making sure that we can understand exactly what the process is that you're going to have to get the job done.

Does that answer your question or did I wander too far on that one?

GOODMAN: It answered part of it. I would say that based on that answer, I would recommend you delete the word "fully" from the discussion about the staff should fully understand what methods, procedures and techniques are going to be used.

ORLANDO: Anybody else? Comments, thoughts on planned decommissioning activities?

[No response.]

ORLANDO: Okay. Who went out and checked the weather

channel and found out that we're getting six inches of snow here tomorrow and wants to get out of here by 3:00? That's all I want to know.

Decommissioning project management and organization, module number nine. The idea here is to give the staff some idea or a good handle on how you are going to manage the process, make sure that -- and, again, from something of a material slant, just to make sure that an organization exists, that has the review and, in some cases, stop work authority, to make sure that the decommissioning can be handled safely.

ZINKE: George Zinke, Maine Yankee. Again, focusing on 50 licensees, which I think may be distinctly different, that kind of information would have been basically approved with original license submitted and then over time, it would have been changed in accordance to regulatory change mechanisms.

So it would seem that for a Part 50 license, all that would have already been reviewed.

ORLANDO: It may very well be correct.

ZINKE: So it wouldn't be your intent to re-review something that the NRC has already --

ORLANDO: To re-review something we had already approved.

ZINKE: Yes, or that was approved basically through a regulatory process, like 50.59.

ORLANDO: Well, as long as a decommissioning project management organization existed that was sufficient to meet the -- to make sure that the decommissioning could be done safely, I wouldn't think so. In other words, if you have a great project -- a great power reactor management team and that doesn't do anything with decommissioning, then perhaps you need to think about having a separate decommissioning management organization or at least acknowledge that

those people have decommissioning responsibilities, so that we can see where they are.

But as far as having to reinvent something that's already been approved, I wouldn't -- no.

ZINKE: I guess I'm asking more of a process question. When I enter decommissioning and I determine what organization I ought to have, under the current regulations, under 50.59, for changing the SAR, if there is some level of organization that's in our tech spec, I have to get an amendment, but there are laid-out processes for making those changes.

So if this section is asking for just information about that, of which all we would have sent to the NRC, not necessarily reviewed and approved, since regulations wouldn't require it, but sending the information for information is different than --

ORLANDO: Requesting approval.

ZINKE: -- requesting approval for something that the regulations said the licensee had the authority to change.

ORLANDO: I wouldn't think we'd want to go back and second-guess something that had already been approved.

ZINKE: Okay.

ORLANDO: Keep in mind that in your particular -- for a 50-license, since the process is somewhat different than it is for a materials license, we might not -- we might not have anything on a materials licensee decommissioning management organization. That may be a completely different animal than -- and, Dave, if you want to make any comment on this -- the decommissioning management organization could be completely different than an operational management organization.

It may be the same people, it may not be. It may be the same people, but contractors are in doing it. But just how that -- if it hasn't already been approved, we need to be able to take a look at

that.

ZINKE: Okay. And a couple other comments. The section uses a term called safety-related position, which at least seems to need more definition. I know for a Part 50, under the regulatory definition of safety-related, I have no safety-related equipment; therefore, there is no way to tie back to an individual.

But I'm not sure that you really intended your use of the term safety-related to mean the same thing in Part 50.

ORLANDO: I'll make sure that that's clarified.

ZINKE: Also, in the project management, there seems to be some emphasis on contractors. I know the historical concern about contractors, but it's a little odd for a guidance document to point out them like as a separate group.

ORLANDO: The issue there is, as you say, there's been some questions about that. We wanted to make sure was clearly laid out in the decommissioning plan is the relationship between the contractor and the licensee.

The potential exists that if there is an issue or a safety-related issue that could arise at a facility, you all are the licensee, but the concern is that there isn't some hole or gap or whatever where the licensee could then say, well, that was the contractor's responsibility and, no, it's your responsibility, licensee, and we just want to make sure that you understand and that you've laid out and that you are fulfilling your requirements under Part 19 and Part 20 for making sure the contractor's people are appropriately trained and informed as to what's going on.

Of course, they can do the training themselves. You don't necessarily have to do that training, but if these folks are in here and they're rad workers, they require some training.

If your decommissioning plan is going to say something,

contractor X, who is licensed to do decommissioning at sites surrounding, they're handling the training, that's fine, but it just says tell me what training you're going to do, what training we're going to do.

The concern is that there is not a -- in the event of a safety-related issue or an inspection issue or something where there could be some tension between you and the contractor, we just want something in place so we can see what the relationship is of everybody that's doing work at the site.

ZINKE: And, again, just for Part 50 licenses, I guess the confusing part about that is that we have no choice, by our QA program, by our license.

ORLANDO: Then this might not necessarily apply to something that would be sent in to support the decommissioning of a Part 50 license.

In a materials setting, it could be that the first time contractor sets on-site is -- with the exception of when they were building the plant, is when they start taking it down.

ZINKE: Right.

ORLANDO: And one of the things in my experience has been that the contractor is in a room and everybody starts talking about who is doing what and it's, well, they're responsible; no, they're responsible. No, no, no, no, no. Make sure everybody understands who is responsible for what.

ZINKE: And I think the answer to this will probably be similar. So since Part 50 licensees also are subject to a training rule, then that might be out of scope for this -- our submittal of information, since we actually have a regulation that says we've got to have all of this stuff in place.

Thank you.

GOODMAN: Lynne Goodman, FERMI-1, just a clarification. Some Part 50 licensees, some of the older ones, we do have exemptions from the training rule. So we're not quite all the same, at least from some parts of it, other than what apply to our current status.

I do have one additional concern, and that's the use of the word procedure in here. I would be a lot more comfortable if it was procedure or practice. In other regulatory documents, the word procedure means things that require certain approval cycles and so forth and I think in here it's used more generically, and I wouldn't think that your radiation work request is supposed to be going to your review committee for approval.

It's part of what is implied here by the word procedure.

ORLANDO: Say that last part again.

GOODMAN: For example, procedures typically have to have a very detailed approval thing, like to be going to a specific review committee. I didn't think in here the specific -- every specific work document and radiation work permit was envisioned to have that approval requirement.

ORLANDO: We would expect to see the type of approval process laid out that was reasonable, yes, but that's up to the licensee to develop. I'm not going to say that everyone has to, but whatever is approved in the decommissioning plan for what will go through the RWP process would have to be -- would have to go through that process.

GOODMAN: I'd agree that it would have to go through that process, but it may not be the same process that a procedure has to go through.

ORLANDO: Fine. I see what you're saying.

PALLAGI: Ken Pallagi, Big Rock Point. I'd be interested to hear what your intent is on the statement about evaluating for appropriate management philosophy, and our philosophy for Maine Yankee

and the rest of the plants is different about our outcome and how we get there. But really our intent is always to follow the regulations.

ORLANDO: That statement is -- what I'm looking for -- what we're looking for there is to make sure that you understand that there is this process and that safety should be the underpinning for the entire process, and I'm looking for something that demonstrates that that is what the management is doing and how they're thinking about things.

PALLAGI: Thank you.

CULBERSON: Doug Culberson. I've tried to figure out exactly how to ask the question. But in the case of many of the fuel cycle facilities and materials licensees, there doesn't necessarily come a point in time where you enter the decommissioning process for the whole site.

In most cases, I think it's an incremental thing where a building may have reached the end of its plant life and it's ready to be taken down and decommissioning addressed.

Would you envision that this decommissioning process would take place each and every time something enters that decommissioning arena or are we truly envisioning this process taking place when they're ready to terminate the license for a site?

ORLANDO: I think the guidance that would be offered in the SRP could be applicable at a lot of different points in the life of a facility when it's doing decommissioning or decommissioning like activities.

If you were to come in and, say, want to incorporate some decommissioning type activities into your existing license, even though you're not going for complete license termination, try to write this with an eye toward being able to evaluate that kind of information.

So that when you do come in for ultimate termination and you

say something to the effect, well, we -- our scabbling has already been reviewed and approved, so we're going to scabble all those, yes, that's right, we took a look at it four or five years ago.

So it's to evaluate decommissioning plans, but also some of the other information that might be submitted to support decommissioning-like activities. If you're going to take a building down and not request license termination, say, we're just going to take one building on your site down and you were going to send in your procedures and we were going to review them and send in sort of a small decommissioning plan just for that, we could use the information in here to evaluate that.

CULBERSON: From a practical standpoint, do you -- and this is, again, a question -- do you think it's more effective and efficient use of resources to do -- to prepare a single decommissioning plan that covers the site and everything there and it gets implemented incrementally over time, or address those individual buildings or areas as they come up?

I'm kind of grasping here as to what would be the most practical for everyone involved, what is the best approach there?

ORLANDO: That's a tough question and it involves legal considerations and everything else, because depending upon what you intend to do, there may be NEPA considerations. For example, if you were going to continue the license, but decide to not take a building down and clean it up and bury the material on-site, well, that's something different and almost set up like a mini-restricted use site or sort of a pre-restricted use cell on the property, I think that that needs to be looked at on a site-specific basis.

I don't know that every -- I don't know that there is a best way to do it. I think that depends an awful lot on the complexity of the site, the management philosophy of what they want to do with the

site, do they want to go quickly to green field before disposal fees go up or do they want to take their time.

I wish I could give you a good hard and fast which way -- from our perspective, it's like it's great to get all that work at one point and then you go do it and then you're done, but it's also nice to have stuff come in a little bit at a time.

CULBERSON: Right.

ORLANDO: So is that vague enough? Good.

DUVALL: Ken Duvall. I just wanted to make the observation. If I look at the reactor decommissioning process that you handed out, the structure of that process is a planning, conducting and assessing type of structure, phased in that way.

I'm trying to understand how that correlates with the NRC D&D plan. I see 16 modules, each of which may have a planning, conducting and assessing phase and which some modules, decisions in one may be correlated with the other.

To facilitate your having these two processes going parallel, I would suggest that in this section, have a road map for the NRC process in terms of the planning, conducting and assessing. Planning is a very important aspect and they all seem to come back around in a sort of iterative type of way.

ORLANDO: Thank you. We'll take that into consideration as we move forward.

Anybody else on planned decommissioning activities -- excuse me -- decommissioning project management and organization, I'm sorry.

[No response.]

ORLANDO: Health and safety programs.

This one is specifically done so that it would help the staff better understand a lot of the health and safety issues that are going to be raised during decommissioning. We look at lot at

respiratory protection and things like that in there, and give lots of references to the different Reg Guides that the staff will need to evaluate the programs against.

That section was actually written by one of our top inspectors and license reviewers out in the Region. He was specifically asked to do it because of his knowledge of this area.

And I just wonder if there are any comments that anybody has on that.

PALLAGI: Ken Pallagi from Big Rock. Just for our benefit from a public perspective, when we talk, we look at health and safety. At our facility, health and safety is extremely immense and encompasses EPA, OSHA and all those things.

And when we looked at this, this really looks like a radiation safety program.

ORLANDO: Yes, sir, it is.

PALLAGI: And we just ask some consideration and clarity so when we have people that ask us about your health and safety plan and only see radiation protection, we don't want them to be confused.

ORLANDO: So like maybe have it changed to radiation safety program or something.

PALLAGI: Yes, thanks.

ORLANDO: Yes, that's fair. Anybody else. Any other questions I can answer on health and safety questions? Programs? Yes, sir?

TARZIA: I'm Jay Tarzia with RSCS at Connecticut Yankee. Going back to the point that you made earlier, for most large licensees, Part 50 licensees, especially, have radiation protection programs that are already reviewed and approved by the NRC.

Would it be appropriate just to reference that, or would we have to go into detail in the plan on the program itself? NRC, in most

cases, has copies of our plan already.

ORLANDO: I think the key is to make sure that all the information is included in one document. A lot of times, these DP -- now, again, you're in LTP PSDAR space, and a lot of times, that kind of information isn't or doesn't show up in a materials license.

I think that you can work that out with your regulator when you come in with your plan. Perhaps you could just send that in. I know I have some licensees who have just sent me their radiation health and safety plan, so that I have it, so that it's in the docket for that action, for the decommissioning.

If all of the issues that need to be addressed for decommissioning are already addressed in the existing health and safety plan, then it's probably fine.

You know, sometimes there are some unique issues to decommissioning that you don't see during operation. And that would be the thing we'd want to focus on.

TARZIA: You know, so we could focus in our LTP in the changes perhaps to customize the program for decommissioning?

ORLANDO: Well, I hesitate to speak for the reactor folks, because Larry just left again. I'll take it into consideration when we're rewriting it.

I can't give you a direct answer because I'm not an expert in reactor decommissioning.

SEXTON: I guess, to add to that, I mean, again, to the timing of these license termination plans, I mean, we're currently, in the case of Connecticut Yankee, right in the throws of major decommissioning, so I would assume that some fairly succinct description of existing program will be more than adequate to address this particular section, given that we are, in fact, with NRC's approval, proceeding with the decommissioning activities, in which you'd obviously

need all the elements of this particular section.

ORLANDO: Right, I think that that's probably reasonable, but I would still -- but, you know, I'm not the decisionmaker for your project. So I'd make sure that you double-check that with whoever the PM is for that project. But that seems reasonable to me.

Anyone else?

[No response.]

ORLANDO: Effluent monitoring and control program, Module No. 111. Any thoughts or questions on that section?

GOLDIN: Eric Goldin, Southern California Edison. Just, again, for Part 50 licensees, these are all license requirements already to have the programs and the annual reports to the NRC and everything.

So from our perspective, this has all been taken care of.

ORLANDO: Yes. I don't see where all that actually ends -- really needs to change. There just needs to be an assessment as to whether it's appropriate and adequate. Again, I'm thinking of it more from a materials licensee.

They're going to have effluent monitoring programs in place already, too. That's just not unique to a Part 50. And you just have to make sure that you have taken a look at all of the impacts that decommissioning may have.

And if something is going to change -- and you may be able to actually scale back in some instances. I mean, there may be situations where you're going to take down a building, and you don't necessarily need a well next to it, or something next to it, because the building is gone, you know.

So, the point is that you just have to make sure that what that the program is commensurate with what you're doing. And if the program adequately addresses all of those things, fine. If there is something extra that needs to be tagged on, that's fine, too.

But that's one of the things that you would talk about when you sat down to develop the decommissioning plan.

ZINKE: George Zinke, Main Yankee. One of the conceptually difficult things is because the process really is different for materials versus reactors. So, for a reactor, I continue to decommission, and I don't need this approval. I can go -- I don't even have to submit until I'm almost done.

ORLANDO: That's correct.

ZINKE: So I'm really not looking for approval of, in this case, like an environmental monitoring, versus --

ORLANDO: You may not even be sending that in. As Larry said, your LTP describes the remaining decommissioning activities.

ZINKE: Versus the materials license that maybe can't even start their decommissioning until they get some approval.

ORLANDO: Correct.

ZINKE: And so we're trying to make sure that at least the message being given out is, like, if you have to send a whole bunch of stuff to be reviewed, if you send it early it's rather a disincentive, and you just wait till you're done, and then there's nothing to send to the NRC.

So we're trying to balance those two things so that we don't end up getting caught because of some words of having sent a lot of information, that if we just waited a year, we'd never have to send.

ORLANDO: I don't really know how to respond to that, other than that's the decision that you and your management make. And using NUREG 1700 and coming in and talking to NRC about what, exactly, would be expected to be submitted, you can help do that balancing act, and determine whether you're going to send in your LTP early up, or later on.

I think that -- again, I'm not a reactor decommissioning

expert, but my understanding is that that is totally up to the licensee as to when that is submitted, within certain parameters, within two years of termination, requesting termination and things like that.

ZINKE: And that's true. I guess the oddity there is that we wouldn't have considered that if you send it in earlier, that the NRC has more regulatory authority to tell you to do things than they would have if you just waited a year. It would seem the regulations and the regulatory scope of what needs to be reviewed and approved would be the same, independent of when you send it in.

ORLANDO: Well, that will be regulated, that will be set up by NUREG 1700, and that may not reference -- may not require you to do all of the things that are in here.

ZINKE: Okay.

ORLANDO: You, as a reactor licensee, your guiding document is going to continue to be 1700, and you'll work with your regulator at that point to figure out what is going to be required through 1700. If you're required to send that material in, this will be one of the things that can be used to evaluate that material.

But that doesn't mean to say that you have to send in everything that's in here through NUREG 1700, or through the license termination plan, as reviewed through NUREG 1700.

GENOA: Paul Genoa with NEI. Just for the utility guys that are here that are sweating these bullets, clearly in speaking with Larry just for a moment, he has indicated that they're very close to release of -- they're moving it through concurrence and all of that, and that it clearly is the intent that it will provide a road map directly to the sections that are applicable, and that it will use those words, if applicable, in all those sections where there is some question.

And we clearly are going to have to review that document before we can -- and we are clearly going to have to see that to allay

some of the concerns that we're hearing around the table. But I'm confident that their philosophy is headed in the right direction, so we're going to have to take a look at the results.

ORLANDO: I thought I saw another hand. Yes, sir?

TARZIA: Jay Tarzia, again, with Connecticut Yankee. You know, we keep pointing out the difference here between the power plants and the Part 30 licensees in terms of the fact that we could decommission essentially without a plan for a long time before we submit a plan.

But I have been involved in a lot of Part 30 licenses that have current programs for decontamination, and they have a program for handling radioactive waste, and for shipping off material.

It's not inconsistent what with power plants are doing where essentially they could get rid of all of their sources, decontaminate their entire facility before they even apply for a decommissioning plan.

I mean, it's within their current processes, so I guess I'm struggling as to when even the small licensees are going to know that they have to submit this document. In a sense, they could be all done cleaning up their facility before they submit their plan, as well.

So how much does it buy them by describing their radiation protection plan and their effluent monitoring plan and their waste management plan? Because, essentially, a lot of these folks can do this stuff under their current operating plans.

ORLANDO: As I was saying earlier, one of the things that I hope to be able to use this for is to review those kinds of procedures that are included in operating licenses.

Now, a little contrary to what you said, if you're not approved to do certain D&D activities at your site, at least in the materials side, you're not supposed to be doing it.

TARZIA: I understand that.

ORLANDO: And when -- and you're correct, though, that there are some licenses out there that allow a -- on the materials side -- allow a fairly significant amount of D&D to occur. But in approving the licensee's request to do those things under the operational license, those activities would have been reviewed and approved.

This could be used for those activities, and then when they come in at the end and say, well, the only thing we have left to do now is move some dirt around, okay, fine, we have some criteria for reevaluating how you move the dirt around.

We already looked at how you're going to scabble, and how you're going to take care of waste and whatnot, you know, earlier on in the process when you were still under an operating license.

TARZIA: But you mentioned earlier, for example, sealed-source licensees and medical licensees. Those sorts of facilities, they could get rid of all their stuff prior to --

ORLANDO: I also said that one of the things that we have to keep in mind is that we're going to revise our NMSS Decommissioning Handbook. I'm not sure if you were here. That was earlier on this morning.

Revised the NMSS Decommissioning Handbook, and in there, it lays out the decommissioning activities that different types of licensees, or the NRC staff's activities, given different types of licensees and how they're going to be decommissioning.

For a sealed-source and device licensee, clearly, all they really have to do is send in a 314, maybe send us a copy of their last source leak test to show that it hadn't leaked, and a statement that they have taken down all the signs, and everything is fine. We're not going to expect a decommissioning plan at that point.

The other example I used earlier on was, say, just a hospital that maybe has a licensee for Tech-99 generators and some

sealed-sources for doing those calibrator consistency checks. You know, they can send saying something to the effect of, well, all I've ever had is Technetium in these sources, and these sources went back here, and here is something that shows that they got where they were supposed to go, and we sealed up the room for a week and a half. Well, the Tech is gone.

You know, they wouldn't necessarily have to send in the decommissioning plan, but we're going to lay all that kind of stuff out in the NMSS Handbook.

TARZIA: I guess my whole point with this is that I think it's unclear to a lot of small licensees, as to what is just normal facility cleanup, and what is going to be considered decontamination when we go down this road. I know a lot of small licensees that do scabbling and will clean up concrete as part of their program because they have contaminated an area, and probably haven't submitted a decontamination plan or decommissioning plan, because it's just one part of their facility that they're cleaning up, and they still have a license.

ORLANDO: Yes, well, that license would assumedly include the review and approval of how they were going to do that, maybe not directly, but if nothing else, maybe they have a process for developing RWPs and reviewing those kinds of operations that are embedded in the license and in the Health and Safety Plan, so we wouldn't -- you know, those operations wouldn't need to have a decommissioning plan because they had already been approved.

KILLAR: Felix Killar, Nuclear Energy Institute.

I just wanted to elaborate on the discussion that we just had, in that there are all sorts of levels of material licensees, and when you start talking about major material licensees, the fuel fabricators, enrichers, conversion facilities, things along that line,

they're very similar to the reactor community. Most likely, they're going to be very similar to the reactor community insofar as what their actual decommissioning plan says.

They will be able to do a lot of the remediation, equipment removal, and things like that, under their current operating license because that's what they typically do during refurbishment and changes, updating, what have you, of the plan.

So there isn't a whole lot of difference on areas along that line.

Probably the two areas where the major materials licensees will have to come in for is how they're going to dispose of buildings, once they've gutted these buildings and removed all the equipment, what they're going to do with the buildings. That's something that's after routine operations, and so how are they either going to leave them standing, or if they are going to tear them down and things along that line.

The other thing is any type of contaminated soil. Now, certainly, they have provisions in their operating license now for cleaning up spills and what have you, but when you start talking about the amount of contamination you have there and the amount of soil there, it's beyond routine -- I won't say, routine, but -- we don't have routine spills -- but beyond a spill that you would typically have at the site, so it's a matter of how you handle that dirt.

Those are probably the two biggest things for major material licensees that we address in their decommissioning plan, and then the final survey which everybody has to provide the information for.

Once you get from the major material licensees and drop on down, you know, you have a whole entourage of people, similar to what you were just talking about. If you've got a sealed source individual,

you know, he ships that source back to the manufacturer or to a low-level waste site and does a survey, and he sends a report that, hey, I've got rid of all of my radioactive material, I've surveyed my site, here is my final survey result. I want my license terminated, and that's it.

So you have a whole list, and I think what the NRC is trying to do here is to provide for all the gauntlet. What they're trying to do is put out a program that, this SRP, to cover everybody from the guy who has got everything to the guy who has almost nothing and stuff. And so, consequently, you have to have all of that in there.

And so it's a matter of how it's applied, and part of what your decommissioning plan is, is pointing out those sections that apply.

Just along the same lines that you're talking about on the radiation protection, health and safety programs, you know, for major material licensees, we will say that if we go into a decommissioning, we are basically going to continue to abide by the health and safety programs that we currently have approved by the NRC. That's all we need to do.

ORLANDO: But possibly augmented a little bit over here because now we're going to be putting up HEPA tents or something like that.

KILLAR: Something along that line.

ORLANDO: I agree with you, and that's what I was talking about this morning with, you know, get with your regulator, come into the NRC, determine what, exactly, needs to be in your decommissioning plan.

I mean, you could go through bullet-by-bullet-by-bullet and there's an understanding that's reached that this is the information that's needed for your site.

Keep in mind, this is, as I had hoped I made clear earlier

today, and what Felix just, I hope, made clear again, this is everything we could think of. It doesn't mean that it's everything that everybody will have to send in, but it's everything that we could think of, and every piece of data and every evaluation point.

So, in the end, you don't get a question for, or you don't get an RAI that says send me this, and you're thumbing through trying to figure out, well, what -- how are they going to evaluate that?

And so the point was, soup-to-nuts in the two documents, and then tailor it specifically to your site.

NARDI: Joe Nardi, Westinghouse. Just building again on this, you were talking about the operating procedures. Is this activity within the procedures that are authorized under a material license?

When it's a broad scope like some of our licenses, we have no authorized procedures. What we have is a strong radiation safety committee and a mechanism by which we do our own internal review. I keep telling our people that we are acting as the NRC in this situation.

And basically that's what we try to do, is, we review our procedures as we are going, not incorporating them into a license amendment for NRC review and approval. It gives us more flexibility.

And so in the one license that we are decommissioning, it is very much like a reactor licensing process, because the determination was made in accordance with discussions with the Region.

ORLANDO: Right.

NARDI: That we could do everything inside the buildings without a decommissioning plan.

ORLANDO: And that's the key. The thing you said is, in discussion with the Region. You know, you went, we know what you're doing, you know what you're doing, and you know what we expect from you.

They key here is the communication. Everybody is playing from the same sheet of music. If the Region takes a look at your

license or headquarters to the regulator looks at your license and says, yes, you know, you can do this, this, this, and this; you don't have to send in a decommissioning plan to do that.

That's fine. You'll have somewhere where that will be in writing, and that's your marching order.

The key is that when those activities or procedures or whatever that warrant review come up, the mechanism exists for you to come in, you talk about it, you've got some evaluation criteria against which to take a look at it, and then it moves on.

Anybody else on effluent monitoring? I don't think we talked too much about effluent monitoring there, but --

Radioactive Waste Management Program: any questions, comments or thoughts on that Module?

GOLDIN: Eric Goldin, Southern California Edison. I have a couple of quick comments. You might consider including some provisions in the discussion for volume reduction vendors and waste processors. There's a lot of talk about sending information specific to what disposal facilities are going to be used for certain kinds of material.

But in a lot of cases, depending on cost/benefit analysis, waste processors are the preferred choice.

And also you might consider including alternate disposal under 20.2002 as an option for some waste disposition.

ORLANDO: Just to comment on that, that's always an option. 20.2002, is actually evaluated against NUREG 1102, and there are some guidance that we have for that.

So if you were to come in, you wouldn't necessarily -- you may or may not make your 20.2002 request in the decommissioning plan. That would be something I would think that the best thing to do would be to talk to your regulator about that up front. Depending, a 2002 could involve the development of a separate EA, okay, which takes some time.

And so you might not want to fold, at least on the materials side, you might not want to fold the development of a 2002 EA into the development of a decommissioning plan review EA. There might be some -- or you might want to do both. It really depends.

But that's something that you've got to work out with the regulator, but, yes, I think it's probably appropriate to make mention of the 2002 option.

GOLDIN: And also, there's a lot -- the SRP seems to request a lot of detail, very prescriptive things, volume in cubic feet, for example, where the licensee may want to provide information of mass in pounds, for example.

I know that's one of the approaches that our people are using, and, yes, you can make the conversions, but our construction guys come up with mass in pounds or tons. And then there are some areas where it might be -- you might want to soften the requirement a little bit.

There are some areas where it almost appears to be delving into contractual issues where the NRC, according to this, is going to compare your waste characteristics with what the disposal facilities are able to accept. And those issues may be best addressed in contracts between the licensee and the waste disposal operator.

ORLANDO: You're going to send me these?

GOLDIN: Sure.

ORLANDO: If you have any specifics where you think that that boundary is being crossed --

GOLDIN: No.

ORLANDO: -- please -- I mean, in here, please feel free to indicate that.

GOLDIN: Okay.

ORLANDO: I want to make sure that we don't tread on any

legal toes and get into any proprietary things we're not allowed to do.

Anyone else?

LITTLEFIELD: Pete Littlefield, Duke Engineering. Just another example of that, I guess, Nick, of the last bullet item on solids where it talks about they want you to list the name and the location of the disposal facility that the licensee intends to use for each solid waste type, summarized in Bullet 1 above, I guess our experience is that that's something we decide on a case-by-case basis as we go through decommissioning. We do it on a most cost-effective basis to decide where we're going to send that.

ORLANDO: Rotating contracts, best bids, changing year to year? Well, you know, something like that could be described. You now, you could talk about different options that you're going to use.

I know that when I talk to my licensees, I have a pretty good idea where they're sending stuff. That's in a lot of cases done -- originally, in the decommissioning plan, they'll say here's where we're going to send it, and then as things change, they'll send in some notification that they may be changing their vendor or they may just write in that they're going to make sure, because under Part 20, they have to ensure that wherever their material is going, that facility is licensed to have it.

That's evaluated during inspections, so the concern is not so much that material will go to a facility that it's not supposed to be going to. I think the issue there is just to make sure that we all understand that, yes, you've got some place that you're going to be sending it, and you're going through that process of making sure that they know what they're doing, or that they are allowed to have it

If you get a -- come up with a better price someplace else, that's good for you, you get a bonus.

An other things on rad waste? Next waste, liquid waste and

solid waste, Module No. 13. I'm going to suggest that we just keep going. I think there was a break scheduled for about an hour, but I have feeling we're going to get to that point pretty quickly.

So, I'll stay as long as anybody needs to. Quality Assurance Program, does anybody have any questions or thoughts about the module on that?

ZINKE: George Zinke, Main Yankee. Similar to some comments before, it would seem probably that the intent here is that if we already have NRC-approved QA programs, which all the 50s would have and Part 72 licensees would have, that --

ORLANDO: And may of the regular 70s, 30s, and 40s have.

ZINKE: Is there an intent of this section to re-review that, or is it just trying to capture those that --

ORLANDO: It could be either referenced -- if things have changed somewhat, you know, yes, that would need to be reviewed. But if you've got a program, even in the waste management of in some of the other ones, it's just looking at the changes.

You know, you may have to just describe it, but it wouldn't necessarily be a re-review, re-approval kind of a thing.

ZINKE: Part of this section is very prescriptive, and it prescribes some things that are not required for Part 50 QA programs. And the regulations don't require it, and it wouldn't be in ours.

So then it's my understanding that just because we are different, the fact that it's approved, you're not going to try and impose new requirements on top of what had already been approved?

ORLANDO: Correct.

GOODMAN: Lynn Goodman. I like that previous answer, but I also want to comment that there seem to be some things in here that go beyond what is practical or what is necessary for a licensee. I'll give you a couple of examples:

There is a requirement here that someone doing a self-assessment can't have any responsibilities in that area. To be self-assessment means that you are assessing yourself, so that's the best person to do a self-assessment, which is different than an audit.

And the NMET items in here, I agree measuring and test equipment used for making decisions and doing your final survey and so forth, needs to be in a fully-calibrated program. But, potentially, things you're using for information-only purposes doesn't.

Some of the record storage requirements in here such as like two-hour fire cabinets for temporary storage, again, to me, that seems rather excessive. It's more stringent than most of the quality standards that are out there.

ORLANDO: The author of that module is here in the audience. John, could you -- do you have any response to that? Just state your name.

BUCKLEY: John Buckley with the NRC. I think the intent was to come up with criteria that are similar to what you folks are used to seeing in Part 50, Appendix B, and in QA-1.

So if you find things that you think are more stringent than what you already have in those programs, again, point those out, and I'd be happy to take a look at those.

Again, as Nick stated earlier, you have to tailor this to your own facility and your own program.

GOODMAN: I agree, and I understand it's being tailored, but some of these, I didn't think that should have to be for anyone to have to use.

BUCKLEY: Okay, we'd be happy to look at those.

CULBERSON: Dave Culberson. One of the discussions I had earlier with one of the fuel cycle people was that at the point of decommissioning, it may be very appropriate that the QA program goes

down and gets revised downward to next to nothing, because the quality is in how you calibrate instruments and how you implement your procedures, but there are no safety-related components anymore, there are no procurement issues or the procurement issues would be minimal.

So, I think it's quite likely that if you have an existing QA program, you could justify downgrading that to something less for decommissioning efforts. If fact, if I understand what was said earlier, I think there's a good opportunity there to reduce your program and still have a very effective one for decommissioning.

And is that kind of justification something that a licensee could put in, and, in effect, justify?

ORLANDO: Yes. In fact, if you think about it, I mean, the decommissioning plan -- I know your concern is that it's going to ask for more. Well, in some instances, the decommissioning plan can be used to reduce a lot of the activities that you would have to have done if your license just remained in effect and you just started tacking on new things to it.

There are some instances where there are a lot, depending upon the licensee, of safety procedures, processes and whatnot that are in place that are only applicable when it's an operating facility.

And the decommissioning plan can help you remove a lot of those things. Again, this may be more of a materials issues, because I think that in the reactor world, you can do a lot of that yourself anyway.

But the thing I'm thinking of is that if you have a very aggressive pressure systems check inside your building or something like that, well, the building is gone and you haven't modified your license to say you don't have to do that, you could conceivably be ding'd for not doing a pressure system check on a system that doesn't exist anymore.

So, the decommissioning plan is not only meant to enhance the safety during the decommissioning, but it's also a way for you to reduce those things only to the activities that you really need to do during decommissioning.

So, yes, to answer -- that's kind of a long-winded answer to Dave's question, but, yes, you can use that to ease the DP, to start scaling back to the appropriate level, the activities and oversight that you do at your facility.

ZINKE: George Zinke, Maine Yankee. It was mentioned earlier this morning about change mechanisms. In this particular section on QA, it has a few statements that deal with when to submit documents to the NRC, and it implies which ones you'd need approval before you could implement, and ones that you would approve after implementation.

In one of the sections we reviewed this morning on the ALARA, it had a requirement in there to submit change pages within a year. The specifics in the QA program have to do with submitting certain things 30 days ahead of time or 30 days after.

My suggestion is that those kinds of things that either have to do with the change mechanism or of the decommissioning plan or license termination plan, or time periods of submittals of changes, that if those could be captured in one location, I think it would be easier, because they tend to go -- you know, they're not -- in the current regulations, it's not necessarily required, all of this, particularly for Part 50 license.

ORLANDO: Okay, we'll take a look at that.

CULBERSON: Dave Culberson again. That raises a question I had earlier and postponed till a more appropriate time, but once a decommissioning plan is approved, it's done by license amendment, if I'm correct there.

What is the stature of that decommissioning plan relative to the license conditions? Is it a document that cannot be changed? Or can a change mechanism be built into that decommissioning plan that a licensee could review and make some judgment and make some changes without prior NRC approval?

Or does that document become an enforceable, inspectable document that is like a license in that sense. This is where I think a lot of the phased approach Joe was talking about earlier that may come in, that once you get into process, you realize certain things can be done better or more cost-effective, and without compromising safety, but is there a mechanism in place to do that?

Or do you have to revisit the decommissioning plan, resubmit, get re-approval? What do you envision in that sense?

ORLANDO: Well, right now, when the decommissioning plan is incorporated into the license by a license amendment, it's not like the license; it is the license.

CULBERSON: Oh, it is the license.

ORLANDO: Yes. I mean, it is a license amendment, and you're required to abide by it, and it would be incorporated usually in a tie-down condition.

Now, what I would suggest -- and, in fact, in the health and safety program portion, it's sort of -- it talks about modifying some of the health and safety procedures.

But if you think that during the development of your decommissioning plan, if you can see some areas where it might be -- where, because of a decreasing potential for harm, there are some areas where you might want to be able to have some flexibility to reduce certain programs or whatever, that, I think you need to be able to put in that mechanism into your decommissioning plan, and then we would review that particular process.

It's almost like a 50.59 type process, which could be incorporated into a decommissioning plan. I've seen situations where a licensee will set up sort of a -- well, not sort of a radiation safety committee, but the radiation safety committee will look at it, the ALARA committee will look at it, the RWP development group will look at it, and say, okay, all of these people have taken a look at it.

They've signed off on everything, and, you know, we can now change from doing it this way to doing it this way. The NRC staff reviews that process, and says, this process is valid and will ensure, you know, the safety, so, yes, you can do that within certain parameters.

LIEBERMAN: Jim Lieberman, OGC. I was just going to add that we have approved in recent months, several decommissioning plans which are license amendments that do contain a 50.59 type process. They're publicly available, and there's no reason why everyone can't use those types of conditions.

ORLANDO: I think, Jim, since you have obviously seen them, I think that the thing that we focus on there is the process for making the changes, and making sure that the process that the licensee has in place adequately evaluates all of the potential harm, all of the potential for harm that could come from the change, and that that's mitigated.

LIEBERMAN: That's right. It's tied to the environmental assessment, the EIS, safety evaluation. It's very similar to 50.59.

NARDI: Joe Nardi, Westinghouse. We've done much of that. I would really suggest that that be another topic in this table of contents.

ORLANDO: You mean an actually chapter?

NARDI: Yes.

ORLANDO: On modifying or something like that?

NARDI: What is NRC's concept of -- we don't, as a materials license, have a lot of experience with the 50.59 process.

ORLANDO: Right.

NARDI: And so it becomes a -- I have gone through my first one under a Part 50 license, and it was enlightening.

ORLANDO: You're too kind.

NARDI: It would be helpful if there were a chapter in this Standard Review Plan that acknowledged the possibility, and gave the expectations of what the NRC would want to see in this development of the process that you talked about.

ORLANDO: Take a look at Section 10.2 which talks about health and safety procedures. That lays out kind of what we were thinking about for at least that program. I think that that could --

NARDI: I think that that could be expanded, though, to all of these elements to allow us more flexibility, not just the health and safety plan.

ORLANDO: Okay, that's a good suggestion and we'll consider it.

Any more on quality assurance programs?

[No response.]

ORLANDO: Okay, facility radiation surveys. Yes, sir? Please don't ask me any technical stuff.

SEXTON: No. Dick Sexton, Connecticut Yankee. Some of these are minor issues and I'm sure you'll clarify them.

Section 14.2, there's a discussion about contamination or surfaces that are not readily accessible, and a discussion of them. Then it goes on to say in a discussion of how they were surveyed and why they did not meet the survey.

I guess my comment would be that for inaccessible surfaces and areas -- and certainly in the reactor world, I think what's

appropriate to be included is an acknowledgement in any characterization report is that they were not surveyed, some plan and acknowledgement that they will be surveyed is sufficient.

I can give you examples of slabs inside buildings which I think was already referred to, tanks that may have leaked, and when the tank was removed, that would be the logical time for characterization.

So my suggestion would be to just maybe loosen up those words.

ORLANDO: Where, exactly, are you talking about?

SEXTON: I'm on page 5 of 10 in my revision, and it's --

ORLANDO: Third to the last bullet?

SEXTON: Yes. And the second comment is on the next bullet down, and that it talks about justification of ratios, and ultimately those ratios become the basis of what I'll call your operational DCGL.

My only comment would be that as your proceed through the decommissioning or decontamination process, it's very likely that those ratios could change, and therefore probably the more appropriate time for determining those types of ratios is during the remedial action process, the survey there, as opposed to in all cases it being defined at the characterization stage of your process.

ORLANDO: It's been my experience that normally a process that works is to establish what you think the ratios are, early on. And then build into the decommissioning plan, a confirmatory or scaling factor confirmation plan.

You're correct that as you go through, it may very well be that you have some assumptions that you're making based decay and transport in the environment or whatever, of what the ratios of radionuclides are going to be.

And if you're looking for something that's difficult to see in the field based on something that's easy to see in the field, there

needs to be some mechanism to go back and make sure that you are using the right scaling factors or ratios.

But that is something that you'd want to build that into the plant. In any case, you'd have to have some assumptions at the get-go, and my suggestion would be that -- when I would discuss this with the licensee, is, tell me what you think they are now; tell me how you're going to justify them or demonstrate through the process.

Maybe they have to come in a little bit later on and get an approval for scaling factors for a particular area, and then at the end, some information to demonstrate that those scaling factors were -- probably unlike the final survey or something, that the scaling factors were appropriate.

SEXTON: Okay.

ORLANDO: In answer to your question, no, you don't have to have all of them in stone at the get-go.

SEXTON: Okay.

ORLANDO: But you do have to have some idea of what you're going to use, and then if you feel that there is the potential that those ratios might not be met in the entire soil column or in this tank or that tank, a commitment that you're going to go take a look at that when it's appropriate.

SEXTON: Okay.

ORLANDO: So, again, the process would be approved.

SEXTON: Right, the process. I think that's the point that this ratio determination to present a process in the license termination plan, I think that that would be sufficient if it was a robust process for determining those ratios.

ORLANDO: As long as the ratios are provided to the staff so that we can take a look at them.

SEXTON: Certainly, certainly.

ORLANDO: That would be a suggestion we would have to take into consideration, so I'm not approving anything right here, but in the past, we've done that.

SEXTON: Last comment was on page 7 of 10, and this had to do with inscription of background reference areas and material. I think that's appropriate, to provide a description.

The only point I would make is that as you proceed with the implementation of your final status survey, frequently you encounter different and varying materials, so that, again, what I would expect to be contained in the license termination plan is an example of our typical backgrounds, a process to describe how we would assess background, and then as we proceeded through the license termination survey process, if we came across a different and unique material, that we would just use those processes described in the license termination plan to assess the background.

ORLANDO: And in some of the other comments we had on the DG, people said the same thing, and also said maybe we just want to use zero, if that -- if you can meet your DCGL using zero as background, you know, then that's just a process for allowing that to happen, too.

In a lot of cases, that's easier, especially if you're dealing with material where you have remediated it. Why do, you know -- why go through all the background determinations when you're already there? I've had some licensees do that, too.

CULBERSON: Dave Culberson. Two comments: On page 2, and again in Section 14.5, it speaks to the final status survey as if this is a completed item, and action. The staff will review the final set of survey to determine whether the survey demonstrates that the site and the area meet the criteria.

And in 14.5 it discusses what needs to be in that so that that review can be completed. I'm thinking that this is not something

that is included in the decommissioning plan; that's --

ORLANDO: This is to give some guidance to the licensee in thinking about. In fact, when I actually had some folks from Oak Ridge and Steve McGuire write this section, one of the things they wanted to be able to do was -- so much of what -- you know, the MARSSIM approach is a total kind of an approach.

And so you have to know a little bit about the final surveys, or what you're planning for your final surveys, as you're going through the process. In fact, in the front, we acknowledge that you're not even going to be able to submit some of the information on a final survey prior to three-quarters of the way through the process in some cases, number of sample points and things like that.

CULBERSON: But that is the design, as opposed to the results. I think, if I read this right, it speaks in terms of the results are adequate to determine that you effectively met the criteria, et cetera.

ORLANDO: Right.

CULBERSON: And there is a section on the survey design which I think is appropriate at the decommissioning plan stage, but these others, I wasn't sure were appropriate at this point in the process, the overall process.

ORLANDO: Don't forget that the regulation -- well, actually what it says is that the description of the planned final status survey. You say a description of how you're going to do it.

CULBERSON: Yes.

ORLANDO: Obviously, you can't send in the final survey before you've gotten your decommissioning plan approved.

CULBERSON: Okay.

ORLANDO: But it's just a description of -- the commitment that we're looking for here is that this is the information that you

will submit.

CULBERSON: Okay.

ORLANDO: This was incorporated so that the staff could say we understand that this is what the licensee is going to send in at the end. Maybe the way it's crafted is a little vague.

CULBERSON: Okay. Maybe that could be combined with the survey design then, as the output. I understand what you're saying, though.

Second point: Section 14.1 is the discussion of the DCGL's release criteria. My impression is that that is a major issue, and this section may not quite do justice to that as an issue.

ORLANDO: The submission of the DCGL?

CULBERSON: No, the methodology for arriving at that, and what goes into deriving DCGLs if you're going site-specific; that that whole process is significant enough that it may warrant some additional guidance, both to the licensees that use this and the reviewers as to alternative DCGLs and how you get to those acceptable methods.

So I'm thinking this probably could be expanded even further to --

ORLANDO: If you could point out what is specifically -- try to point the reviewer to the appropriate parts of MARSSIM.

DUVALL: 15.49.

ORLANDO: But if you could provide some specifics as to what you'd like to see included in there, that would be something that we could consider.

DUVALL: Also 15.49.

ORLANDO: That was Ken Duvall and he said that 15.49 also includes that information.

MORTON: Henry Morton. Isn't the clarification with respect to the final status surveys that in the intent or the spirit of a

decommissioning plan, that one would submit a plan for designing surveys, but would not submit the designed survey for each of the survey units, and would not, of course, submit the survey results since you will not have the opportunity to either design the surveys, nor to have done the surveys at that stage?

ORLANDO: Correct, but the regulation states that one of the things that needs to be included in the decommissioning plan, says a description of the plan, final radiation survey.

One of the things that -- and the reason that we put this in here is that so that you'd have some idea of what we would be looking for in the final survey.

MORTON: And can that be interpreted as the method for designing the surveys?

ORLANDO: I'm going to have to check with the experts on that, so I can't answer you yes or no.

MORTON: You really may need information from the remediation surveys.

ORLANDO: Well, that's discussed further up.

MORTON: Yes.

ORLANDO: About the survey design and not only the scoping survey but the -- it talks about what we'd expect to see as a description of the in-process surveys.

MORTON: Yes.

ORLANDO: All of that all rolls in, and the reason, like I said, we put the final status survey review stuff in here is because there is a requirement to have that in the decommissioning plan. But all of those things are all folded into the final survey, or the information that you get from those surveys is included in the final survey.

Clearly, you don't -- well, I'll let it go at that.

GOLDIN: I have just one quick suggestion: Maybe it would be useful to include some guidelines or whatever on what kind of process could be used for partial release in the site.

ORLANDO: Okay. I think that is a global type issue, and I'm not sure if it's going to be in there, but clearly we recognize that partial site release is something we hadn't thought about.

We have some thinking about it to do. That's going to happen in a lot of different venues, I think. But once we determine how all of that is going to hang together, we'll probably have to include that in some guidance somewhere. I'm not sure if it's going to end up here, because I'm not sure if the issue is going to be vetted and resolved by the time this needs to be published.

But at some point, yes, there is going to need to be something on partial site release from -- it could be cutting across every one of these modules.

GENOA: Paul Genoa, NEI. Maybe just to carry that thread just a little further, even if the resolution -- even if you don't come to the resolution in the near term of the actual mechanism to allow partial site release and termination of that portio of the site's license, at minimum, certain aspects.

It would be nice to have the guidance to know what documentation will be necessary to document that a final status survey has been done, perhaps even the confirmatory measurements have been made by the NRC, and here are the steps we're going to take to document that, and here are the steps we're going to take to ensure that it doesn't recontaminate it or whatever, so that when you finally get around to addressing it, it's still valid.

ORLANDO: Okay. So you're saying to put that in here, or just find the appropriate place and make sure that that is totally -- that that information is laid out clearly or whatever?

GENOA: Yes.

ORLANDO: I'm not sure that it's going to get into here, because I'm not sure we're going to be at that point in July, but we'll see. More on surveys?

[No response.]

ORLANDO: No more on surveys, okay. Everybody's favorite topic, financial assurance for decommissioning, any thoughts or comments on that module?

And, yes, we are now -- officially, it's 2:30, and I suggest we just keep going. I'll reconvene tomorrow and, as I said earlier, if anybody wants to come back and re-say the same thing, that's fine, but I have a Federal Register and an agenda out there that pretty much locks me into doing this again tomorrow, but if anybody has any questions or comments now and would prefer not to come back tomorrow, that's fine, we'll take them.

ZINKE: George Zinke, Maine Yankee. One more of what I call a minor comment: For a Part 72 licensee that happens to be an electric utility, my understanding of the regs is that it ties you back into 50.75, which then has some different financial assurance mechanisms than the one listed in here.

Just for completion, since you may want to consider putting that in there, since that's what, in fact, would have to be reviewed.

ORLANDO: Okay, thank you. Anyone else on financial assurance?

GOODMAN: I have a comment. Lynn Goodman, Fermi I.

Just to clarify that these are different criteria than we do have to meet in 10 CFR 50 for power reactors, and so I think we're going to have to meet those instead of these.

ORLANDO: If these are not specific to Part 50 licenses, yes, you'll have to follow what's in 50. Remember that NUREG 1700 may

not reference this section and it may contain its own guidance on financial assurance.

FORD: Brian Ford, Millstone I. You might want to also consider that some of the specific -- of what you can take credit for and not take credit for, really seems kind of stringent, things like you can't account for scrap, you can't account for -- you might want to consider some of those.

ORLANDO: We will consider them.

GOODMAN: Lynn Goodman, Fermi I. Along those lines, also regarding the item on the limitations to withdrawing more than ten percent of the remaining funds also seem rather stringent to me for a materials license.

ORLANDO: Okay. Again, that is, we will consider. That was not an acknowledgement or a condemnation. Okay, thank you. Remember, all this is going to be transcribed, so I want to make it very clear that I just didn't say, oh, yeah, we're going to do that.

[Laughter.]

ORLANDO: Anyone else on financial assurance?

[No response.]

ORLANDO: Okay, restricted use and alternate criteria, does anybody have any comments on that section of the Standard Review Plan?

GENOA: Paul Genoa, NEI. We thought this one wasn't too bad.

[Laughter.]

ORLANDO: What was it he said, none of you guys are going to go for this? This one, I thought, would cause the most discussions, but I guess it's either perfectly clear, perfectly reasonable, or perfectly unintelligible.

[Laughter.]

ALLARD: Dave Allard, Pennsylvania DEP. I guess the

question is this issue of third parties for institutional controls. Has anybody done this yet?

Then, you know, what sort of mechanisms? We're looking at probably one or two of these up in Pennsylvania, and the local government and how that's going to be done, and legal enforceability.

I'm not an attorney, but this is going to be a really complicated issue.

ORLANDO: Yes, it is. The whole institutional control area, one of the things that I'm involved in right now, is in another work group in NRC to try and take a look at this.

Even though there is guidance in DG4006 and in here, I'm not sure that this even goes far enough. It may very well be that we've got to look -- I mean, just the idea of the different -- there are 56 different political entities in the United States, I think.

There are probably 56 different methodologies for a local government to enforce things. And we may have to take a look at every one of those.

This is a very, very tough issue, and I think the first couple ones we go through are going to be very instructive as to how the rest of them work.

ALLARD: There are issues of liability and what's the liability of this third party, and is it going to be the limit of the pot of money.

ORLANDO: There are certain situations where state laws prohibit a state authority from assuming responsibility for a site, conceivably one of these types of sites. There are all kinds of issues associated with it.

I think this one is going to end up being written, or at least augmented by some more detailed type guidance. In fact, one of the things we're going to try and do is get that out and in this. I

think we're going to also try and get it out into the public view before we do it.

But we haven't firmed all of that up yet, so that's not a commitment, but other than that we do feel that there is more guidance needed.

ALLARD: So you are looking at this thing?

ORLANDO: Yes we are; we're looking at what DOE is doing, what EPA is doing, what IAEA is doing. It's a -- for one little section in the regulations, this certainly has a lot of work.

ALLARD: I know in the UMTRA, the UMTRA would be one area to look at, the Fernald Model, whatever was used out in Fernald.

GENOA: Paul Genoa with NEI. I concur that there are precedents out there that we could look at, and I understand that EPA even has a website address that, you know, lists various types of institutional control mechanisms that have been applied or that have been considered.

You know, I just think we should encourage, you know, a look at those. Radiation is just one type of hazardous material that could be in the environment, and we don't have to reinvent the wheel.

ORLANDO: We are going to take a look at all of those. Yes, Lynn?

GOODMAN: Lynn Goodman, Fermi I. Just a real minor item: I wasn't able to find Footnote 2 in my copy. It's referred to a couple of times.

ORLANDO: Page 5. It has to do with the durability of institutional controls.

GOODMAN: It just must not have come out on my copy.

ORLANDO: Sorry about that. I hope, well, we can take a little --

GOODMAN: And I will say that that was kind of typical

throughout, that typically the footnotes, that when I printed them out, I didn't get to any footnotes.

ORLANDO: I wonder if that was a function of the file that was on the computer. You got them from the website?

GOODMAN: Yes.

ORLANDO: Did you print them directly from the website? I know that sometimes if you print something directly from an electronic format, the footnotes won't accompany it. You have to save the file and then print it.

GOODMAN: Okay, I'm not sure on this one, since someone printed it for me.

ORLANDO: Okay. I know that in our particular LAN system, if you don't -- if you print it directly from the LAN, the footnotes won't accompany it. You've got to save it and then print it. That may be a function of that.

Anyone else?

[No response.]

ORLANDO: Okay, it's 2:45. We have gone through with everybody here, all of the modules, and we have all of your comments. They will be transcribed, and we will also put the transcripts of this meeting on the website.

If -- yes, sir?

ALLARD: Nick, just backing up just a second, back to the health and safety program section, I'm not sure what the answer is to this, but having spent some eight years in DOE oversight and looking at all the industrial hazards out there in welding and contamination control and electrocutions and that sort of thing, I'm wondering if it's worth at least some sort of a checklist.

I know this gets into OSHA and other health and safety regs, but somehow those sort of things are considered in the heat stress.

ORLANDO: In a decommissioning plan?

ALLARD: Right.

ORLANDO: I'm not sure we have -- the only problem I see with including too much of that kind of information is that one could assume that we are approving something like that in the DP, and the problem is that we don't have the regulatory authority for that.

ALLARD: Right.

ORLANDO: Perhaps the best we can do is a commitment by the licensee -- and even this may be a stretch -- to ensure that they comply with all other applicable state, federal, and local regulations, which is, in a lot of cases, a tie-down condition in licenses anyway.

ALLARD: Right.

ORLANDO: It already exists in Part 61 as a general requirement, so I think there is an implicit requirement or an implicit expectation in Part 20 that you'll comply with everybody else's requirements, to. But often in dealing with licensees, what I have ended up having to do when there is a situation where you've got, say, mixed waste or something, we'll send them back a letter that says this is okay from our perspective, however, if you have to go get all of the applicable other of your -- meet all of the other regulatory authorities' applicable rules and regulations, and that this approval only pertains to the radionuclides.

ALLARD: My comment is just that often these kinds of hazards are the bigger hazards on these projects.

GENOA: Paul Genoa with NEI. Just to sort of tag onto that thought, there is an area, I think, certainly -- there may be multiple places where that kind of issue could be raised as a qualifying statement. Hey, don't forget to pay attention to these things.

But in the ALARA area, it could be more direct than that. In fact, the optimization of the ALARA approach should include, in my

opinion, all of those industrial safety issues. The radiological hazard is one element, the heat stress hazard is another, the fall hazard is another, the silicosis hazard is another. You know there is a range of them.

And we're spending significant energy in the industry to keep our people safe. That's real important. There has to be an optimization there with getting every atom of radioactive material out.

ORLANDO: I think I agree with you, Paul, but I think what Dave was referring to is just some kind of commitment in the decommissioning plan to comply with other regulatory authority requirements. I think what you're talking about is the balancing between the radiation hazard and the other hazards, which, in some cases, are orders of magnitude higher than the potential harm that could come to a worker from radioactivity in a particular area.

Anybody else, anything else? Yes, sir? John Karhnak.

KARHNAK: Nick made a very interesting point this morning when he said that in his experience, the way some of these things work the best is when everybody comes together at the beginning and makes sure that things happen, and everybody knows what's going on.

You've probably heard a lot of opinions about what EPA is doing in terms of D&D of some of these facilities. I simply want to tell you that our aim and our attempt and our goal is to make sure that all these pieces come together, just as Nick described, so that when the non-radiological parts and parts that NRC is not responsible for are brought up and covered at the same time.

My position with EPA right now is to make sure that some of these things are coordinated so that we are some value-added to this process, and not a hindrance. I'd be glad to give you a card with my phone number, if you'd like to get a hold of me.

ORLANDO: Thank you, John.

TARZIA: Jay Tarzia, Radiation Safety and Control Services. There was a lot of talk here today, and I think we clarified a lot of issues about how this SRP applies to a large, broad band of licensees.

I was just curious: Seeing as how half, if not more than half of the licensees are under agreement state status, you know, the agreement states have a compatibility rule that requires them to have, you know, rule compatible with 10 CFR 20, Part E, but there is no compatibility issue to require them to have a Standard Review Plan, as far as I know.

Are you going to be encouraging agreement states to have decommissioning plans for their licensees as well?

ORLANDO: Do you mean Standard Review Plans?

TARZIA: Or to have --

ORLANDO: They would have to have a decommissioning plan, the licensee. My understanding is that -- well, first of all, decommissioning plans are not addressed under Part 20; they're addressed under the licensing regulations, 30, 40, 70, 72. So I'm not sure.

I'm not sure of the compatibility -- what's the word I'm looking for? Categorization of those regulations. If they have decommissioning plan requirements in the state regulations, I think the states could use these -- this Standard Review Plan --

TARZIA: This format.

ORLANDO: -- to meet those requirements. As far as the strict requirement for a state to use this, I'm not -- I don't work in that area, so I'm not real cognizant of it. I think that one of the things we might want to do is clarify that.

TARZIA: Yes, I think it might be good. My company deals with small licensees in agreement states, and there's a lot of differences between the states that we see in how they develop even release criteria for decommissioning. And some guidance from the NRC,

even if it's just informative guidance to the states, I think would be a help, even if it's a presentation, maybe, to the Radiation Control Directors during one of their annual meetings on this process, to drive a little bit more consistency between the states as to how they decommission, might be helpful for them.

ORLANDO: We did have the states -- we had the CRCPD in last workshop, where we actually had five members of the agreement states and -- actually, this was CRCPD, because Pennsylvania was there, Maine, New Jersey, Colorado, Oregon, and I think there was one other, Connecticut, maybe.

They all came, and discussed their issues with the Standard Review Plan. And if memory serves me, I believe that the New Jersey representative indicated that they were just going to adopt this when it was completed, and say, well, if we're going to adopt Part 20, verbatim, we're going to adopt the applicable portions of this to Part 20, verbatim.

So, you know, this would be a model that the states could use.

Yes, sir, John?

KAHRNAK: John Kahrnak. Nick, you may not be aware that the CRCPD at their annual meeting coming up this year, has a session on D&D, and that may be a factor to bring into it in the discussion.

ORLANDO: Yes, I was aware that they were having that. That's in March?

KAHRNAK: May.

ORLANDO: Something like that. Dave?

CULBERSON: Dave Culberson, different subject. Could you help us understand where this information is posted? I had difficulty finding the agenda for the meeting, and the SRP. Not until I talked to you was I able to find it.

It wasn't in the place I would have normally looked for the meetings and workshop agendas.

ORLANDO: Well, we've got one more to go, and you know the date of that. In any case, the best thing to do is to go to the NRC, www.nrc.gov, go to the Radioactive Waste icon. It's the little truck. Click on that and that will get you into the Division of Waste Management Page, which is uranium recovery, low-level waste, and down at the bottom, it says nuclear facilities decommissioning. Click on there that will take you to a little writeup description of what my branch does.

Down at the bottom it has -- and it says special projects, and under there, it listed all of the products we've got out there right now. The transcripts of these meetings are there, the transcripts of the clearance rule workshops and meetings are there.

There is a hyperlink that says Standard Review Plan for Decommissioning. Click on that and that will take you to the Lawrence Livermore site that has been managing all this.

The modules are under Standard Review Plan, and the public meetings, the announcements, the agendas and whatnot are under the public meetings banner.

KAHRNAK: Thank you.

ORLANDO: Yes, this is our streamlined and cleaned up process.

[Laughter.]

ORLANDO: It used to be when you had to go to bin.topics and type it in directly, that was -- it took me a few months to get it all hyperlinked together so at least you can get to www.nrc.gov and you're 50 percent of the way there at that point. You've only got eight more clicks to go. It used to be that it took you about 12 clicks.

Okay, as I said earlier right after lunch, I have a Federal

Register Notice and an agenda that's in the public that I want to try and stick to, so tomorrow morning, I will reconvene at 8:30 here.

Anybody who is here that would like to come back and talk, we welcome you. Anybody who is not here that will be showing up to discuss financial assurance or restricted use, we'll take their comments at that point.

We'll also open the floor up at that point for an open discussion of any issues, decommissioning, and then Bobby and Mark will present some technical information, criteria for establishing conceptual models, and treatment of uncertainty in dose assessments.

If anybody here would prefer not to return tomorrow, if you'll leave me your card and just put Friday Session on the back, I'll get Mark and Bobby's handouts and send them to you.

We finished up significantly faster than what I had expected, but there are some folks that may be coming in only tomorrow to say -- only to comment on these two sections. So I have to afford them the opportunity to do that. That said, I want to thank everybody.

[Whereupon, at 2:58 p.m., the workshop was recessed, to be reconvene at 8:30 a.m., on Friday, February 18, 2000.]