

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Public Meeting on Draft NUREG-1757,
Volume 2, Revision 2

Docket Number: (n/a)

Location: teleconference

Date: Monday, March 15, 2021

Work Order No.: NRC-1404

Pages 1-41

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING ON
DRAFT NUREG-1757, VOLUME 2, REVISION 2

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MONDAY,
MARCH 15, 2021

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The Public Comment Meeting was convened via Video Teleconference, at 10:00 a.m. EDT, Brett Klukan, Regional Counsel for NRC Region I, facilitating.

NRC STAFF PRESENT:

PATRICIA HOLAHAN, PhD, Division Director,
Decommissioning, Uranium Recovery, and Waste Programs

BRUCE WATSON, Branch Chief, Reactor Decommissioning

CHRISTEPHER MCKENNEY, Branch Chief, Risk and Technical
Analysis Branch

CYNTHIA BARR, Senior Risk Analyst

GREG CHAPMAN, Health Physicist

SHELDON CLARK, Attorney

TONY HUFFERT, Senior Health Physicist

LEAH PARKS, Risk Analyst

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ADAM SCHWARTZMAN, Risk Analyst, NRC/NMSS/DUWP/RTAB

BRETT KLUKAN, Region I, Counsel, Facilitator

LAURIE KAUFFMAN, Region I, Health Physicist

MICHAEL LaFRANZO, Region III, Senior Health Physicist

SARAH ACHTEN, Licensing Assistant

MARYLAYNA DOELL, Project Manager, Webex Coordinator

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P R O C E E D I N G S

10:02 a.m.

MR. WATSON: So good morning, everybody, and thank you for joining us today for our public meeting on NUREG-1757, Volume 2, Revision 2. My name is Bruce Watson. I am Chief of the Reactor Decommissioning Branch here at NRC headquarters. I am here virtually, along with the staff, and especially Trish Holahan, our Director of the Division of Decommissioning, Uranium Recovery, and Waste Programs. And of course, Christopher McKenney, Branch Chief of the Risk and Technical Analysis Branch, as well as, like I said, all the members of the working group in the regions and at headquarters.

A few important items about today's Webex meeting: Staff will make a brief presentation on the updates to this revision, and of course, I'm talking about NUREG-1757, Volume 2, Revision 2. After that short presentation, the remainder of the public meeting will be focused on obtaining your comments on the draft guidance document. I wanted to thank Brett Klukan, Region I counsel, for being our facilitator today during the public comment period. Brett will provide details on the comment period logistics. So I want to thank Brett again for helping out. Now I

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would like to introduce our Division Director, Trish Holahan, so next slide, please.

DR. HOLAHAN: Good morning, and thank you, Bruce. And thanks for your participation in today's Webex meeting on NUREG-1757 Volume 2, Revision 2, a draft for public comment. The NRC is really interested in risk informing the way it does business.

We've reached out to our stakeholders to get feedback on how we can improve our processes. For example, we met with stakeholders on October 30th to discuss how we're risk informing our decommissioning guidance. We think our stakeholders would be interested in hearing more about how we have made key improvements in a number of areas.

The NUREG-1757 working group has worked hard to incorporate practical examples and lessons learned from review of LTPs, license termination plans, decommissioning plans, and final status surveys into Revision 2. In fact, this was the first update in almost 15 years, so there was quite a bit of work to do. The staff are looking forward to receiving your comments on the draft guidance document today. And while we recognize that NUREG-1757 provides guidance on acceptable methods for meeting license termination rule criteria, alternative methods could

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also be acceptable if sufficient justification is provided. So we're interested in obtaining stakeholder feedback on how we can continue to improve our guidance in the future. And with that, I will ask Bruce to provide a few opening comments.

MR. WATSON: Thanks, Trish. We recognize the revision incorporates lessons learned and a lot of new information. The staff recognizes this revision is very extensive, with over 550 pages of technical information. So we decided to publish it as a draft for comment and use. Our intent is to make the decommissioning process more efficient and demystify the methodologies with many examples. So the draft Revision 2 is currently available for use by the states, licensees, and interested parties.

As a reminder, the guidance provides technical information on acceptable methods to the staff to meet license termination rule criteria, found in 10 CFR Part 20, Subpart E. Other approaches will be considered, provided the technical basis is acceptable to the staff. So we're looking forward to hearing your comments on the draft report today to help us finalize the report. I will now turn the presentation over to Cynthia Barr, the working group lead, to provide an overview of the major changes. Cynthia,

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you're up.

MS. BARR: Thanks, Bruce. Oh, sorry. Thanks, Bruce. Before I go over to the changes to the guidance document, I would like to acknowledge the working group members who have been working hard on the updates in Revision 2. We have representatives from the regions, including two Health Physics inspectors, Laurie Kauffman and Michael LaFranzo. We also have representatives from headquarters, including two certified health physicists, Greg Chapman and Tony Huffert; risk analysts who review dose modeling analyses used to derive cleanup levels, Leah Parks and Adam Schwartzman; and last but not least, Sheldon Clark is our attorney from the Office of General Counsel. Next slide, please.

NUREG-1757, Volume 2, Revision 2 was completed on November 30th. A Federal Register notice announcing availability of the document for public comment was issued on December 8th for a 60-day public comment period. A request for extension was received, and the comment period was extended from 60 to 120 days, with comments now due on April 8th. So there are just over three weeks to get your comments in. We also announced this public meeting in the same Federal Register notice we extended the public comment period.

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Next slide, please.

Major changes to NUREG-1757, Volume 2 are mostly in the dose modeling and radiological survey areas. I'll go over details regarding those updates in just a second. We also significantly updated other sections, including Appendix F on surface water and groundwater characterization, which was updated with respect to conceptual and mathematical model development and monitoring networks and frequency, and a number of new or updated references are included. Appendix N on As Low As is Reasonably Achievable analysis was also updated. The updates were primarily based on experience with a restricted release scenario.

A new appendix on composite sampling was placed in Appendix O. Composite sampling can be helpful for hard-to-detect radionuclides when the costs of sampling start to become prohibitive due to a relatively high number of samples required. And finally, updates were made to the engineered barrier analysis guidance in Section 3.5, with most of the technical material moved to Appendix P. Next slide, please.

In the area of dose modeling, new guidance was added to Appendix I on conceptual models and

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commonly-used decommissioning codes such as RESRAD. With regard to source term modeling, various examples are provided on how to reduce conservatism in treatment of multiple elevated areas. Appendix J was significantly revised to include streamlined guidance on consideration of intrusion scenarios for buried radioactivity. While the methodology did not change, we added more examples, particularly in the area of exposure scenarios for large basement sub-structures. And that was based on experience with reactor decommissioning.

Finally, Appendix Q was added to discuss important factors related to uncertainty analysis, including examples illustrating impacts of correlated parameters, use of generic data sets, and risk dilution, among other topics. Next slide, please. In the area of radiological surveys, Appendix G was updated to include guidance on Scenario B, which is an alternative scenario that assumes the site is clean until proven dirty. It could be useful when the cleanup levels are low compared to background variability. It could help alleviate a situation where a site could be cleaned up to below background levels. Surveys associated with soil reuse and survey of excavations are also discussed, based on recent

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lessons learned. Example use of graphical tools to visualize the data, including use of geographic information system and geostatistical tools are also provided. With respect to guidance on subsurface surveys, we are developing a technical letter report to frame discussion topics for a workshop we plan to have this summer. We are looking for areas where we can continue to improve our guidance in this area. If you are interested in participating, please let us know and we will keep you posted on the details about the workshop. Next slide, please.

So next tasks include: Finish collecting comments on our draft guidance document, summarizing and addressing the comments in a comment response document, and then finalizing the draft guidance document based on your comments. We plan to publish the final NUREG sometime next year. Next slide, please. The purpose of today's meeting is to collect your comments on our draft guidance document. Formal written methods are preferred to ensure we get sufficient detail to allow us to better address your comments. Formal methods include submitting comments through the rule-making website or mailing comments to our Office of Administration.

Next slide, please. In summary, NRC has

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issued NUREG-1757, Volume 2, Revision 2 for public comment. The document is available in ADAMS or on NRC's website. The purpose of today's meeting is to collect your comments on our draft guidance document.

Formal methods are available and preferred to submit written comments. And with that, I will turn it over to Brett Klukan from Region I to facilitate the public comment portion of the meeting. Next slide, please.

MR. KLUKAN: Hello, everyone. Again, my name is Brett Klukan. I'm normally the Regional Counsel for Region I, but today I'll just be facilitating the public comment portion of this meeting. So I just want to thank everyone again for attending and for showing interest in this decommissioning guidance document for which we've issued a draft, again, NUREG-1757, Volume 2, Revision 2. Right now, we have one registered speaker who pre-registered, though we do have a number of participants on the call today. So I would ask that when it is your opportunity to provide your comments, that you do so as concisely as possible so as to maximize the amount of time that we have for other people to also give their verbal comments today.

I do want to give just one meeting ground rule and one quick consideration. First off, I would

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just ask that you please respect other members of the public participating in the meeting and just show courtesy to each other, that's all. And then, in an effort to give as many people an opportunity to speak again today, I'm asking that you limit yourself to roughly around four minutes when speaking. That time limit is based on the number of participants we have participating, assuming a fair number of you do want to give verbal comments, you know, that should give a nice balance between, you know, being able to provide what you need to say in terms of your comments while maximizing the amount of opportunity for the largest number of people. If everyone has had at least one opportunity to provide their comments and there is extra time at the end, then we will go back through and allow people to expand upon their original comments; again, as time permitting up until the scheduled end time. All right.

Now, as seen on this slide here, if you're on the Webex and you would like to provide a verbal comment, raise your hand by clicking that button, as indicated on the slide. If you are on the phone and thus maybe can't see this slide, if you would like to make a public comment on the draft document, you can notify us that you would like to do so by hitting *3.

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Again, that is *3, but that is only if you're a participant on the phone. If you're in the Webex itself and connecting through the computer's audio, use the hand-raising function within the software, okay? All right.

The last thing before the public comments: In order to make sure that your verbal comments are being captured, our meeting is being recorded, and the statements today made will be transcribed, so please be sure to clearly state your name and, if you wish, you don't have to, any company or organizational situation before launching into your comments. Also, again, just to echo what Cynthia said, while we are collecting your verbal comments today, we would encourage you to submit written comments through the regulations.gov website as previously discussed in the slides, so that you can provide additional details and we're better equipped to address your comments. And so with that said, we will start off with our one registered speaker of whom I'm aware, which is Mr. Bruce Montgomery of NEI. So if, Sarah, you can unmute Bruce, we will start with him.

MS. ACHTEN: Say the last name again for me? Sorry.

MR. KLUKAN: Bruce Montgomery.

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MS. ACHTEN: Perfect. Doing that right now. Scrolling back up. Bruce, you are unmuted.

MR. MONTGOMERY: Yes. Thank you, Sarah. Thank you, Brett. This is Bruce Montgomery with the Nuclear Energy Institute. We appreciate the opportunity to provide some verbal comments on NUREG-1757 Volume 2, Rev 2. We recognize it's a significant body of work. A lot of effort went into pulling in additional information based on lessons learned and experience over the past quite a few years, so we thank you very much for that. We will be submitting our written comments, and we have a significant number of clarifying suggestions to make for the report, so we'll be providing those on April 8. We would recommend that this dialogue continue on past the comment period. I think this would be an excellent opportunity to discuss our comments in more detail after we submit them.

We have a team that we put together at NEI. We represent the vast majority of the commercial nuclear industry, both in terms of the full legal licensees and the suppliers, who do a lot of work in this area. We put together a team of folks who, as you all know, we're working on some licensee guidance on license termination of final status surveys, which

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this NUREG speaks a lot to. This team is very experienced in work that's been done in the past and the work that's ongoing at existing decommissioning sites. And it's a great team, and I'd like to get them more engaged with you directly on these comments as we work on this NUREG.

Today, I'd like to just give you a couple of high-level remarks that we'll talk about in more detail when we submit our written comments. But first off, we think this report, which is a consolidated decommissioning report, provides a lot of information that we can use on the guidance that we're developing that is targeted towards the kinds of commercial decommissioning work that we expect to have to get done over the next decade or two, not to mention the work that's currently ongoing and underway. So, you know, this is a great source document for us. We think there might be some opportunities to change the flow of the information a little bit for the user, to make it easier to work through. So we'll provide some comments along those lines too, in terms of the workflow. We think another positive is that, you know, you do draw, you know, a lot of information from other sources and put those in appendices, which we think is a user-friendly attribute. You know, we

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think that's a great direction to take. So it just helps us figure out how we're going to work through putting together a report for you and a plan for license termination at the site remediation project.

Some opportunities, we think, for improvement might be along the lines of how information is being pulled in. There's so many different technical reports that this report makes reference to, and we noticed that there's quite a bit of information that's pulled in from these other reports and put in the various appendices. We suggest that that might create a little bit of a downstream risk in that, as these other documents get revised and updated, then that's sort of, you know, looking backwards at NUREG-1757, and might create an opportunity or a need to continually upgrade or revise NUREG-1757. So maybe a better approach would be to just reference these other documents, as opposed to pulling information in from them. It's a little bit of a duplication of effort and again, it creates a little bit of downstream risk in terms of keeping documents updated.

The other comment we would have, and we'll provide examples of this, is there appears to be a little bit of a disconnect between what the NRC is

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expecting in terms of minimum information from licensees in a license termination plan or final status survey reports and what the report sort of points the reviewers to look for at the NRC. In fact, it looks like the reviewers are being expected to look for a significant more amount of detail in the submittals than you summarize as minimum information to licensees. So we'll give you some examples of that because we want to make sure we understand what's expected of us as we make comments.

Also, you know, there's some areas where we would've expected additional information from the NRC, you know, given the time that's passed on some details or aspects of a license termination plan or final status survey report that weren't addressed. You know, for example, you had a model for hot particles. Also, you know, there's a statement in the report about doing surveys of excavations before back filling, but there's really no information on what your expectations are for those surveys before we do the back fill. Things like that would be helpful to resolve sooner rather than later as we finalize the report. And, I think, the workflow piece, when we get to that, I think there may be an opportunity for us to deal with the workflow piece for the user community as

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we develop our industry guidance on license termination and final status surveys, as opposed to trying to tackle that piece in the NUREG, because I think the format is already pretty well set. And it's not a bad format. It's just that, you know, I think the user could use a little guidance on, you know, how to work through these things through time, and in terms of putting together the license termination plans and final status survey plans and ultimately the reports. So those are just our high-level comments. I think I've gone a little more than four minutes, but I really do appreciate the opportunity to submit our comments. Thank you.

DR. HOLAHAN: Thank you, Bruce, for those comments, and we'll be happy to meet with you in the future and continue working the issue in future public meetings. So I like your comments, and we'll take them into consideration.

MR. MONTGOMERY: Thank you.

MR. KLUKAN: Thank you as well. So again at this time, just a reminder: If you would like to make a verbal comment in the Webex system, raise your hand. Follow the instructions on the slide that we have up on the screen for raising your hand. There's a little button that you click. That lets us know

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that you want to be unmuted to provide a verbal comment. If you are on the phone, again, in order to quote/unquote raise your hand, it's *3, okay? *3. So we'll give people here a couple of minutes. As of right now, it doesn't look like anyone has their hand up. But again, if you want to provide a verbal comment, raise your hand or, if you're on the phone, press *3. All right. Thank you.

MR. KLUKAN: Okay. Sorry for the silence.

We were just waiting to see if we had anyone who wanted to provide a verbal comment. Again, to do so, just raise your hand within the Webex platform or, if you're on the phone, hit *3. Again, we'll give it another minute there to see if anyone decides that they would like to offer verbal comment this morning. Thank you again.

MS. BARR: People can also send a chat to the host if they want to make a comment as well.

MR. KLUKAN: So yes, if you would like to just provide a quick written comment, again, we have a mechanism through regulations.gov to collect written comments, but if you just have a short comment you would like to provide this morning, you can add it to the chat function as well, so --

DR. HOLAHAN: You can also ask

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clarification questions if there's something that's not clear to you.

MR. KLUKAN: Okay. It looks like we do have one individual who'd like to speak. That is Ms. Jenny Goodman. So if we could have her unmuted and then, once she is, whenever you're ready, Jenny. Thank you.

MS. GOODMAN: Hi. This is Jenny Goodman. I'm with the New Jersey Department of Environmental Protection. We've submitted our written comments already, but I would just like to say that we appreciate all the excellent work that was put into this document. We use it all the time. And I also maybe want you to think about: We also use it for other sites, which are actually way more contaminated than, probably, nuclear power sites or materials licensee sites. So when you revise things, maybe keep that in the back of your mind, even though I know you don't regulate everything. But some things that you might want to do would have, you know, other ramifications. I'm understanding that it's just guidance and we don't have to use it, but, you know, it is a useful document. Thank you.

MR. KLUKAN: Thank you very much.

MS. BARR: Thanks Jenny. Oh, I just

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wanted to say a quick word. This is Cynthia. We did receive your comments and they were really good comments, Jenny, so we really appreciate that, and we're working through them now. We may have some clarifying questions for you, if we could contact you with those, because we want to make sure we're able to address them very well. But I just wanted to thank you again for the excellent effort and thorough review you did on the document.

MS. GOODMAN: Thanks.

MR. KLUKAN: Okay. Looking through the question/answer dialogue box, it looks like Riley Carey would like to raise their hand. So Sarah, if you could unmute Riley Carey, R-I-L-E-Y C-A-R-E-Y. It looks like they were trying to --

MS. ACHTEN: Done.

MR. KLUKAN: -- raise their hand. Okay. So whenever you're ready, Riley, please go ahead.

MR. CAREY: Okay. Can you all hear me?

MR. KLUKAN: Yes, we can, thank you.

DR. HOLAHAN: Yes.

MR. KLUKAN: You still there, Riley?

MR. CAREY: Can you hear me now?

MR. KLUKAN: Yes. We can definitely hear you, thank you.

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MR. CAREY: All right. Sorry. I just have a general comment that kind of ties into some written comments that I may have. Was the upcoming MARSSIM Revision 2 considered when compiling this draft? And if there are any upcoming changes that make it more so in line with, you know, sort of the methodology in MARSSIM and MARLAP, will those be incorporated in future changes to this? Thank you.

MS. BARR: Hi, this is Cynthia. Yes, we have members on the working group for MARSSIM, which, by the way, is done. It is on the EPA Science Advisory Board website, but it has not been issued for public comment yet. But you can download it from there. But yes, we worked very closely with the MARSSIM working group, and a lot of the information was kind of overlapping, so we do have a lot to integrate. But then there's also some new things that we want to do. So I would say yes, definitely, we still have some more work to do, but there was close integration. Does that answer your question, sir?

MR. CAREY: Yeah. thank you. I just had a few specific questions that I'm planning on incorporating in the written comment period. Thanks.

MS. BARR: Because it wasn't done yet, Rev 2 of MARSSIM, we couldn't cite it. And I think we

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even have notes about that, that we didn't cite it. But in the back of our mind, we were working on similar topics, I should say. And so you will see a lot of information between the two documents that are complementary. And one thing I would note is that they had rank set sampling in MARSSIM Rev 2. We had something that was similar to that. I mean, it's not similar, but we have composite sampling, which both could be useful for hard-to-detect radionuclides. So that's just an example of -- maybe we would want to update MARSSIM with composite sampling or our guidance document with rank set sampling but, you know, similar types of new guidance were added to address particular issues. So thank you, Riley, and we look forward to receiving your comments.

MR. KLUKAN: Yeah. Again, thank you very much. So again, if you would like to speak today, please raise your hand using your raise your hand button or, if you're on the phone, press *3 to let us know that you'd like to speak. Bruce Montgomery, it looks like you still have your hand up. Do you have other comments that you wanted to add on or append to your earlier comments? If we could have him unmuted really quickly, just so he could answer that.

MR. MONTGOMERY: Can you hear me now?

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MR. KLUKAN: Yes. Yes, we can.

MR. MONTGOMERY: Okay. Thank you. No, I really just didn't know how to put my hand down. But since you've given me the opportunity, I think I'd like to ask: What sort of public opportunities for, you know, further dialogue around these comments and how they're going to be resolved will you provide during the course of the year?

DR. HOLAHAN: I can start. And, you know, as you requested, we may have meetings with you in the future as we're working through the comments. We don't know how many comments we're going to get. And so we'll roll it out and figure it out in the future.

Cynthia, did you want to add anything? Or Bruce?

MS. BARR: This is Cynthia. I'll just say, you know, we do have a workshop on subsurface, and so that would be an opportunity to have additional dialogue on that particular topic, so that is -- let me go ahead and turn on my video. It's not working, sorry. But that would be one opportunity that you can discuss particular topics that are important to a lot of our licensees. But that's the only planned one. But like Trish said, you know, we'll look at how many comments we get and the nature of the comments, and assess at that point if we want to have another

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opportunity to reach out and have further dialogue.

MR. KLUKAN: Again, thank you for that.

MS. BARR: Okay.

MR. WATSON: Yeah, this is Bruce Watson.

I was just going to add that, you know, this is a iterative process, and I certainly hope we don't wait as long as we have before to do the next revision. But I think the key thing we were looking for is, once MARSSIM is revised and is finalized, you know, that would be another opportunity. But really what we're going to be doing is looking at the comments we receive and see if there's anything we really need to add or delete from this particular version. Like I said, it's been long in the coming.

There was a question about, if I can switch subjects to NUREG-1757 Volume 1. We've been working on a revision to that over the last year or so. It is currently with our Office of General Counsel for, hopefully, final review so that we can move forward in the process to make it public and also, you know, finalize it and get it published. So we're moving ahead with that. And let me just reiterate that Volume 1 is the graded approach to decommissioning, and it really sets up the different categories of the decommissioning and requirements.

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So a very simple site does not require, you know, significant decommissioning, I'll just call it documentation, like a license termination plan that would be required for a very complex site like a nuclear power reactor, or a complex material site where it would require a decommissioning plan. But a lot of the revision to that is a lot of internal NRC -- how we do processing of some of the issues. So we're working on that. We hope to have it out to the public very soon. It did go to the Agreement States for comment, and so we have their comments also that have already been looked at.

NUREG-1757 Volume 3 is on the financial assurance guidance for material sites. And I think that was revised just a few years ago, back when the financial assurance for material sites was in Chris McKenney's branch. And I just really don't know of any significant issues that would cause us to go and revise that at this time. However, you know, I can always follow up with the Financial Assurance Branch which has been transferred over from NRR to NMSS to see what their thinking are on that particular set of guidance documents, or document, I should say. So with that, I'll turn it back over to Brett.

MR. KLUKAN: Thanks, Bruce. Appreciate

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it. The next question we had is -- making sure here -- that we received from an attendee: Is there a clear linkup to the LTP, or does the update provide a clear linkup to the requirements in the LTP?

MR. WATSON: Let me go ahead and give that a shot because there's already a guidance out in the public, which we recently revised. Our branch issued the revision to NUREG-1700, which is the standard review plan for license termination plans. So 1757 Volume 2 should reference that as another means for providing the comment and format for the license termination plans. So I guess that's the biggest link that there is that you can have, but I would recommend that licensees take a hard look at the standard review plan, NUREG-1700, because we can always take comments on any guidance document along the way. But we did revise that a couple of years ago. So Brett?

MR. KLUKAN: Thanks, Bruce, I appreciate it. So another question we received is -- so I'll just read the quote: I appreciate the new part about buried material, but the key part, from my point of view, is the need for a methodology for subsurface as a MARSSIM document. My question: Is there any plan to have a subsurface methodology document? Thanks in advance. And that question and comment came from

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Manuel Martinez (phonetic). So I will cue that up to the group for a response.

MS. BARR: Hi, this is Cynthia. There's no plan for a separate document, and we did start to include additional information on that topic in the current Rev 2, referring to NUREG/CR-7021, which is a technical guidance document. But we also have a contract with SC&A (phonetic) right now to work on that issue. And so we're planning on having a workshop this summer. We're going to publish parts of a technical letter report to frame discussion topics for that workshop. So if anyone would like to participate, please reach out to us and we'll get you the details on that. Thank you.

MR. KLUKAN: Thank you. Again, if you would like to make a comment, please click raise your hand within the Webex platform or, if you're on the phone, press *3. So then, we'll give it one minute there for people to go ahead and indicate that they want to speak, and then we'll circle back here in a couple of seconds. It seems that a lot of individuals are struggling with the hand-raising function, and we apologize for that. So what I would ask is instead that, for those of you in Webex -- and again, if you're on the phone, just hit *3. That should

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indicate to us or to the panelists or the host that you want to, you know, make a comment. But let's say you can't find the raise hand function or it's not working for some reason, there are two other ways that you can let us know that you want to talk or provide a comment. You can write something in chat, in the little chat box, or you can send something through the Q&A to say, look, I would like to pose a comment. And then we will unmute you and we can go to you that way.

Again, we apologize for any technical difficulties. So if you want to raise a comment or -- excuse me, give a comment or provide a comment, and you can't raise your hand, for whatever reason, through the Webex system, let us know either through the chat function or the Question and Answer function; preferably the chat function.

MS. BARR: This is Cynthia again. We don't have any firm dates for the workshop, but we're pretty confident that it's going to be this summer. It's not going to be delayed. We're putting the finishing touches on our letter report or the contractor is. So if you're interested, just let me know and I can make sure you get the information when it's available. And we'll try to advertise that so everybody in attendance will get that information.

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Thank you.

MS. ACHTEN: Cynthia, can you clarify which workshop? Not everyone can see that part of the chat.

MS. BARR: Oh, sorry. Somebody was asking about the subsurface workshop that we're planning on having this summer, and so I was just responding to that.

MR. WATSON: Yeah. If I could just piggyback on what Cynthia just stated, that, you know, we have a lot of work going on in this area, the subsurface work, through our Office of Research. And so we're really interested in trying to figure out the best means to, you know, evaluate the subsurface and try and make them very, you know, confident in the methodology. So we are planning, like Cynthia said, sometime this summer holding a workshop on that particular subject and gain other people's insights into it. So with that, Brett, back to you.

MR. KLUKAN: Thanks Bruce. I appreciate it. So we have received one additional question: In reviewing the lessons learned from the various final status surveys that have been submitted to date, what were the most significant changes made to the updated guidance, so that someone could focus on those points

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when commenting on the document? And again, that question was received from Larry Camper (phonetic). And I'll read it again, just because it was a long question, and just for the sake of the people on the phone as well. In reviewing the lessons learned from the various final status surveys that have been received or submitted to date, what were the most significant changes made to the updated guidance, so that someone could focus on those points in commenting on the document?

MS. BARR: Ooh, that's a tough question, Larry. If I had to narrow it down, I would say probably Appendix G, surveys of open excavations and reuse of soil. I think we did a lot of updates to Appendix J on exposure scenarios related to large basement substructures. And we're still working on that, to be honest with you. It's hard because people want to use RESRAD, and when you're talking about contaminated zones underneath the saturated zone in a confined basement substructure, it can get kind of tricky. And so we just want to make sure that RESRAD is not used incorrectly. In some cases, you can simplify the conceptual model and use RESRAD and it's clearly bounding, and so that's one area where we also, I think, provided some updated guidance. But as

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I said, we're still working on that.

Hopefully people will take advantage of the composite sampling new Appendix O. We think that's a big update, and I know people have tried to use it in the past, so hopefully that'll be an improvement. And we also noticed a lot of conservatism with treatment of multiple elevated areas, and so we did try to add a lot of examples in Appendix I on that topic. And so hopefully that's useful to people as well. And on occasion, we've had people need to use Scenario B. In those cases, I think we've provided a lot more detail on when it would be appropriate to use Scenario B and how you might go about doing that. And so I think those are, if I had to list them in order of priority, what I would say. But if anybody has anything to add to that, please feel free. Thanks.

MR. WATSON: I think that was a pretty good summary, Cynthia. So, you know, I think we've done our best to incorporate lessons learned. And also, like, composite sampling was actually a project we had that we worked with Oak Ridge Associated Universities on and published some papers at the Health Physics Society on. So we tried to capture some of the lessons learned also that was consistent with the literature we've done in the past. So with

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that, Brett.

MR. KLUKAN: All right. Thanks, Bruce. So I have one additional question from Larry Camper: What about the recommendations from the Financial Assurance working group last April? Will they need to be included or will they be included in Volume 3? Again, what about the recommendations from the Financial Assistance working group last April? Will they or those recommendations be included in Volume 3?

MR. WATSON: I've got to figure out the buttons here a little better. Sorry, folks. The Reactor Decommissioning Financial Assurance working group was looking at, specifically, the reactor decommissioning trust funds, along with the process we follow -- not only the regulations, but the internal processes we follow and how we request information. So those types of comments, or the corrective actions I'll call them, follow-up items from the Reactor Decommissioning working group are not going to be incorporated into NUREG-1757 Volume 3. Volume 3 is really covering the regulations for financial assurance for those complex material sites and other material sites, so their regulations are totally separate in the requirements. So the simple answer is: We're doing some upgrades to our inspection

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procedures; also our internal procedures for looking at the Financial Assurance working group, from that working group. And we're also looking at some updates to a few of the regulatory guides on the reactor side for the financial information. Again, NUREG-1757 Volume 3 deals exclusively with decommissioning material sites. And so the RD FAWG, as we call it, the Reactor Decommissioning Financial Assurance working group, their recommendations are not applicable to do NUREG-1757, Volume 3, so thanks. Brett.

MR. KLUKAN: Thanks, Bruce. So again, and I apologize for sounding a little bit like a broken record here, but if you would like to pose some comments or pose a comment, please use the raise hand function in Webex. If that isn't working for you, for whatever reason, just let us know or drop a line in chat or the Q&A function or feature to let us know that you would like to speak. And again, if you're on the phone, it's *3. I will give people here a couple of seconds to do so. All right. At this time, I don't have anyone else who would like to raise a comment. So again, we have time remaining, so if you do have a comment you would like to raise, please feel free to do so. And just, you know, raise your hand or

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let us know through the chat or the Q&A function.
Thank you.

Okay. We're not seeing any additional comments at this time, so I'm going to give you one more opportunity. Again, please feel free to raise your hand within Webex or let us know via chat or Q&A.

And if you're on the phone, it's *3. So quote/unquote, raise your hand to let us know that you would like to be unmuted. So we'll give you another minute.

MS. ACHTEN: So Brett, I put a question in the chat. I think you're reading it now.

MR. KLUKAN: Yes. Thank you for that. So we did receive one additional question from Sofia -- oh, boy, L-U-Q-U-E. I apologize. As someone whose name is often mispronounced as well, I don't know if that gets me any bonus points for not being able to pronounce your last name, but we have a question from Sofia, last name L-U-Q-U-E: In your opinion, could Scenario B be used to assess the final status of a remediated former uranium mine or milling site? Again, Sofia's question is: In your opinion, could Scenario B be used to assess the final status of a remediated former uranium mine or milling site?

MS. BARR: This is Cynthia. I'm not sure

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because I don't usually work on uranium mine or milling, but I will say when Scenario B is appropriate, and that is when the cleanup levels are close to background and there's a lot of background variability. And so it's difficult to determine whether the surveyed unit is actually contaminated or -- you know, in some cases, the background could be higher than the survey unit, because of that background variability. So if you have a situation like that, then yes. But I know the regulations are a lot different, so that's the best I can do. Sorry. Does anybody have anything to add on that?

And I will say also -- this is Cynthia again. Like, if you have groundwater contamination and you're not sure if it's background or not, you could do a Scenario B-like analysis or maybe an ANOVA analysis. So I think there are opportunities for uranium sites, especially for groundwater, because I know that comes up a lot. So that's just something I thought about. But Scenario B is really specific to MARSSIM and sites that have a cleanup level, and that cleanup level is very low compared to background. So hopefully I answered your question. Let me know if it doesn't.

MR. KLUKAN: Thanks, Cynthia. All right.

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So we do have someone who would like to speak, and that is Kaylene Walker. Again, Kaylene Walker. So if we could have Kaylene --

MS. WALKER: All right. Can you hear me?

MR. KLUKAN: Yes, we can. Thank you. Please go ahead.

MS. WALKER: I just came across this meeting. I haven't really been able to look at the 500-page document yet, but I was curious if somebody could just give a thumbnail overview of what this particular NUREG is. It's kind of hard to sift through 500 pages. Could someone just give like a, you know, clipped version of what this NUREG is?

MS. BARR: Yes. It provides acceptable methods to meet the license termination rule, and it's used by materials and reactor licensees. It's a technical guidance document, and it focuses on dose modeling used to derive cleanup levels and also the radiological surveys to show that you have met those cleanup levels. And so that in a nutshell is what it does. It's related to 10 CFR Part 20 Subpart E, the license termination rule. So it's a dose-based standard. A lot of times people will convert the dose to a cleanup level that's a concentration-based level, and then the surveys would show that you're below

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those levels. That's all I can say in the simplest terms. If you want more detail, just let me know. Hopefully that answers your question.

MS. WALKER: It gives me a basic idea. So this is a way of evaluating the property; is that right? Or evaluating it so that you can, you know, decommission or unlicense a facility?

MS. BARR: Yes. To decommission and terminate the license, yes, ma'am. So basically, you know, it provides information on all the radiological surveys you would do to characterize it, and then the final status survey is the point at which you say whether the site is clean or not. And all the dose modeling that assesses the risk to make sure you're below that dose-based standard.

MS. WALKER: And what if you're not below the dose-based standard?

MS. BARR: Then the decision is that the license can't be terminated. You have to remediate more, or you have to do more refined modeling to show that (audio interference) that the site meets the criteria. So I think if you look in Chapter 2, it's an integrated approach, so if you don't meet it in your first demonstration, then there are opportunities for you to recover from that.

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We also have an Appendix C on double sampling or two-stage sampling, if part of the design.

In some cases, you could do extra work in that area.

So there's a lot of different approaches you could take if you don't pass initially, including the modeling, the surveys, things of that nature. But that's all outlined in Chapter 2.

MR. WATSON: So this is Bruce Watson. Yeah, I would recommend you take a look at the document itself. It does establish the criteria on which the staff will evaluate the approaches the licensees will take to demonstrate to us and, of course, the public that the licensee is meeting the criteria for license termination. And until they do that, then the site will remain under license and under our inspection activities to make sure the license and the property remains safe for the workers and, of course, the public and the environment. So back to you, Brett.

MR. KLUKAN: Thanks, Bruce, and thanks, Cynthia, as well. So again, to raise your hand or to create that little raise hand function in Webex, or let us know through chat or QA. It looks like a lot of you are using those alternative methods. Or again, if you're on the phone, just to reiterate, hit *3.

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And we'll give people here a minute to see if they would like to provide comments, particularly those of you who have not yet spoken this morning.

Again, we want to try to make sure we capture as many comments as we can during the allotted time for the meeting. So again, if you haven't spoken already, you know, we have the time; please feel free to raise your hand and provide a comment. And can we just give people a couple, 30 seconds or so to decide if they want to voice a comment or not, and then we'll circle back.

Okay. Again, so as far as I know, and I apologize, I keep looking to my left, your right maybe, to see if we have anyone else because I have that info up on my other screen. Doesn't look like anyone has raised their hand at this time or indicated that they want to comment. So I'm going to offer it up one more time, just to make sure.

If you would like to provide a comment today, raise your hand using the little hand raise function. It's next to the little megaphone button on the bottom of the participant list, or let us know in chat or Q&A. And if you're on the phone, press *3 at this time. Give you one more minute and then I will turn it over to the staff to close out the meeting.

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So again, if you'd like to raise a comment, please do so now. Let us know at this time and if not, then we'll close out the meeting.

Okay. As far as I can tell or based on that -- it seems to me that no one else had any additional comments. Again, if you do have additional comments after this meeting or questions, you know, you can reach out via the methods as provided in the presentation. And I would particularly encourage you if you do have written comments, even if you voiced those comments here today, to provide them through the regulations.gov website related to this draft, which were the draft of NUREG-1757. And with that, I will turn it over to Trish Holahan to close out the meeting. So thank you very much for the public commenting portion. I appreciate it.

DR. HOLAHAN: Thank you, Brett, and thank you everybody for participating. And I know it's a voluminous document, you know, but we look forward to getting your written comments by April 8th, and we'll follow on with future meetings if we find a need to, and also the subsurface meeting this summer. I think there was a lot of interest in that.

So hopefully we'll get information out -- well, we will get information out to you. And so

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that's a possibility there to continue the dialogue. So with that, I'll thank the staff, Cynthia, and Bruce, and everybody that participated. And have a great day.

(Whereupon, the above-entitled matter concluded at 11:03 a.m.)

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