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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON NUCLEAR WASTE AND MATERIALS

(ACNW&M)

182nd MEETING

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WEDNESDAY,

SEPTEMBER 19, 2007

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VOLUME II

The meeting was convened in Room T-2B3 of Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, at 8:30 a.m., Dr. Michael T. Ryan, Chairman, presiding.

MEMBERS PRESENT:

MICHAEL T. RYAN, Chair

ALLEN G. CROFF, Vice Chair

JAMES H. CLARKE, Member

WILLIAM J. HINZE, Member

RUTH F. WEINER, Member

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NRC STAFF PRESENT:

SHER BAHADUR

ANDREA VALENTIN

JOHN N. RIDGELY

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P R O C E E D I N G S

8:30 A.M.

CHAIR RYAN: All right, folks, it is the appointed hour, so if could ask everybody to come to attention.

This is the second day of the 182nd meeting of the Advisory Committee on Nuclear Waste and Materials. During today's meeting the Committee will consider the following: Regulatory Guide revisions, preparation for our meeting with the NRC Commissioners in November, and discussion of ACNW&M letter reports.

This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act. Chris Brown is the Designated Federal Official for today's session.

We have received no written comments or requests for time to make oral statements from members of the public regarding today's session. Should anyone wish to address the Committee, please make your wishes known to one of the Committee staff.

It is requested that the speakers use one of the microphones, identify themselves and speak with sufficient clarity and volume so they can be readily heard. It's also requested that if you have cell

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phones and pagers that you kindly turn them off.
Thank you very much.

Feedback forms are available at the back of the room for anybody wishing to provide us with their comments about the meeting. Thank you very much.

Without further ado, I'll turn to our presenters and Dr.

Thank you. Dr. Bahadur, are you going to lead us off?

MR. BAHADUR: Yes.

CHAIR RYAN: Thank you very much.

MR. BAHADUR: Thank you so much and it's always a pleasure to come to this Committee and today I'm going to be talking about the Reg. Guide revisions. But before I do that, I'd like to take this time to inform you of two other news items. As I have told you earlier, in my directorate I have three branches. One is the Waste Research Branch. The other is the Radiation Protection Branch and the third is the Reg. Guides Branch.

The last time when I was in front of the Committee I informed to you that we had certain budget cuts in the decommissioning area which may require me

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to find new homes for this stuff in the Waste Research Branch to other places. Well, the good news is there was an SRM August 31st. The Commission has reinstated the resources in the decommissioning area. As a result, I will be able to maintain the Waste Research Branch within my directorate and I don't need to find a home for them in other areas.

Right now, the branch is preparing, is in the process of preparing a research plan, a research plan which will reflect a broader-based support that they can provide to the Agency, not just in the decommissioning area, but also in the new reactors area and also in the operating reactor. So as and when it becomes available to the Committee, as in the past, we would like to utilize this Committee as a peer review for such a plant and I'll be coming to you for that in the near future. I do not have the date.

CHAIR RYAN: We'll look forward to it. Thank you. Good news.

MR. BAHADUR: Yes. It certainly is very good news.

The second news is on the National Academy report on the alternative technologies, alternative sources that they are working for us. We had an

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information security review for about 14 days which was over the long weekend. The NRC staff has now completed their review. The comments have gone to the National Academy. We would like to share the report with the Advisory Committee, but the Academy's wishes are unless the report goes to Congress, they wouldn't want to make it public.

I'm going to be working with Frank Gillespie to find ways by which we can share the report with the Advisory Committee so that when the report comes to the Commission, the Committee is prepared to advise the Commission about that.

One possible solution would be that we could share our review of the report because the report came to us for a security, information security review. We conducted that and we sent our comments to the Academy. One possibility would be to bring those comments to you. But there are pitfalls for that too.

If you don't see the entire report, the comments may not mean anything.

So there are some constraints and there are some options and just in the next few days and weeks we will resolve that and then perhaps the Academy, I mean the Advisory Committee can get

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involved.

CHAIR RYAN: We're happy to help.

MR. BAHADUR: Coming back to the Regulatory Guide revisions, today you're going to be hearing about the process that we have followed in updating the Reg. Guides, eliminating the Reg. Guides or enhancing. And also examples of specific Reg. Guides that the Advisory Committee may wish to hear.

As I understand, you are mostly interested in the Division 8 Reg. Guides. I have invited Stephanie Bush-Goddard, who is the branch chief of the Radiation Protection Branch. She would be here to answer any questions. So if you don't have any specific questions from me, I'd like to turn it over to Andrea Valentin and she is the branch chief of the Regulatory Guide Development.

CHAIR RYAN: Just by way of introduction I might add that we basically divided up the Reg. Guide Divisions among the members and we kind of took a look across all the Reg. Guides as kind of to review. So we're consolidating all of our reviews, not just Division 8.

MR. BAHADUR: I see.

CHAIR RYAN: But actually all of them, so

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we'll offer you that insight as we get going.

MR. BAHADUR: So what we'll do, and as you would discover that during our discussions, some of the Reg. Guides also deal with the decommissioning and the waste area as well and I have invited Bill Ott who is the branch chief of the Waste Research Branch and as I speak, he's coming in, and he is going to take the seat right there.

MS. VALENTIN: Okay, thank you, Sher. It's especially a please for me to present. I've never actually presented before this group before until June of 2007 when I took this branch, I was on the reactor side of the house. So I look forward to presenting to you.

What I'm going to do, well, what I'm going to give to you is just an overview of our program. I'm Andrea Valentin and I have with me, John Ridgely who will follow with more details on actually the approach that was taken to prioritize the Reg. Guides.

And also as Sher mentioned, we have both Stephanie Bush-Goddard and Bill Ott and staff from the Radiation Protection and Waste Research Branch because I know the Committee is interested in some specific technical questions. So they'll be able to answer

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those.

Next slide, please.

The real objection of the program is to look all of the Reg. Guides, to either develop -- there are some Reg. Guides that are on the table or review an update Reg. Guides as you know that are old '70s vintage, '80s vintage, and also to withdraw Reg. Guides. I'll get into that a little more because that a large effort that we're doing as well. The objective is to have better efficiency and effectiveness and interactions with the licensees.

Next slide, please.

Phase 1 was the critical high priority phase which was necessary for the high priority new reactor-related Reg. Guides. That phase was completed in March of 2007 as the Committee is aware. We're currently in Phase 2 which goes beyond the new reactors. We're in process with the operating program offices to finalize some of the information, but right now the Phase 2 Reg. Guides are to be completed by December of 2008.

Going beyond that, Phase 3 Reg. Guides are the Reg. Guides that potentially need a lot more time for technical development. There's a lot more

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involvement with the Phase 3 Reg. Guides. Those are to be completed by December 2009. What's actually new to this Committee is a new phase, Phase 4 which grew basically out of necessity with interactions with the program offices. There are some Reg. Guides for various reasons. For example, there may be standards that are being developed and it doesn't make sense to go out with a Reg. Guide before the standards develop.

There may be some extensive coding or some other reason why some of these Reg. Guides need to go out to Phase 4. And that would be December 2010.

I wanted to point out that the dates in the phases are really date-driven. Just because a Reg. Guide is maybe a Phase 3, it could be issued well before December 2009. There's a cut-off date based on how long it takes for the Reg. Guide Branch to process Reg. Guides that puts each Reg. Guide in a particular phase. If something is at Phase 3, it may be an early Phase 3. So I wanted to point that out.

Now I wanted to turn over to John Ridgely, who will give you more detail on prioritization. Then I'll come back and give you some status on current activities that we're doing.

MR. RIDGELY: Good morning. The

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Commission directed the staff to by memo to update all the Regulatory Guides and provided funding for this. And what we did was researched, made a list of all of the Regulatory Guides and we took staff and prioritized all the Guides. Then we then shared this information with NRR who looked at our prioritization and they came back and they said well, move these here, move those there. So we came up with a combined prioritization for all the Regulatory Guides.

We then issued this out for public comments. We got some comments. We factored those comments into our prioritization. We briefed the ACRS on our prioritization and then we started basically with the Phase 1 which is for new reactors.

Prioritization is not a static thing. That's the initial prioritization that we did, but it is an on-going living thing. The Regulatory Guides move from phase to phase, based upon a number of factors, not the least of which is how long is it going to take to get the technical basis developed to revise the Regulatory Guides. So it's not static. It changes and we try to keep you all informed of which ones are in Phase 2 this week and which ones are moving to different places.

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The Regulatory Guide selection process then really was a combination of a top-down approach and what I call a cross-cutting approach, more of a horizontal approach.

The top-down approach, this was again basically because we start with new applications for reactors was the driver for it, so we looked primarily, initially at those. Which were the ones that were most out of date. Which were the ones that were most important for new reactors. But it's expanded beyond the new reactors. It's in all fields.

It's in medical. It's in transportation. It's in decommissioning, all the fields whether inspecting have an urgent need causes it to rise to the top in terms of priority.

Another issue that is factored into is the methods of the technology. Are the methods that are in there, are there newer methods, newer versions, newer ways of doing things that are better, more efficient, more accurate. One of the -- an example of this, for example, is the GALE code which you all know and are familiar with, has been around for a while. And that's something that needs to be changed. And I'll talk more about that in a minute.

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Other issues are like codes and standards. Some of the standards that were referenced for '75 or '76 or some very old standards. Newer standards, obviously, have come about and the question then becomes what should we reference them? First, you have to look at the new standards to make sure that they're still good standards that we want to endorse, but given that they are, that's another reason to update the Regulatory Guide and based upon its age, for example, in terms of standards and the benefits of going to new standards, again, that's something else that factors into prioritization of it.

And as Andrew mentioned, timing is an issue. For Phase 1, we were mandated to be done by March 2007 which we were. And that was driven primarily because of the regulation that says applicants have to address all the Regulatory Guides that are on the books six months or more before the date of an application. And so that's what drove that particular phase of them when we get those through. There isn't anything exactly like that that's driving this except the Commission express desire that we be done in three years.

To meet the dates and not just the first

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ones, but all of them, requires that sometimes we can't do everything we want, particularly in the first phase, particularly with Regulatory Guide 1.112 where the GALE Code is referenced. There were things that we could do that would improve the Reg. Guide, things that we could not do in that time frame.

Those that we could do, we did. And we came to you all and presented to you and you wanted the GALE Code updated. We do too. We've been working on getting together to get the code updated. But that's not something that we could by March 2007, but we decided that the improvements that we could make would be of sufficient benefit to applicants that we would go ahead and issue that anyway and we would take it on as an action that we would update the GALE Code or whatever is appropriate. And so that Reg. Guide hasn't fallen off the plate. It is still there, but because of the time it takes to do this work, it's not something that's coming up immediately.

And this is the same type thing that will happen in other Regulatory Guides and it will continue to happen. When we're done, if we could be done in three years, the process just doesn't quit because there always will be new standards. There's always

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going to be things that are going to -- new ways of doing things, reasons to update the Regulatory Guides.

And so we see this more of a continuing process where we're going to update to where we can now, but either because of something we know now or something we'll know later, we need to go back and do it again.

Next slide, please.

In the cross-cutting, what we did was we looked at each Regulatory Guide and we looked at it for form and technical content, the consistency within the Guide. But in addition to that, we look at the Guide and its references and we look at all the Regulatory Guides primarily on either a person's expertise, but mostly on the titles of the Guides, where they were located like in Division 8, we'd look for all the Division 8s. For Guides that look like might have something similar in common with the Guide that we were particularly looking at.

The purpose for this was to make sure that what we were producing in the Guide that we were looking at was consistent with what the other Guides said or whether it was something that the other Guides needed to be updated to now. For example, if we were looking at a particular Guide and were looking to

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updating one aspect, if that same thing shows up in a different Guide, then we need to update that one at the same time. We didn't find that, but we looked for it to see if that was the case.

Let's see. Not in 8, but when we did look at it for Division 1, we found Reg. Guide 1.128 which is installation and design of lead storage batteries.

Well, that was one we saw that needed updating. We found 1.129 which wasn't really very far away, but it was maintenance and testing, replacement of lead storage batteries. So we said hey, if we're going to do one, we're going to do the other. And so we did both of those at the same time. These are the kind of things that we were looking for, the ones that we needed to piggyback and carry along with us.

We also looked for inconsistencies. We did find a few small things, but we looked for the larger ones also in terms of as an example. There's a Reg. Guide 1.60 which is design response spectra for nuclear power plants. It's a seismic. We were creating Reg. Guide 1.208 which is performance-based approach for site-specific earthquake ground motion. They're a similar topic. Are they consistent? Well, in this case the answer is no. They were

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intentionally not consistent because we're going to a different approach.

So we looked to find consistency and if we didn't find consistency we addressed it in terms of is it acceptance, is it the way to go, is it something we need to do now? Or maybe it is something we need to think about. We have a tracking system that tracks all the Regulatory Guides and where they are, not only what phase and who's doing what to them, but we also try to keep track of things that we see that might need to be looked at in the future.

An example of this is Reg. Guide 1.97 which is the criteria for accident monitoring instrumentation in nuclear power plants. When we looked at that Guide we said oh, well, you know, Reg. Guide 1.7 which is the control of combustible gas concentrations in containment is going to use that information. It's not critical, but when we get to 1.7 we want to make sure that we're consistent with 1.97. So that's something that we put in our tracking system so that when we go to 1.7, we have these notes that we carry along with us so that we can be consistent.

So our process then basically is not only

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a top down, but we're looking laterally along at the same time.

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So as a result, well, that didn't show well. Anyway, the prioritization is a combination of the assessments that we've done with the Regulatory Guides and staff availability, the availability of information to update the Regulatory Guides, the availability of resources, however you wanted to look at it. Those two aspects come together to actually refine our prioritization. And that's basically how we've done it and how we continue to do it.

MS. VALENTIN: And I also just wanted to close with updating you on some current activities. We awarded a commercial contract in early August. There were two awardees and that was a large effort that finally came to fruition and we're at the point where we're drafting the task orders that will be competitively bid to the two awardees.

We're also still having the on-going interactions with the program office, as John mentioned. It is a living system, sometimes daily, sometimes weekly. We have negotiations when we're moving Reg. Guides in and out or not a whole lot of

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change in lead responsibility, but there's been some of that as well, due to individuals, maybe going to different offices and things like that.

The large effort that I mentioned at the beginning to withdraw Reg. Guide obviously the NRC is not going to withdraw Reg. Guide without sufficient information and a series of questions being answered to go out in the Federal Register notice. So there are two people on my staff that have been actively working on about 35 to 40 Reg. Guides that have been identified for withdrawal and working with the lead individuals and offices and others to make sure that these questions are answered and to prepare a Federal Register notice.

And finally we maintain weekly updates on the website, both there's a Research internal website and an external website where status of Reg. Guides or listings, things have moved from one place to the other are put on the website.

That's the end of our prepared remarks and we'll take any questions that you have.

CHAIR RYAN: Great. Thanks a lot. Let me tell you a little bit about what we did. We took -- we divided up the Divisions among us and looked

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through them from a technical content and currency, sort of pattern and found some trends and again, let us start with the fact that we really appreciate the fact this is a huge task and Rome wasn't built in a day, so we appreciate the fact you've got a lot to do.

The patterns I think, at least I saw in Division 8 and I'd ask my colleagues to chime in on what they saw are that in a lot of cases technology is referred to that's out of date. I don't know how much we need a film dosimetry Reg. Guide any more to tell you the truth. I mean there is some film used here and there, but that's one that's just out of date and there are many others, uranium bio-assay and some of the others. An interesting one that was reactor-related was the dose -- occupational radiation dose assessment in light water reactor power plants which had basically a table that you filled out as you calculated numbers, I'm guessing, based on the fact that it was written in '79 when you calculated it with a slide rule. So that one is out of date. The trouble with technology standpoint.

You touched on the second major area which is Reg. Guides that are out of date because they refer to either an ANSI standard or an ANSI ANS standard or

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some other standard that also woefully out of date. When I saw our standard reference in the Reg. Guide I went and looked in ANSI and I said what is the current version of that standard and often there's 15 or more years between the one that's referenced and the one that's currently on the books. And of course, that doesn't say the one currently on the books is correct and up to date for the purposes of you putting it in a Reg. Guide, so I appreciate that as well. But so I think there's -- that was sort of the second area.

And the third was more of a question than an observation and that is if there is a sufficient industry standard I would ask why do we need a Reg. Guide?

MR. RIDGELY: A lot of Reg. Guides now are turning to referencing the industry standards so there is a move for at least in some Reg. Guides we do that.

CHAIR RYAN: And I would say maybe a move that needs a few more steps, instead of writing a Reg. Guide that interprets the standard, just use the standard and not try and make a separate Reg. Guide, because you can always keep your eye on that standard is if it updated or ages, you can say well, we're going to have now write a Reg. Guide because that

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standard is out of date or we're not happy with it or we want to do something else. But the idea of endorsing industry consensus standards is something that we ought to think about.

MR. RIDGELY: I think we are doing that and the ones that I am a little bit familiar with turns out those are PRA standards.

CHAIR RYAN: Right.

MR. RIDGELY: Generally it turns out that we're happy with a lot that they do, but there are things in there that we aren't happy with and so we need that Reg. Guide again to say okay, you can do this, but these are the problems with that standard. These are the things you have to do differently or address in some fashion.

MS. VALENTIN: I think the best example is like for example on the Reactor side the ASME Section 11 and Section 3 Reg. Guides. There are several exceptions that are taken to those Reg. Guides to these standards that go out.

CHAIR RYAN: Sure.

MS. VALENTIN: So the Reg. Guide, you know, kind of outlines what the NRC would accept and then details what the NRC would not accept.

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CHAIR RYAN: I appreciate that.

MR. BAHADUR: I believe we are saying the same thing. The Agency has encouraged consistent standards for a long, long time. Actually, our staff is very active in all the subcommittees where these standards are developed.

What happens is when you look at the regulatory structure where we start with a rule and then we say there are a number of ways by which this rule can be met. And one approach could be what the staff puts in the Regulatory Guide which goes to the licensees and also provide guidance to the NRC staff.

Similarly, one notch down, NUREG, which gives you some sort of an approach, not necessarily a preferred approach, but one approach which is there. So there are various ways by which the licensing staff can communicate to licensees what is expected out of them in order for them to meet the rule.

When the Agency endorses a consensus standard, one way of letting the industry know that we have done that is a Reg. Guide. There are cases where we have taken the standards and wholesale endorse it in a two-page Reg. Guide.

CHAIR RYAN: There you go.

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MR. BAHADUR: But we still have to do that.

CHAIR RYAN: Oh, no I understand that format.

MR. BAHADUR: And as the Chairman knows, the process is it goes out for public comment. We allow the public to see what the Agency is going to be doing. And then once we receive the public comment then we make that as a final decision.

CHAIR RYAN: Sure.

MR. BAHADUR: Whether to say it's a Reg. Guide or rulemaking. So yes, I understand where the Committee is suggesting this -- we are looking at some of these consensus standards. The problem -- not the problem, but the longer time it takes when we find an exception, because then we start writing these tables of consideration as to why we're considering this standard being acceptable, but there are exceptions to it and that's where we are.

We are looking at the consensus of standards. That's one of the approaches as well for revising the Reg. Guides.

CHAIR RYAN: And I appreciate that. Thanks. That's a good explanation. Again, by

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endorsing a consensus standard I think we all recognize there has to be a public and formal process to bring that under the direction that the Agency wants to give the licensees.

Just a couple of technical points on Division 8. I think it's fair to say that a lot of the Guides are really out of step badly with the current dosimetry calculational methods. There are some that refer to old dosimetry where they use -- instead of total effect of committed dose, it's annual dose for internal emitters and other things. So it's woefully out of date in a lot of areas technically. Actually, many of them refer to the old numbering system in 10 CFR Part 20.

With that being said, the technical basis is wrong for current dosimetry. Even though it's not explicit in some of them, unless you know the calculational methods, you don't know they're out of date.

I just raise the question if licensees, particularly newer ones are following those Guides, they're technically incorrect. So that's an issue that needs some attention I think sooner rather than later that the system of dosimetry that we use by

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regulation in Part 20 is woefully out of step with many of what the Reg. Guides call for. So that's one that needs some attention.

And I think it's part of the foundational technical basis whether it's calculational method for an internal dose or things like the GALE Code that we've talked about is a risk in writing an updated Reg. Guide without checking to see if those fundamental tools are properly supporting what you're writing. And you made the decision to go ahead with the 1.112 through 5 or 1 through 5?

MR. RIDGELY: 1.112.

CHAIR RYAN: Yes, 1.112 and on up, but I think there's a risk there. That code is hard wired with numbers that may or may not be applicable in new reactors. We haven't seen any evidence that we know they are or they aren't.

And again, there are ways around that, given the time schedule. You need to advise folks that's the case. If they want to look at those values they certainly have the option maybe to change them and update their calculations and so forth. But let me ask our other Members that looked at various sections if they have any additional comments along

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these lines.

Professor Hinze?

DR. HINZE: Well, I looked over those in Division 4 and 6 and found much the same kind of problems that Mike is referring to in terms of being up to date.

Let me try a little different tack here. I'm curious about your criteria for making decisions and for example, your criteria in making a decision whether you withdraw a Regulatory Guide and in its place develop a new one or just change the current regulation, what kind of criteria do you have established to make those decisions?

MS. VALENTIN: There are series of specific questions that were sent out systematically to all of the lead program offices, for example, has this Reg. Guide been superseded by updated guidance in a NUREG? Are licensees still using this information, those types of specific questions.

And that's why the negotiation is so I guess tedious back and forth because we want to make sure that we have the cognizant staff working on this in coordination with the Reg. Guide Branch.

DR. HINZE: It seems to me these two

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approaches, you can withdraw and develop a totally new one or you can change. I don't hear how that criteria is really getting in there.

MS. VALENTIN: What I've seen mostly in the ones that have come through my desk, there are NUREGs that either consolidate some of this information that update it, so primarily it's been NUREGs that are replacing it. I haven't seen anything yet that says there's a new Regulatory Guide that replaces this particular Reg. Guide. There may be some that are existing that are updated, but it hasn't been withdraw this and we'll do a new one, so far that I've seen.

DR. HINZE: My questions are really predicated on the fact that I think that in some of the Reg. Guides I looked at you'd be best off just withdrawing them and starting afresh, modifying them is just going to confuse things, at least in my view.

Let me ask you, who has the final say? You're obviously a very talented group, a very knowledgeable group, but who has the final say regarding the technical basis that is included in the Regulatory Guide? Who has the final word on that?

MR. BAHADUR: There are -- there's not one

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approach that could fit all the Reg. Guides. There was one time, historically, when all of the rulemaking functions, including the development of Reg. Guides was in the domain of the Office of Research. The policy of the Commission took place about eight years back and it could be ten or six, I don't exactly remember, at which time all the rulemaking functions were given back to the Licensing Offices. So NRR became responsible for the rulemaking related to power reactors and NMSS became responsible for the materials. Of course, with reorg. of NMSS and FSME so accordingly they will share.

At that time, the function of developing the Reg. Guide remained with the Office of Research. However, the technical development did not go wholesale to the Office of Research. It depended on a particular issue, so there were some issues where the technical basis was developed in the licensing office and then there were others more generic in nature where the Office of Research continued to develop the basis.

DR. HINZE: So it's the best possible people to handle the problem?

MR. BAHADUR: It's based on the seat of

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the pants experience and as you said, the best possible people. If the licensing office was dealing with the operating reactors, were getting the information directly which could then make them change a Reg. Guide or modify a Reg. Guide. That's how the talent was used.

Now that --

DR. HINZE: It seems to me there's a chance there for something to fall between the cracks because the most knowledgeable person may be totally on to something else that they're very much involved with and they don't have time for this. So who --

MR. BAHADUR: There's always a chance for such issues to fall through the cracks. The only thing we can do is to provide certain screens. One of these screens is a CRGR. CRGR takes care of all the initiatives taken by the staff and they collectively, which CRGR is a committee that answers to the EDO and it consists of the Deputy Office Directors of the four licensing offices, Office of Research and NSIR. They collectively look at any initiative that is either proposed or in the process by the staff members.

It's considered that once a particular action has gone through their office management, it

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has mete through the section leader, the branch chief, the division director and the office director. So that's one screen right there. If anything fell through that, then it comes to the CRGR and the CRGR collectively looks at it and sees whether everything is tight.

And then we have --

CHAIR RYAN: Excuse me, that's where public comment comes in in that process.

MR. BAHADUR: Right, and then it goes, once we have gone through the CRGR and the EDO has said okay, then it goes out for public comment at the same time it goes to the Commission. But when it goes to the Commission, that's a time when the Advisory Committee gets in the equation because then they advise to the Commission.

So there are a number of screens by which we are trying to see the thing falls through the crack, but I'm not saying nothing has fallen through the crack.

DR. HINZE: That's very helpful, Sher.

MS. VALENTIN: And also too, to add to the question about resources or people not having time, maybe the best person that worked on it when it was

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first initiated, that was the purpose of the commercial contract. The two awardees had to look at all the Reg. Guides and in their proposal response tell what expertise they had with all these Reg. Guides, so the two awardees have experts. All the task orders will be competitively bid. If one company comes out better than the other, then they would be awarded the task of working on technical bases.

And of course, the lead offices that have responsibility for it have to be in the mix to look at what comes back, make sure it's correct, but it is a real problem that there are resource issues with the offices. So that was the purpose of the commercial contract.

DR. HINZE: Let me ask a final question and that relates to the interface between ISGs, between interim staff guidance and Reg. Guides. I understand that there are some interim staff guidance that's been around for some time. It's hardly interim.

Is there a -- if I understand correctly, the Interim Staff Guidance is not developed in your group. And I'm wondering, is there a process by which one looks at the ISGs to see if they should become

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Reg. Guides or some way of evaluating whether the ISGs should be terminated? Am I asking the wrong people?

MS. VALENTIN: I don't know for sure that in every case that has happened. I can give an example where I talk to my counterpart in NRO and this particular branch chief is on top of what needed to be fed to us to give us the information we needed for specific Reg. Guides. Whether that happens in every case, I can't honestly say. But we really have to defer to the program offices and the lead technical folks and their management to make sure they're rolling in everything.

What we are doing in our tracking system is trying to make a link, for example, SRPs that need to be tracked at the same time as we're looking at particular Reg. Guides. So we try to put as much information as we can and to go back and look at, but the specifics on the Interim Staff Guidance, I can't answer across the board.

DR. HINZE: It may be Interim Staff Guidance that really should be Reg. Guides and for one reason or another it has not been -- it's not taken that form.

CHAIR RYAN: Thank you, Bill.

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Allen?

VICE CHAIR CROFF: Yes.

MR. BAHADUR: If I may just add one sentence.

CHAIR RYAN: Yes.

MR. BAHADUR: The way I classify in my mind the purpose of the Reg. Guide is mostly to communicate the Agency's position to the licensees. ISGs are meant for both internal and NRC staff guidance as well -- so the licensees know what the staff has been told.

So it's slightly a different thing. However, there's a possibility that you can take an ISG, incorporate all that into a document that can extend to the licensees in the form of a Generic Letter, Information Notice, NUREG and the Reg. Guide.

DR. HINZE: Much of the information that relates to how the staff is being told to do a certain thing is of extreme importance and certainly guidance could provide guidance --

MR. BAHADUR: Sure. That's an excellent observation.

DR. HINZE: Thank you.

CHAIR RYAN: Thank you. Allen?

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VICE CHAIR CROFF: Yes, I looked at Division 3 which is fuels and materials facilities. I guess a few additional observations, there were I'd say a handful of Reg. Guides in there that were still out for comment, in other words, they never had gone final for two or three decades. I think maybe that's at least symptomatic.

I observed in going through Division 3 and in your discussion you noted, there are a lot of closely-related Reg. Guides, the topics are very similar. I'd like to suggest that consolidation of those is probably a good idea to help prevent the, let's say the interface problems or consistency issues. I think it's in one Reg. Guide, less boiler plate and more consistency might be a more natural result.

Also in Section 3, there were a number of design guides where it was specifying sort of how to go about designing some particular part of a reprocessing plant or something like this. That might have been okay in the '70s when -- well, at the time the government was sort of trying to encourage this kind of thing, but I think maybe at this point the NRC maybe shouldn't be in the business of trying to

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specify how to design a reprocessing or a refabrication plant, letting the applicant do what they will and the NRC reviews it as usual.

Those are some additional observations. When I go back and sort of look at the broad sweep of all this, I think if I can use the phrase root cause of all of this, is simply that many of these things are just old and they haven't been looked at for decades and all of these specifics were highlighting sort of stem from that.

And that raises the thought in my mind, you're going through this process to try and update them, but the need for some kind of a periodic review of the Reg. Guides over the long haul, in other words, let's not wait for another three decades and get in the same difficulty in trying to come up with some way to make that happen and make sure it happens.

I don't have a panacea for it or a specific answer, possibly considering having Reg. Guide sunset, in other words, a Reg. Guide is valid for 10 years at which time it either needs to be updated and reaffirmed or it ceases to exist. It's just an idea and there may be other ideas, but somehow I feel the need for all this and while you're going

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through and doing the specifics is to look at how do we make sure we don't get here again.

With that, I'll just offer those comments.

MR. BAHADUR: There are some very useful comments that you made, Dr. Croff. One thing I'd like to observe here and it's quite likely that all of you already realized that. Everything the Agency does depends on the resources available for that.

Reg. Guides, all of us know that they're old. A lot of them are old and not used, but to take a Reg. Guide which is 30 years old or 25 years old and simply say it's old and outdated, so let's discard that is not so easy because some of the licensees may still be using that as their license condition.

So while we can take the Reg. Guide, we can advance the technology and issue a new Reg. Guide, but to take the old Reg. Guide off the book is like you said, Rome was not built in whatever days. It could not be demolished in so many days either. To demolish a certain thing also takes equally long time.

You have to go through the record to see which licensees are actually using it for their Reg. Guide. Where in the inspection procedures have been incorporating those things which are in the so-called

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outdated Reg. Guides? It's a long and drawn out procedure. I'm not saying it's not important. However, it's termed as housecleaning because it does not melt the core.

The first and foremost principle of spending the resources for this Agency is the safety of the nuclear plant, safety of the nuclear facility.

Now the second and a close second is the security and then this intent could be housecleaning. When the resources are there, yes, I think it will be an excellent idea and to that effect the staff went with their proposal to the Commission. Chairman Diaz looked at the proposal and said yes, that's a good idea, take care of all the Reg. Guides, which is what we're doing right now.

Taking care alone simply because the Chairman has indicated take care, it doesn't take care by itself. You need the resources to follow that. So we are doing our best. We keep on putting in the office priorities, when the money comes through we start that.

The objective of this particular briefing today was to give you the idea that there's a process which is in place, which is going to do all these

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things, is that a sound process? And I'm hearing some very useful suggestions and we're going to go back there and we're going to tweak our process.

CHAIR RYAN: One thing we'll do just as information to give back to you is when we write our letter, we're going to try and produce a spreadsheet that will give every Reg. Guide by title and it's original publication date and if we have specific observations about a Reg. Guide, for example, the examples I gave, it's out of step with the current dosimetry or whatever it might be, we'll offer that back to you and maybe that will give you some additional insights and patterns that you might back to factor into your planning. You may have thought about already. Maybe it's a different twist with different folks offering you some insight.

And again, I think we will take the tact that we sure recognize this is a big job. It wasn't - - I mean you're working away at a problem that's out there, so it's certainly not criticism of what you're doing, but maybe some additional insights that might help you rethink or reevaluate or reprioritize as you go along and start working with your contractors and doing other things like that.

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Don't take away what we're saying today as criticism of your efforts, but just helping you recognize some of the details of the problem.

MR. RIDGELY: I would like to add a couple of points. We keep talking about the fact that the standards' role, the Reg. Guides' role, but a Regulatory Guide is one way that the staff has found acceptable to meet a regulation. So one of our criteria in prioritization is what is in there now unacceptable? Is there a flaw in there that makes it not acceptable and it raises it up.

CHAIR RYAN: I think in some of those we're going to answer the question yes.

MR. RIDGELY: I'm not arguing that. I'm just saying that just because it's old, it does not necessarily mean that it would be unacceptable today to follow that approach.

CHAIR RYAN: Sure.

MR. RIDGELY: It may be overly conservative.

CHAIR RYAN: And Radiation Warning 7.8.1 hasn't changed. That's just fine. All you have to do is say it's been reviewed, it's okay.

MR. RIDGELY: And we have already had

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several discussions about how do we keep ourselves from getting into the same place again where time has elapsed and all the Reg. Guides have aged and no one has looked at them. And we've talked about different approaches that we might be able to take to go back to revisit them to say are they still appropriate, are there new standards out there we should be looking at, but that's not been our focus, but we have been thinking about it.

CHAIR RYAN: Right, in our last few minutes let me get comments from Dr. Weiner and Dr. Clarke and go from there.

DR. WEINER: I looked at the Division 7 Transportation Reg. Guides and they fall very neatly into three groups. There is a group of Reg. Guides that were issued between 1974 and 1978 and these are very, they're one and one and a half page guides. They generally refer to an ANSI standard. Just coming off of what Sher just said, and what you just said, John, if they're still in use, they may be old. There's no particular problem with keeping them. The suggestion I made is that ANSI standard still current? Is that still current practice?

I'd suggest and this would be in a

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spreadsheet, just looking at those to see if they're still useful.

Then there are a couple of Reg. Guides that were issued between 1989, well, one in 1989 and two in 1991. The 1991 ones refer again to an ANSI standard for materials tests, for testing package materials, testing the fracture, resistance of packing materials. And I think that one needs to be looked at for its currency.

The 1989 one is again a leak testing one and again, these are -- they're newer, but the question is are they still current? There is a newer Reg. Guide that deals with how you do structural analysis which needs to be updated because we have computer programs now, finite element analysis is used and it's not even mentioned in the Reg. Guide and certainly that should be updated.

The Reg. Guide that is the format and content guide for applying for a license, for package certification, looks to me to be fine. It's a very new one anyway and that's the end of 7. I think working with FSME, and they are in contact with the manufacturers, if the manufacturers still use even the old ones, there's no particular problem, but they

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should be reviewed for currency, so only that one real update that I could point to.

MR. BAHADUR: Thank you for this analysis. We'll definitely use it.

DR. CLARKE: I was spared from this analysis, so I don't have any observations.

(Laughter.)

But I do have a couple of general questions, if I could. In one of your earlier slides that had the status, I think it's page three. It has been mentioned before, this is a monumental effort and we certainly compliment you on it.

Phase 4 new. What do you mean by new? Certainly you're not deferring all new Reg. Guides until 2010?

MS. VALENTIN: No, no, no. Phase 4 means any time we've ever communicated with the Commission, there's only been Phase 1, 2, and 3. Phase 4 is a new phase because of the necessity to move some of the Reg. Guides out beyond Phase 3.

DR. CLARKE: Okay.

MR. RIDGELY: Remember, it's date-driven. The phase number is date-driven.

MS. VALENTIN: Right. So anything that

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couldn't come to us in time to be issued by December 2009 is in this new Phase 4.

DR. CLARKE: Phase 1 is the high priority Reg. Guides.

MS. VALENTIN: Yes.

DR. CLARKE: Needed through reactor application review.

MS. VALENTIN: Yes.

DR. CLARKE: But I can assume that Phases 2 and 3 would be other Reg. Guides.

MS. VALENTIN: Yes, it goes beyond.

DR. CLARKE: How many Reg. Guides are you talking about, looking through all these phases?

MS. VALENTIN: There's about 498 Reg. Guides that have to be looked at, dispositioned and assessed in some form or another. Some of those are, you know, the ones that were identified for withdrawal, but total is approximately 500 Reg. Guides.

MR. RIDGELY: I would like to make a clarification. The Phase 1 is focused on new reactor applications. But that does not mean that in Phase 2, 3, and 4 they're not equal and applicable. They weren't identified as being most critical, most need

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for being updated for the new reactors.

DR. CLARKE: I understand. Thank you.

CHAIR RYAN: Okay, any other questions?

MR. WIDMAYER: I have one, Mike.

CHAIR RYAN: Yes.

MR. WIDMAYER: On your last slide you've talked about, the first bullet talked about the task orders being developed for so-called first group of Reg. Guides. I was wondering what's that referring to? I know we just talked about the phases. I was wondering what is the first group of Reg. Guides? What does that mean?

MS. VALENTIN: The first group means the ones that we've identified to go to the contractor first, for example, what we're trying to do to gain efficiency is put Reg. Guides together and task forces. Each has to be competitively bid with two companies. So we're just drafting task orders as we get requests for contractor support. So whatever first batch is going to go to the contractor, that's what we mean by first group of Reg. Guides. It's not a Phase 1 or a Phase 2.

MR. WIDMAYER: What have you used to prioritize this first group of Reg. Guides going --

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MR. RIDGELY: It's not really prioritize, but it's as we are asked by somebody that they need technical assistance in developing their technical basis. They give us the information they need to give to a contractor. We turn it into a task order and then the process is to go and issue it for bidding.

MR. BAHADUR: It's on a need basis.
It is on a need basis.

MS. VALENTIN: But we do have the option, say somebody comes in later that has a more critical need, we do have the option with the contractors to say okay, we need you to move work up on this particular task order so we do have flexibility.

MR. BAHADUR: Perhaps we can talk off line. Before I close, I'd like to give you more news and that's Office of Research is in the process of reorganization and we are going to go back to three divisions starting October 1. It's quite likely next time you hear about the Reg. Guides I might not be the person to present to you.

(Laughter.)

It is also likely that when you hear about the Waste Management Research I might not be the person in front of you because I'm very sure my three

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branches are being scattered into the three divisions.

And I do not know where I will be ending. But I really appreciate the support the Advisory Committee has given me for my directorate and I'll see you in the future in some capacity.

CHAIR RYAN: You will be around in some fashion I'm sure.

MR. BAHADUR: I'm sure. You'll find some ways to get me here.

(Laughter.)

CHAIR RYAN: Again, just to finish up we are going to write a letter and we will give you the benefit of the individual Guides that we've taken a look at to give you our insights and it's certainly not intended to be critical, but to help the Commission understand what some of these detailed questions might be, particularly with regard to the content and currency and string that a Reg. Guide has to it to all other foundation documents because we just want to try and identify, as I know you do, where the real priorities need to be to solve those problems for us and then work through the others later on.

MS. VALENTIN: We appreciate that, thank you.

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CHAIR RYAN: Thank you all very much. We'll -- I think our next agenda item is preparation for meeting with the NRC Commission, but I want to suggest that we take a brief 15-minute break here and reconvene at 9:45 for that purpose.

(Off the record.)

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