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NUCLEAR REGULATORY COMMISSION

Title:	Part 53 Risk-Informed, Technol Regulatory Framework for Adva Rulemaking B Subparts A and F	ogy-Inclusive nced Reactors ⁻ Rule
Docket Number:	N/A	
Location:	Video Teleconference	
Date:	May 6, 2021	
Work Order No.:	NRC-1487	Pages 1-188

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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
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4	PART 53 RISK-INFORMED, TECHNOLOGY-INCLUSIVE
5	REGULATORY FRAMEWORK FOR ADVANCED REACTORS
6	RULEMAKING - SUBPARTS A AND F RULE
7	LANGUAGE
8	+ + + + +
9	THURSDAY,
10	MAY 6, 2021
11	+ + + + +
12	VIDEO TELECONFERENCE
13	+ + + +
14	The meeting was convened via Video
15	Teleconference, at 10:00 a.m. EDT, Bob Beall,
16	Facilitator, presiding.
17	
18	NRC STAFF PRESENT:
19	BOB BEALL, Office of Nuclear Materials Safety and
20	Safeguards - Rulemaking Senior Project Manager
21	& Meeting Facilitator
22	JOHN SEGALA, Chief, Advanced Reactor Policy
23	Branch, Office of Nuclear Reactor Regulation
24	(NRR)
25	

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1	JORDAN HOELLMAN, Project Manager, Part 53
2	Working Group Member, NRR
3	BILL RECKLEY, Senior Project Manager, Technical
4	Lead, NRR
5	NANETTE VALLIERE, Senior Project Manager,
6	Technical Lead, NRR
7	MOHAMMED SHAMS, Director, Division of Advanced
8	Reactors and Non-Power Production and
9	Utilization Facilities (DANU), NRR
10	AMY CUBBAGE, Senior Project Manager, NRR
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1	P-R-O-C-E-E-D-I-N-G-S
2	(10:01 a.m.)
3	MR. BEALL: Good morning. I want to
4	welcome everyone, and thank you for participating in
5	today's public meeting to discuss the risk informed
6	technology inclusive regulatory framework for advanced
7	reactors, or the Part 53 rulemaking.
8	My name is Bob Beall, and I'm from the
9	NRC's Office of Nuclear Materials Safety and
10	Safeguards. I'm the project manager for the Part 53
11	rulemaking and will be serving as the facilitator for
12	today's meeting.
13	My role is to help ensure today's meeting
14	is informative and productive. This is a comment-
15	gathering public meeting to encourage active
16	participation and information exchange with the public
17	to help facilitate the development of the Part 53
18	rulemaking.
19	The feedback that the NRC receives today
20	is not considered a formal public comment, so there
21	will be no formal response to any of today's
22	discussions.
23	Once again, we are using Microsoft Teams
24	to support this public meeting on the Part 53
25	rulemaking. We hope the use of Microsoft Teams will
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1	allow stakeholders to participate more freely during
2	this meeting. Slide 2, please.
3	The agenda for today includes NRC staff
4	discussions on four topics related to Part 53
5	rulemaking. Topic 1 will be the discussion of the
6	preliminary proposed rule language for Subpart A,
7	General Provisions.
8	Topic 2 and 3 will be the discussion of
9	preliminary proposed rule language for Subpart F,
10	Requirements for Operations.
11	One part of Subpart F will be Section
12	53.700, Operational Objectives and Controls on
13	Equipment. And the other part will be Section 53.800,
14	Programs.
15	The last topic will be an open discussion
16	about the previously released Part 53 subparts. We
17	will also have a 45-minute lunch break around 12:30
18	p.m. today and have at least one 15-minute break this
19	afternoon.
20	Please note that, due to the number of
21	topics and the expected discussion of each topic, the
22	start time for Topics 2, 3 and 4 may need to be
23	adjusted during the meeting. Slide 3, please.
24	I now would like to introduce John Segala.
25	John is the branch chief of the Advanced Reactor
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1	Policy Branch of the Office of Nuclear Reactor
2	Regulation.
3	John will give the opening remarks for
4	today's meeting. John?
5	MR. SEGALA: Thank you, Bob. Good
6	afternoon. Consistent with Nuclear Energy Innovation
7	and Modernization Act, we're committed to developing a
8	technology-inclusive, risk-informed and performance-
9	based regulatory framework for a wide range of
10	advanced reactor designs and publish the final Part 53
11	Rule by October of 2024 in accordance with the
12	Commission's directive schedule.
13	We are committed to a regulatory framework
14	for advanced reactors that achieves the goals of the
15	Commission's advanced reactor policy statement and
16	NRC's principles of good regulation.
17	We are having extensive stakeholder
18	engagement where we release preliminary rule language
19	to solicit feedback to better inform the staff's
20	proposals and to ensure a shared understanding of what
21	will be included in the final rule.
22	As we are considering changes to the
23	previously released preliminary rule language, we want
24	to ensure that we are considering the feedback we have
25	received from all stakeholders including the public,
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1	industry, standard development organizations, trade
2	groups, non-governmental organization and the ACRS.
3	Since we are at the early stages of the
4	rulemaking process, the draft preliminary rule
5	language will remain open for discussions as the staff
6	works towards providing the Commission a proposed
7	rule.
8	Today's meeting is the fifth of many
9	webinars the NRC will be having to provide an
10	opportunity for external stakeholders to provide
11	feedback on NRC's development of the Part 53
12	preliminary proposed rule language for advanced
13	reactors.
14	As Bob Beall mentioned, we will be
15	discussing and seeking input on the Part 53
16	preliminary proposed rule language for the newly
17	released Subpart A, General Provisions, which included
18	definitions, and Subpart F, Requirements for
19	Operations.
20	There will also be an opportunity to
21	discuss previously released subparts. We are looking
22	forward to having discussions today and hearing
23	feedback with you. Thank you.
24	Bob, I'll turn it back over to you.
25	MR. BEALL: Okay. Thank you, John. I
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1	would now like to introduce the NRC staff who will be
2	leading the discussions of today's topics: myself, as
3	the rulemaking project manager and the meeting
4	facilitator and Jordan Hoellman, Bill Reckley and Nan
5	Valliere from NRR.
6	If you are not using Microsoft Teams to
7	attend the meeting and you would like to view the
8	presentation slides, they are located in the ADAMS
9	excuse me, NRC ADAMS document database, also on
10	regulations.gov.
11	And I have placed a link to the slides in
12	the Teams chat window for today's meeting. The ADAMS
13	accession number for today's presentation is
14	ML21125A161. Next slide, please.
15	The purpose of today's meeting is to
16	exchange information, answer questions and discuss the
17	Part 53 rulemaking. This is the fifth of a series of
18	public meetings with the NRC staff to discuss various
19	topics related to the Part 53 rulemaking.
20	Today's meeting will focus on the
21	preliminary proposed rule language for Subpart A,
22	General Provisions and two sections of Subpart F,
23	Operational Objectives and Programs.
24	In addition, we'll be discussing the
25	previously released Part 53 preliminary proposed rule
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1	language. I've also placed a link in the Teams chat
2	window for this meeting to these subparts.
3	This is a comment-gathering public
4	meeting, which means that the public participation is
5	actively sought as we discuss the regulatory issues.
6	Because of the number of attendees, we may
7	need to limit the time for an individual question or
8	discussion on a topic to make sure everyone has a
9	chance to participate. After everyone has a chance to
10	ask questions, we will circle back and allow people to
11	ask additional questions, if we have time.
12	As I mentioned before, we're using
13	Microsoft Teams for this public meeting. Today's
14	meeting is using a workshop format, so the number of
15	formal presentations and the corresponding number of
16	slides have been reduced to allot more time for open
17	discussion on the various topics.
18	We will also require this will also
19	require all of us to continuously ensure that we have
20	our phones on mute and were are not speaking over each
21	other.
22	To help facilitate the discussion during
23	the meeting, we request that you utilize the raised
24	hand feature in Teams so we can identify who would
25	like to speak next.

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1	The staff will then call on the individual
2	to ask the question. The Raised Hand button, which is
3	shaped like a small hand, is along the top row of the
4	Teams display area.
5	You can also use the chat window to alert
6	us that you have a question. Please do not use the
7	chat window to ask or address any technical issues
8	about the Part 53 Rule.
9	The chat window is not part of the
10	official meeting record and it is reserved to identify
11	when someone has a question or for handling any
12	meeting logistical issues.
13	To minimize the interruptions, the staff
14	will call on participants who have used the raised
15	hand feature or chat window to identify when they have
16	a question or comment.
17	If you joined the meeting using the
18	Microsoft Teams bridge line, you may not have access
19	to all these features. If you would like to ask a
20	question or provide a comment, you would need to press
21	the Star 6 to unmute your phone.
22	The staff will pause at the end of each
23	topic to ensure all participants have an opportunity
24	to ask a question before moving on to the next topic.
25	After your comment has been discussed,
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1	your phone line will be muted again. If you would
2	like to ask additional questions on a future topic,
3	you have to press Star 6 to unmute your phone.
4	If there is a particular topic you would
5	like to discuss, please send me an email after the
6	meeting and we'll try to include it in a future public
7	meeting.
8	This meeting is being transcribed so in
9	order to get a clean transcription and to minimize
10	distractions during the meeting, we ask everyone to
11	please mute their phones when they're not speaking and
12	to identify themselves and the company or group you
13	may be affiliated with.
14	A summary and the transcript of today's
15	meeting will be publicly available on or before June
16	5th, 2021.
17	Finally, this meeting is not designed nor
18	intended to solicit or receive comments on topics
19	other than this rulemaking activity. Also, no
20	regulatory decisions will be made at today's meeting.
21	Please note that towards the end of the
22	presentation there are two slides containing acronyms
23	and abbreviations that may be used during this meeting
24	and a set of backup slides that contain additional
25	information about the Part 53 rulemaking.

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1	With that, I'll turn the meeting over to
2	Nan Valliere who will start the discussion of the Part
3	53 rulemaking today. Nan?
4	MS. VALLIERE: Thank you, Bob. Can we
5	move to Slide 5, please?
6	Good morning, everyone. On Slide 5, we
7	have a slide that we've used in most of our past
8	public meetings on Part 53 and will continue to use in
9	the future.
10	This slide lays out the plan to build an
11	entire regulatory framework in Part 53 from design to
12	construction and operation and eventually to
13	decommissioning.
14	And as both Bob and John have noted today,
15	we will be discussing at this meeting the preliminary
16	rule text for Subpart A on general provisions,
17	focusing on the definitions section.
18	And we will also continue our discussions
19	on Subpart F on operations, focusing today on sections
20	related to controls on equipment and operational
21	programs. Next slide, please.
22	Slide 6 is another of our common slides
23	which is a graphical representation of the NRC staff's
24	plans to work through stakeholder interaction on the
25	subparts of Part 53 to support submittal of the
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1	proposed rule package on the milestone schedule that
2	the staff has provided to the Commission.
3	As the note on this slide indicates, this
4	is a living picture of where we are today. And we
5	will continue to make adjustments as the development
6	of Part 53 progresses.
7	The note also highlights the fact that the
8	continuing introductions of concepts and discussions
9	of preliminary rule language will include a variety of
10	topics that have historically involved specific
11	technical and programmatic specialties.
12	One example of this was the discussion we
13	had last month on the staff's white paper on risk-
14	informed and performance-based human system operation
15	considerations for advanced reactors which will inform
16	our future discussions on staffing levels and operator
17	licensing in Subpart F.
18	We encourage stakeholders to ensure that
19	appropriate subject matter experts are involved in
20	future discussions of rule language for these
21	technical areas to improve our chances of having
22	efficient and effective meetings.
23	And to that end, it is worth noting that
24	we are currently planning to focus the June public
25	meeting on security-related topics.
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1	Now such topics may include physical
2	security, cyber-security, access authorization, and
3	fitness for duty. So you may want to consider who
4	else, amongst your colleagues, should attend that
5	specific meeting.
6	And with that, I'd like to pause here to
7	see if there are any early comments or questions
8	before we move on to the discussion of Subpart A and
9	some of the key definitions we are considering for
10	inclusion in Part 53.
11	Okay, seeing no hands raised or other
12	comments, I will turn the meeting over to Jordan,
13	Jordan Hoellman, who will lead our discussion of
14	Subpart A. Jordan?
15	MR. HOELLMAN: Okay, thanks, Nan. Thanks,
16	Bob. Good morning. My name is Jordan Hoellman. I'm
17	a project manager in the Advanced Reactor Policy
18	branch in NRR.
19	I'm pleased to be here today to discuss
20	our first iteration of the preliminary proposed rule
21	language for Subpart A, General Provisions. You can
22	move on to the next slide, please and to the next one,
23	if that's okay.
24	So Subpart A included the scope,
25	definitions, written communications, employee
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protections, completeness and accuracy of information, exemptions, combining licenses, jurisdictional limits, attacks and destructive and information acts, collection requirements.

We are intending to develop Part 53 with largely no cross-references to Part 50 or 52. In some cases, this will require copying and pasting the Part 50 or 52 language, where appropriate, into Part 53 instead of using cross-references.

And then this approach will apply 11 throughout Part 53. So in developing Subpart A, we've understood that there are pros and cons to this approach. And, but our current thinking is that if is self-contained, there would be Part 53 less 15 confusion about the applicability of requirements in Parts 50 or 52. 16

from a usability standpoint, 17 And our 18 approach would mean Part 53 applicants and licensees 19 would not need to flip between the different parts to see the applicable requirements. And this would mean 20 21 that Part 53 would be a one-stop shop, the optional 22 licensing framework for advanced reactors.

So we are interested in our stakeholders' 23 feedback on this approach, but I please ask, as I qo 24 25 through the presentation, you can please note your

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1	questions or concerns but we'll wait until we get to
2	the discussion portion of the meeting to open it up.
3	So as you may have noted, from looking at
4	Subpart A, this iteration reproduces Part 50 in a lot
5	of places and currently includes bracketed reference
6	to existing requirements in either Part 50 or 52.
7	These brackets will be replaced with the
8	applicable Part 53 requirements once those portions of
9	Part 53 are developed.
10	And for future iterations of Subpart A, we
11	will likely develop a discussion table and move some
12	of the bracketed references to that side of the table
13	as we've done for other subparts we've released.
14	In some places, rather than indicate
15	references, the brackets are intended to capture
16	things that would have been included in a discussion
17	table like you've likely seen in the other subparts.
18	And that's intended those brackets that
19	you see are intended to provide an explanation or
20	indicate concepts that are still under development and
21	may be further revised or removed in future iterations
22	as we work towards providing the proposed rule to the
23	Commission.
24	Subpart A was compared to the rule
25	language proposed by NEI in its February comment
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1 letter and addresses largely the same requirements in NEI's proposal which, as I previously mentioned, is 2 largely based on Part 50 requirements. 3 Subpart A will include many pointers to 4 5 other sections of Part 53. And I've already mentioned this, but some specific examples include the emergency 6 7 plan and related submissions and the security plan and related submission's requirements. 8 9 Today, we will focus on the definitions portion of Subpart A, specifically focusing on terms 10 11 that have been discussed in previous meetings related 12 categories to event and structure systems and component classifications. 13 Some of the definitions will need to be 14 15 updated as key terms needing defined are identified or revised as the staff works to produce the preliminary 16 proposed rule language and subsequent iterations. 17 18 You may have noticed that the terms 19 related to fusion are in gray. As you may know, and as discussed in the staff's response to the SRM on the 20 21 rulemaking plan for Part 53, the staff is working to 22 develop options for the regulation of fusion energy 23 systems. The staff assessments of the potential 24 25 risks posed by various fusion technologies and **NEAL R. GROSS**

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1	possible regulatory approaches for fusion facilities
2	is being done in parallel with developing the draft
3	proposed rulemaking package for Part 53.
4	And this work is supporting an options
5	paper that will be provided to the Commission. The
6	draft proposed Part 53 Rule will be developed with the
7	aim of accommodating fusion technologies as much as
8	possible to maintain the flexibility for future
9	Commission direction on the appropriate approach for
10	licensing and regulating fusion energy systems.
11	So I just wanted to make that clear before
12	we move into the specific definitions. So we can move
13	on to Slide 10, please.
14	So on this slide, there's two things I
15	specifically wanted to note. The first is that an
16	advanced nuclear plant or facility, as defined here on
17	the slide, includes one or more reactors and the
18	collection of sites, buildings, radionuclide sources
19	and structure systems and components for which a
20	license is being sought.
21	And the second is that we are currently
22	using the NEIMA legislation definition of advanced
23	nuclear reactor. Other subparts of the rule are being
24	written to refer to the plant and not the reactor.
25	The NEIMA definition does exclude future

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large light water reactors so long as they have significant improvements compared to reactors under construction when NEIMA was enacted, which was January 14th of 2019.

The significant improvements specifically mentioned in NEIMA include additional inherent safety features, significantly lower levels of cost of electricity, yields, greater fuel lower waste utilization, enhanced reliability, increased proliferation resistance, increased thermal efficiency or the ability to integrate into electric and nonelectric applications.

We, as the staff, are considering how to deal with this part of the NEIMA definition to provide the appropriate specificity needed for the rule, this is an area where we are interested in stakeholder feedback, specifically the definition of advanced nuclear plant.

And we're interested in hearing stakeholders' views on the thoughts of the inclusion of large light water reactors in the NEIMA definition and the scope of Part 53.

23 So I know we've heard some comments from 24 stakeholders in the past that the rule should be 25 technology-inclusive and broad enough to capture any

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sort of future plant.

And we've also heard comments that Part 53 Rule should be for passively fail safe designs. So those two views are a little conflicting to some extent. And so, like I mentioned, this is an area where we're still considering how to handle as we move forward with the Part 53 rulemaking.

So we can move on to Slide 11, please. 8 Okay, so Slide 11, this is our current definition of 9 consensus code and standards. 10 It was adapted from 11 ASME and consistent with the National Technology and Act 12 is intended Advancement and to provide 13 flexibility.

The generally accepted modifier used in the rule language is intended to be captured by this definition. The rule language encourages the use of consensus codes and standards as required by the National Technology and Advancement Act.

And so we recognize that there's a variety of technologies and designs as well as stated desire of some stakeholders to adopt standards outside the typical standards development organization.

And so we've talked about this in the past and this includes the international standards organizations and ISO standards and such. So the

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1	intent of this definition is to provide that
2	flexibility.
3	And so the staff is actively reviewing
4	some advanced reactor codes and standards for
5	endorsement. These are intended to be endorsed with
6	any conditions or clarifications in regulatory guides.
7	And this endorsement via the regulatory
8	guide approach is the plan to be continued for future
9	guidance supporting Part 53.
10	And just some examples include ASME
11	Section 3, Division 5 for high-temperature reactor
12	materials; ASME Section 11, Division 2 for the
13	reliability and integrity management programs, and the
14	ASME ANS probabilistic risk assessment standard for
15	advanced non-light water reactors.
16	So we think capture of the acceptable
17	standards and guidance provides the flexibility and
18	increases efficiency by avoiding routine rulemakings
19	related to adopting the revisions of incorporated
20	standards in the regulations.
21	But endorsement of standards in guidance
22	does not provide the same degree of regulatory
23	stability as provided by rulemaking. So we can move
24	on to Slide 12, please.
25	So we included both end state and event
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1	sequence on this slide since these terms are related
2	and reference each other in the definitions. I should
3	note that these definitions are generally adapted from
4	NEI 18-04 or the licensing modernization project.
5	End state is the set of conditions at the
6	end of an event sequence. This definition is intended
7	to include the safe stable language to make it clear
8	that there would be no further event progression
9	beyond the identified end state.
10	And sort of a question or feedback we are
11	interested in hearing is would adding that language,
12	that safe stable language, to that, to the definition
13	of end state be helpful here.
14	Even sequence mirrors the definition in
15	the non-light water reactor probabilistic risk
16	assessment standard. This definition is intended to
17	capture a typical PRA even sequence and provides a
18	lead-in to the next slides that cover the various
19	event sequences defined. So we can move on to Slide
20	13.
21	And so Slide 13 and 14 cover the event
22	sequences that we've defined for Part 53. Normal
23	plant operation covers events that are expected to
24	occur during planned operation or shutdown.
25	Licensing basis events are the collection
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sequences considered in the design 1 of event and licensing of a plant. Licensing basis events are 2 3 unplanned events and include anticipated operational occurrences, design basis accidents, unlikely event 4 5 sequences and very unlikely event sequences. Design basis accidents are used to set the 6 7 functional design criteria and performance objectives for the design of safety-related structure systems and 8 9 components. Design basis accidents are based on the 10 11 capabilities and reliability of safety-related 12 structure systems and components needed to mitigate 13 and prevent event sequences. 14 Within the licensing modernization 15 project, design basis accidents are derived from design basis events but assume only safety-related 16 17 SSCs are available to respond to an event. 18 So in Part 53, the equivalent concept 19 would mean that design basis accidents are derived from unlikely event sequences but assume only the 20 21 safety-related SSCs are functioning. 22 The anticipated operational occurrences, 23 or AOOs, are expected to occur one or more times during the life of a nuclear power plant. 24 An AOO is 25 defined as event sequences which are unplanned with a

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	24
1	mean frequency of 1 times 10 to the minus 2nd per
2	plant year and greater.
3	A00s take into account the expected
4	responses of all SSCs within the plant regardless of
5	safety classification. So we can move on to Slide 14,
6	which is for the discussion of unlikely event
7	sequences and very unlikely event sequences.
8	So unlikely event sequences have
9	frequencies below the frequency of an anticipated
10	operational occurrence. Like an AOO, the unlikely and
11	very unlikely event sequences take into account the
12	expected responses of all SSCs within the plant
13	regardless of safety classification.
14	Within the licensing modernization
15	project, unlikely event sequences would equate to
16	design basis events. Both the design basis events and
17	the licensing modernization project and unlikely event
18	sequences in Part 53 have a frequency range between 1
19	times 10 to the minus 2nd and 5 times 10 to the minus
20	4th per plant year with an accounting for
21	uncertainties.
22	Very unlikely event sequences have
23	estimated frequencies well below the frequency of
24	events expected to occur in the life of an advanced
25	nuclear plant. Within the LMP, this would equate to

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beyond design basis events. 1 Both the beyond design basis events in the 2 LMP and very unlikely event sequences in Part 53 have 3 a frequency range between 1 times 10 to the minus 4th 4 5 times 10 to the minus 7 per plant year, 5 and accounting for uncertainties. 6 7 So we can move on to Slide 15, please, where we are discussing the SSC classifications. 8 9 So, should note that these terms are under we development and may be revised in future preliminary 10 11 proposed rule iterations. 12 But, we wanted to provide an initial definition, which will hopefully help clarify the way 13 have been discussed throughout 14 these terms 15 discussions on Subparts B and C. So safety related are SSCs and human 16 actions that warrant special treatment and are relied 17 18 upon to demonstrate compliance with the safetv 19 criteria in 53.210(b), is the first tier of safety criteria for unplanned events. And so, the safety-20 21 related SSCs are needed to mitigate and prevent design 22 basis accidents. Non-safety related, but safety significant 23

are those SSCs and human actions that are not safety 24 25 related, but warrant special treatment and are relied

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the

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1	on to achieve defense in depth or perform risk
2	significant functions.
3	So non-safety related but safety
4	significant SSCs contribute to mitigation and
5	prevention of anticipated operational occurrences,
6	unlikely event sequences, and very unlikely event
7	sequences.
8	Non-safety related, non-safety significant
9	are those SSCs which are not safety related, do not
10	warrant special treatment, and are not relied on to
11	achieve adequate defense in depth or to perform risk
12	significant functions. So, these functions, these
13	SSCs performed functions during normal operations.
14	So, we move on to Slide 16. And so, we
15	just talked, we just used the term special treatment.
16	So the idea and the order of these slides was sort of
17	to group things together as we go through them because
18	the terms are related.
19	So, special treatment are those
20	requirements such as measures taken to satisfy
21	functional design criteria, quality assurance and pro-
22	programmatic controls that provide assurance that
23	certain SSCs will provide defense in depth or perform
24	risk significant functions.
25	For safety related equipment, where we
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are, these would be things like your technical
specifications, or Appendix B, R50 QA requirements,
those types of things for non-safety related, but
safety significant equipment.

These are things like appropriate surveillances and reliability assurance programs that would have more flexibility and have a more of a licensee control.

in 9 For defense depth, this is the inclusion of multiple independent and redundant layers 10 11 of defense in the design of a facility and its 12 operating procedures to compensate for potential human and mechanical failures, so that, no single layer of 13 14 defense no matter how robust is exclusively relied 15 upon.

So we know that the defense in depth 16 section of Part 53, that's Section 53.250, provides a 17 18 detailed description of defense in depth. So 19 something we're interested in stakeholder feedback on is if this definition is needed in subpart A and the 20 21 definitions, or if it's helpful, or needed and what 22 sort of, what, you know, that sort of flavor there. 23 So on Slide 17, we'll discuss design So design features are essentially all 24 features.

SSCs. So what design features a structure or system

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1	are provided to fulfill the safety functions.
2	So the active and passive SSCs and
3	inherent characteristics of those SSCs that contribute
4	to eliminating the total effective dose equivalent, to
5	individual members of the public during normal
6	operations and prevent or mitigate the consequences of
7	unplanned events.
8	So we chose to define inherent
9	characteristic as an attribute of a design feature
10	that has such a high degree of certainty in its
11	performance that uncertainties need not be quantified.
12	The reason we wanted to define inherent
13	characteristic in the first iteration of the
14	definitions is because in the second iteration of
15	subpart B we revised the language in the Defense In-
16	Depth Section, that's 53.250.
17	To say no single engineer design feature,
18	human action, or programmatic control no matter how
19	robust should be exclusively relied upon to meet the
20	first tier criteria for unplanned events or the safety
21	functions.
22	The addition of the phrase engineer design
23	feature in the description of these terms for which
24	defense in depth is required reflects the possible
25	crediting of inherent characteristics within the
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design and analysis for advanced reactors and the
reduced uncertainties associated with such
characteristics.

So this is another place where we're 4 5 interested in hearing stakeholders' thoughts on. Specifically, do think that inherent 6 you an characteristic has to be associated with a structure 7 current 8 system or component? The definition 9 identifies that it does, but we'd like to hear your thoughts as we work towards future iterations of the 10 11 language.

And then, another question where we're sort of, since we've used the words no single engineered design feature in 53.250, should we also be defining what an engineer design features is in subpart A?

So we can move on to -- oh, wait no, not moving on yet. Go back. Functional design criteria is that the bottom of this slide. These are the requirements for the performance of SSCs. So what design criteria a leak rate, a cooling capacity, are needed for each design feature?

For safety related SSCs, these criteria 23 define requirements necessary demonstrate 24 to 25 compliance with first tier safety criteria in

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1	53.210(b). That's the first tier safety criteria for
2	unplanned events.
3	And here we're talking about an immediate
4	threat to public health and safety, such as the two
5	hour dose below 25 grams at the exclusionary boundary
6	or the duration dose below 25 REM at the low
7	population zone boundary.
8	For non-safety related, but safety
9	significant SSCs, these criteria define requirements
10	necessary to meet the second tier safety criteria in
11	53.20(b). That's the second tier safety criteria for
12	unplanned events.
13	And so, this would be appropriate to
14	address potential risks to public health and safety.
15	This is where we bring in the metric of the QHOs
16	supported by systematic analyses, which enables the
17	risk management approach to operations.
18	So we can move on to Slide 18. So, this,
19	so I'll just briefly touch on the other portions of
20	subpart A, just sort of summarize what I discussed at
21	the beginning of the presentation.
22	So this iteration, like I mentioned,
23	reproduces Part 50 in a lot of places and currently
24	includes bracketed references. Those brackets will be
25	replaced with the applicable Part 53 requirements once
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1 developed. We're intending to develop Part 53 with 2 largely no cross references to Parts 50 and 52, which 3 will require copying and pasting. And this approach 4 5 applies throughout Part 53 so that Part 53 is selfcontained to limit any confusion about the 6 7 applicability requirements in Parts 50 or 52. And that subpart A will include many 8 9 pointers to other sections of Part 53 that will be updating in future iterations. Including, definitions 10 11 as they're identified, and the other subparts are 12 developed. And future iterations of the rule text may 13 14 change the terms we use for some things and may 15 require redefining stuff. But there's, so there's been a lot of discussion, I think, throughout our 16 meetings on subparts, B, and C. 17 18 Т think we've heard the stakeholder 19 feedback that it's important to get the definitions So this is our first iteration. As we've 20 developed. 21 been mentioning throughout our public meetings this is 22 an iterative process. 23 And we continue to seek stakeholder feedback on what we're, what we've put together so 24 We appreciate the feedback we've been receiving 25 far.

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1	and continue to consider it as we move forward in
2	developing the remaining subparts for Part 53.
3	So with that, I think that's the end of
4	the presentation here. I think we can open it up to
5	any discussions. If you need me to go back through
6	and sort of pull out the specific questions I asked
7	during the presentation, I'm happy to do that. But I
8	know, I see some hands up. So let's, let's turn it
9	over to Bob and see who's asking questions.
10	MR BEALL: Okay. Thank you, Jordan. I
11	think, Cyril from USNIC, you wanted to make some
12	comments?
13	MR. DRAFFIN. Okay, sure. Can you hear
14	me?
15	MR. BEALL: Yes, we can Cyril. Go ahead.
16	MR. DRAFFIN: Okay. A number of comments.
17	And what I'll do is I'll make a few. And then, let
18	some of the other people who have raised their hands
19	comment. And then, we might iterate.
20	I'll start with codes and standards. We
21	do support the use of consensus codes and standards,
22	and including in the guidance you've described. Some
23	of the standards are explicitly for nuclear power
24	plants.
25	Well, I see the definition includes that
1	

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1	they must be for nuclear power plants, does this
2	include, in the consensus standards, will you include
3	standards which are not explicitly done from nuclear
4	but are, you know, IEEE standards or ISO standards
5	that could be used for other components?
6	So I just question the use of, under
7	Section 3 on consensus code, whether it has to be
8	explicitly referencing nuclear power plants, or, or
9	not? So that would be a question for you. The
10	On construction, on what you're going to
11	make a distinction, this is not something you made in
12	the presentation, but some facilities will have
13	separate steam generation facilities that will not be
14	part of the nuclear system.
15	And so a definition of how you're going to
16	define construction of those nuclear and non-nuclear
17	facilities may need more attention than you have in
18	your current language. And so, why don't I stopped
19	there and let something other people make comments and
20	I'll have some more comments afterwards.
21	MR. BEALL: Okay, thanks, Cyril. Jeff
22	Merrifield?
23	MR. MERRIFIELD: Yes, Jeff Merrifield,
24	here. I want to go back to the comments that were
25	made on Slide 10. You were talking about trying to
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1	come up with a definition of an advanced reactor,
2	advanced nuclear reactor.
3	And you quoted the language in there, in
4	the highlighted paragraph about some of the attributes
5	that might be included in the definition. I would
6	note, from a statutory construction standpoint, it's
7	quite important that the use of the word "or" was
8	included in that variety of characteristics.
9	That is intentional decision in statutory
10	construction to mean it could be any of the elements.
11	It does not require all of the elements to be
12	included. If that were the case, they would have used
13	the word "and".
14	What that leads one to believe, is the
15	intention, and I think this is consistent with the
16	legislative history on this. The Congress intended it
17	to be an expansive definition and to be forward
18	reaching and wide-ranging.
19	So as the staff is evaluating how we'll
20	implement this, I think it needs to keep that concept
21	in mind and not be too limiting on the ability of
22	different technologies to be characterized in those
23	advanced reactor technologies, if they meet one of one
24	or more of the criteria that are included in the
25	definition.
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1	So I just, you know, I know you all are,
2	it sounds like you're struggling with this a little
3	bit. I don't think you need to as much. Congress
4	clearly, through passing the amendment was intending
5	to be promotional of advanced reactor technologies.
6	And I think the Agency needs to be mindful of that in
7	enabling these technologies to move forward. Thank
8	you.
9	MR. BEALL: All right, thanks, Jeff.
10	MS. VALLIERE: Bob, if I could just
11	respond. Yes, Jeff, thank you. I would say that,
12	yes, we are. You know, we have paid very close
13	attention to the words in the NEIMA definition.
14	And are really trying to determine, now,
15	what's the best way to take that definition and form
16	some implementable regulatory language that will be
17	cleared to all the parties involved. So I think that,
18	you know, we are having those discussions, right now,
19	directly along the lines you just laid out.
20	And, you know, one of the reasons why we
21	wanted to make sure we presented this definition
22	today, to specifically, you know, solicit stakeholder
23	feedback on how others might think we could define a
24	regulatory definition that would fit along the lines
25	of the NEIMA language.
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1	MR. BEALL: Okay, thanks, Nan. Steve
2	Kraft? You had your hand up.
3	MR. KRAFT: I did, Bob, thanks. Can you
4	hear me?
5	MR. BEALL: Yes, sir.
6	MR. KRAFT: Thank you. Sorry everyone
7	keeps doing that cell phone commercial.
8	(Laughter.)
9	MR. KRAFT: So the draft has the
10	definition of end state, which is fine. But doesn't
11	the draft rule language include the link phrase, safe,
12	stable end state?
13	MS. VALLIERE: It does.
14	MR. KRAFT: Thank you, Nan. So what is
15	the I think this got asked in the last public
16	meeting by Marc, what is the definition? But before
17	I, you know, my view but ACRS Subcommittee asked
18	that question.
19	And the question they asked well, I
20	think it was Joy Rempe, said, asked, doesn't mean shut
21	down in the traditional way we understand shut down in
22	large LWRs. So I'm just curious as to whether you're
23	thinking about how to further define that or whether -
24	-
25	The thought I had, which is my personal
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1	opinion, is you could look at reactor systems of any
2	type and show an analysis that says this is a safe,
3	stable, end state. Now, it could be argued it's a
4	meta state, but I just raise the point.
5	That I'm curious to know what you're
6	actually meaning and whether you will add the phrase
7	safe, stable in your definitions. Thank you.
8	MR. HOELLMAN: Yes, thanks, Steve. This
9	is Jordan Hoellman, again. That was one of the
10	questions I tried to ask during the presentation. I
11	think the definition was intended to include that safe
12	stable language.
13	To make it clear that it would, that there
14	would be no further event progression beyond the
15	identified end state. And so, I think your question
16	and comment there sort of provides some of the
17	feedback we were looking for on, on if that language
18	should be included, specifically in the definition.
19	So thank you, again.
20	MR. KRAFT: So just to follow up on that,
21	Jordan. Does have to mean shut down in the
22	traditional sense? It could just be, here's a stable
23	end state and we can show at the end of the sequence
24	out of the someone has their phone.
25	Out of the PRA it gets to a spot where, in
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1	this particular sequence, there are no further offsite
2	releases, consequences, whatever. But the facility
3	can still be in operation. Is that a correct
4	interpretation?
5	MR. HOELLMAN: I don't know if I Nan,
6	do you know?
7	MS. VALLIERE: So I guess I would say that
8	one of the reasons for highlighting this issue, this
9	definition today is specifically to get feedback on
10	this issue. And Steve, as you noted, it has been
11	raised at ACRS.
12	And as you noted, we have added the safe
13	stable words to the rule text. So we are really
14	looking for input on how stakeholders believe, you
15	know, these terms should be, fields should be defined.
16	MR. KRAFT: Okay, thanks, Nan, for that
17	clarification. If I can hold the floor for just a
18	minute, going back to what Jeff Merrifield just said,
19	definition of advanced reactor. Not questioning
20	Jeff's ability to interpret statutory language. I'm
21	certainly not a lawyer.
22	But again, back to the ACRS, and again,
23	Joy Rempe, she asked Bill Reckley during the meetings
24	about the gatekeeper. What, what's the gatekeeper on
25	an applicant saying we fall under this definition?
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1	And of course, Jordan, you raised that
2	wanting feedback as to whether LWRs meet that. But
3	then she linked that with a point that to her, and I'm
4	quoting her, I'm not saying it's my opinion.
5	To her, the rule seems to presuppose that
6	reactors falling under this definition are safer than
7	previous designs. And she said, well, who knows? We
8	don't know. Maybe, maybe not, it hasn't been proven.
9	I mean, there's all kinds of sub-text to
10	that question. So I'm just curious as to, since it
11	links so closely to the definition, what the, if you
12	have any thoughts? I grant you, the ACRS meeting
13	right now is talking about the letter.
14	So I don't know what they came out. I'm
15	just curious to know, what your thoughts are next. I
16	think it'll help applicants understand what they have
17	to say, in your application.
18	MS. VALLIERE: That's, it was an
19	interesting conversation and continues to be. I
20	think, you know, that there are sort of dual issues in
21	this question. One is, the one issue is the basic
22	issue of, you know, who can apply under Part 53 for a
23	license?
24	But, but the real question is, once you
25	apply, you know, a simple application doesn't mean
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1 your design is accepted. Once you apply, you have to present your safety case, in a convincing manner that 2 you meet the safety criteria. 3 And that, you know, you have provided the 4 5 defense in depth required by the rule, that you have identified the safety functions. And what your safety 6 7 case presents will determine, you know, whether you get some of the operational flexibilities that might 8 9 be offered in the operation subpart, for example. MR. KRAFT: And --10 11 (Simultaneous speaking.) 12 MS. VALLIERE: So --MR. KRAFT: Sorry, go ahead, or sorry. 13 14 MS. VALLIERE: Yes. So I'm not really 15 I quess, I'm not sure I saw the full value of sure. the gatekeeper question. With the understanding that, 16 you know, anyone that brings forth an application is 17 18 going to have to present their safety case. 19 And if they want to use some of the operational flexibilities that will be offered, they 20 21 have to, you know, make that case --22 MR. KRAFT: Yes. I was --23 (Simultaneous speaking.) MS. VALLIERE: -- in a specific manner. 24 25 MR. KRAFT: Nan, I think your question, NEAL R. GROSS

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1 your answer was excellent, what you just answered to me just now. I would simply suggest that you make it 2 3 to use Joy's term backwards. Make it as non-fuzzy as 4 possible so there's no question as to what you're 5 getting at, what's showing. And maybe that's in the Statement of 6 7 Considerations. I really don't know. But clearly traditional process, you go through your docketing 8 analysis. That you could say, hey, you're just out of 9 bounds, we're not even going to look at this one for 10 11 the following reasons. 12 And then, go on from there. I mean, that's perfectly acceptable. 13 Hey, thank you. Ι appreciate everyone indulging me on my time. 14 Thanks 15 very much. Thank you, Steve. 16 MR. BEALL: Jeff Merrifield, you have your hand up? 17 18 MR. MERRIFIELD: Yes. I don't mean to 19 keep revisiting this issue, but I just want to, I just want to go back to this. Congress had the expectation 20 21 that a variety of attributes would allow these 22 reactors to qualify for being called advanced reactors and thus be able to, thus be in a position to use the 23 rule. 24 Now, the staff, and we've had discussions 25

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1	back and forth on what should those safety standards
2	be. And those are as of yet unsettled. But there's
3	nothing in NEIMA that requires a higher safety
4	standard for advanced reactors.
5	Congress had an expectation that that may,
6	that may be the case, and they did include those as
7	one of the factors. But there's no requirement in
8	NEIMA that they be safer. And I just want to make that
9	clear.
10	I think there's been a lot of clarity. I
11	think, you know, obviously, those of us in the
12	advanced nuclear reactor community believe that they
13	are safer.
14	And there are attributes that the
15	individual applicants will use to state that case.
16	But nothing in NEIMA requires that. And I think that,
17	I think there's some confusion on that, perhaps even
18	with ACRS.
19	MS. VALLIERE: Yes. That's a good point.
20	But, and I'll go further to say is, not only does
21	NEIMA say that, but the Commission has told the staff
22	and stated in a number of places that their
23	expectation is that advanced reactors will be at least
24	as safe as existing reactors.
25	And that any additional margins to safety
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1	should be allowed to provide operational flexibilities
2	for those advanced reactors. So that is what the
3	staff is using as its guidepost in developing Part 53.
4	MR. BEALL: Okay, thank you, Nan. Mark
5	Nichols from NEI, I thought I saw your hand up. Would
6	you like to say something?
7	MR. NICHOLS: Yes. It is, it is up. Yes,
8	thank you, appreciate that. First, appreciate the
9	staff's presentation, very, very, very helpful. I
10	want to start, I want to preface my comments by giving
11	you an understanding into the thought process of NEI,
12	and our members, the industry.
13	So as we're looking at it Part 53, we're
14	recognizing Part 50, 52 achieved safety, it's usable,
15	it can be used for advanced reactors. Then Part 53,
16	what do we need to achieve with it?
17	Well, we need to achieve the same level of
18	safety or better. That, that would be okay. But we,
19	in order for it to be useful or desired to use, it
20	actually has to be an improvement in efficiency.
21	So it needs to either increase
22	flexibility, or it needs to decrease regulatory burden
23	in achieving that same level of safety. And so,
24	that's sort of the framework we're looking at it.
25	But we're also focused on not just the,
1	

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1	I'll say intellectual discussion of the requirements
2	themselves, but really where the rubber meets the
3	road. What, how are they going to be implemented?
4	What's the practical application and how
5	does that translate into benefits? I wanted to get
6	that across because it's that practical application
7	that we're always focused on. How are they going to
8	be applied?
9	How are they going to be interpreted in
10	the future, both by the NRC staff and by the industry?
11	Because that's really where we're going to realize
12	any of those potential benefits. So sorry for that
13	long winded introduction.
14	I want to go to slide, or first say, you
15	asked a question, this one step 53 not referencing
16	Part 50, 52. You asked a question about that. We
17	agree with that approach. We support you in that
18	endeavor and like what you're doing there.
19	I'm going to go through a series of slides
20	and some specific comments. I'll start with Page 10,
21	Slide 10 on the definition of advanced plant. And I'm
22	not going to repeat what Jeff and Steve have said. I
23	agree with them. But I will, maybe, touch on them to
24	put together the full picture.
25	I really think there's three points that
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1	need to be looked at here. First is what is the
2	intention of Congress and you also mentioned the
3	Commission.
4	And within that, we really need to know,
5	did Congress intend the definition in NEIMA to be the
6	most restrictive envelope? And so, you have to
7	clearly meet those requirements in order to be able to
8	qualify.
9	I tend to think that's not what they
10	intended. If we don't know, we should ask them. We
11	should get their clarity. Because I believe what they
12	intended is what Jeff said is, well, these are some
13	examples.
14	But in a technology inclusive rule, which
15	is what they specified, specifying these entry
16	requirements to get into the rule is, by its nature,
17	exclusive. And I don't think that's what they meant.
18	Nan, I think you put it very well. Is
19	that, the bar to meet are the requirements themselves,
20	the performance, safety performance requirements.
21	That's what you have to meet. Whether you have an
22	additional inherent safety feature or not, shouldn't
23	be of consideration. Whether you meet any of those,
24	those definitions there.
25	And one specifically that was brought up

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1	in the ACRS meeting is AP 1000. They don't qualify
2	because they're under construction. Well, what does
3	it take for them to qualify?
4	Do they just have to add one more inherent
5	safety feature and then they could license under this?
6	I mean, does you know, it then gets to a question,
7	the second point, which is what does the NRC itself
8	thinks is appropriate for a requirement in being in
9	here.
10	And being in here. Do you think that you
11	need to have some definitions to restrict or be
12	exclusive of what new plants should be able to get in?
13	How does that actually fit within the
14	philosophy of Part 53 that you're trying to put
15	together? I tend to think that we don't need to be
16	exclusive in a definition of advanced nuclear plant.
17	And then, the third point is how is it
18	going to be used, implemented, and practiced and that
19	gets to the gatekeeper question.
20	So, as NRC is looking at this application
21	and says well, yes, you have one additional inherent
22	safety feature that the AP1000 didn't have.
23	But we were looking for ten or six or five
24	or, it's pretty subjective because it's not written
25	down. So, that's where you get into, you know, how is
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1	it going to be implemented and gets into a lot of
2	confusion.
3	My recommendation, just get rid of the
4	requirements of, you know, those, the A through G and
5	just say, any new plant could be licensed under Part
6	53 provided you meet the requirements that are in
7	here.
8	And that the requirements themselves,
9	those safety performance requirements, should be the
10	gatekeepers themselves. I think we'd be much better
11	off that way.
12	I also wanted to point out something on
13	this slide that nobody has yet and you defined it only
14	as a utilization facility and do not include a
15	production facility.
16	I'm wondering if you did that
17	intentionally, there may be advanced reactors that
18	meet the production facility definition and would like
19	to use Part 50.
20	Is there, let me ask a specific question,
21	I have more if you want to move on, that's fine but
22	was that a conscious decision or just unintentional?
23	MR. HOELLMAN: Mark, I think it was
24	because NEIMA requires us to create a rule for
25	commercial advanced nuclear reactors but I think we
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1	can take your comment back and think about a little
2	more.
3	I'm not sure that we have to be that
4	restrictive but, Nan, if you want to chime in, you
5	can.
6	MS. VALLIERE: Yes, I was going to say
7	something similar to what you said, Jordan, that I
8	believe we thought we were staying consistent with
9	NEIMA.
10	MR. NICHOLS: Okay. I guess I'd point
11	out, Jordan and Nan, thank you. Jordan, I'd be
12	encouraged if you did take that back and think about
13	it.
14	In terms of my first three points on even
15	needing those NEIMA requirements to exclude certain
16	designs from Part 53, supposedly technology inclusive
17	rule.
18	And the reason is, production facility may
19	actually be used so, I, you know, what about a molten
20	salt facility that might do inline separation of the
21	fuel?
22	What about a fast reactor that might have
23	a recycling system at that facility to be able to
24	produce their own fuel and that those processes might
25	cause them to meet a production facility and exclude
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1	them from Part 50?
2	So, so I would. I just tend to think
3	philosophically here, the less we try to be exclusive
4	and restrictive the easier this rule is going to be.
5	So, sorry I'll get off my soapbox on that. We can
6	move on to Slide 14.
7	MS. VALLIERE: Hey, Mark, maybe just one -
8	MR. NICHOLS: Yes?
9	MS. VALLIERE: one thought before we
10	move on. So, I'll just ask that as you go forward
11	and, everyone, as you go forward and continue to think
12	about this particular definition and term, you know,
13	one of the questions we had was, in addition to
14	advanced nuclear plant should we include a definition
15	of advanced nuclear reactor.
16	And if so, how, again, how does that
17	relate to the NEIMA definition and trying to put that
18	into regulatory language. So, if you have specific,
19	you know, proposals, we'd be interested to hear them.
20	MR. NICHOLS: Okay, thank you. I thank
21	you for pointing that out. I think in our discussion
22	draft from February, we focused on advanced nuclear
23	facility. I see you have it there, plant facility.
24	They essentially mean the same thing.
25	Rather than focus on the reactor. Recognizing the
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1 reactor tends to mean the core and the vessel and there are things outside the core and the vessel that 2 are important to the safety and function of that 3 reactor. 4 5 So, we thought well, just include facility and then as you go through the definitions of what 6 7 types of SSCs are part of that facility that's regulated by the NRC. 8 9 There may be SSCs that do not need to be regulated by the NRC. That those would be defined. 10 11 But we'll continue to think about it. 12 Thank you. MS. VALLIERE: Slide 14, please. 13 MR. NICHOLS: Yes. So, 14 this one and I'm going to go back to the slide, so 15 this was about the, yes, and the one before it, so 16 Slide 13 and 14 together. 17 So, first I want to say as we get into the 18 definitions, we didn't find anything within the definitions themselves that either increased 19 or decreased burden or flexibility. 20 21 What we note that it's the application of 22 those definitions where it really matters. So one, 23 recognizing there are a lot of new definitions, some changed definitions. 24 We all need to be very mindful of how 25

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1	they're utilized in the requirement. Because that's
2	really where they become meaningful.
3	So with this one, and I don't have any
4	specific disagreement with the definitions but I think
5	as I look through, well how are they applied and how
6	are they used in the rest of the rule.
7	They get to be a little bit confusing so,
8	we've got Licensing Basis Events, which include very
9	unlikely, unlikely, and DBAs and then AOOs.
10	But really focusing on Design Basis
11	Accidents unlikely and very unlikely and how are they
12	actually applied. If you go back and look through the
13	rest of the requirements, they're mentioned in a few
14	places.
15	But specifically where I think it's most
16	important is in 53.210 and 220, I believe, the safety
17	criteria. And they're not actually used.
18	So, it's not very clear well, to meet the
19	25 REM, is that an unlikely event sequence, is that a
20	very unlikely event sequence, is that a DBA? It's
21	just not and then similarly for the others.
22	So, to be able to link these back
23	specifically to where they need to be applied is going
24	to be very, very important.
25	And then, also just a question about a
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1	DBA. Is a DBA both unlikely and very unlikely event
2	sequences? Is it only unlikely event sequences?
3	That really matters because that really
4	plays into the scope of SSCs and how they're treated
5	under the requirements. I'll pause there just in case
6	you might have information that could clarify those
7	questions.
8	MS. VALLIERE: Well, I guess, so I'm going
9	to answer your question with a question just to make
10	sure I understand one of your points.
11	So, I think the first point you made was
12	that the safety criteria themselves don't use the LB
13	terminology.
14	MR. NICHOLS: Correct.
15	MS. VALLIERE: So, you're looking for that
16	link but I believe when you get into Subpart C that
17	talks about the design and analysis, they do point
18	back to the safety criteria. So, what you're looking
19	for is the, sort of the pointer in the other
20	direction?
21	MR. NICHOLS: That's correct. Yes.
22	MS. VALLIERE: Okay, got it.
23	MR. NICHOLS: Yes, maybe it's more just
24	consistency throughout in terminology. And it could
25	have been an oversight. I mean, those things happen
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1	at early stages in rule language so, you know, I'm not
2	trying to criticize that.
3	MS. VALLIERE: Yes, understand. And I'll
4	just maybe say something at the very high level with
5	regard to the rest of the categories. So, the
6	categories are largely consistent with how they are
7	described in the licensing modernization project where
8	DBAs are derived from the set of DBs and then, you
9	know, only safety related equipment is credited in
10	those DBAs.
11	MR. NICHOLS: I suppose sorry to
12	interrupt. I suppose what could happen or what could
13	help is if you somehow link the terms very unlikely
14	and unlikely back to the DBEs, so
15	MS. VALLIERE: Yes, I apologize and you
16	caught me there slipping back into LMP terminology.
17	So, unlikely events are in LMP terminology, is the
18	design basis.
19	MR. NICHOLS: Mm-hmm, right.
20	MS. VALLIERE: And very unlikely is beyond
21	design basis event. So, I see what you're saying. So
22	that the unlikely event sequence is
23	MR. SEGALA: Yes, I think that's a good
24	comment, Mark, this is John Segala. And, you know, I
25	think when you look at it you take the unlikely
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1	events, which credit both safety and non-safety
2	related SSCs and then you only credit safety related
3	SSCs, that become the DBAs.
4	But when you actually look at that, those
5	event sequences, when you fail the non-safety systems,
6	there's a reliability associated with them and so,
7	when you fail them you're actually, the DBAs are
8	actually a much lower frequency than what would fall
9	into the unlikely event sequence category.
10	So, it gets kind of confusing, you know, I
11	think tying these, tying them back to, you know, a DBA
12	and somehow tying it to unlikely and very unlikely but
13	we can take a look at that.
14	I see where you're coming from in terms of
15	the different definitions and it not being necessarily
16	clear on how they all line up.
17	MR. NICHOLS: Yes. Yes and I try to
18	thank you, I appreciate the understanding of my
19	comment. I try to think of them visually, you know,
20	if there's a hierarchy, how are they hierarchically
21	fitting in?
22	Or if there's, you know, Venn diagram, how
23	are they overlapping and distinct and different? So,
24	my only point is, from the definitions in the current
25	language it's not clear how they all fit together.
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1	So, that's the only point is to help work
2	on that. We can move on to Slide 15 and I apologize,
3	I'm taking up a lot of time but I figured I'll just
4	get through all my comments and then you can move on
5	to other people.
6	So, these definitions are super important
7	and, you know, we can discuss whether you should have
8	restrictive categorization or not but let's just work
9	with the definitions we have here.
10	There is in my mind anyway, some
11	confusion, specifically between safety related and
12	non-safety related but safety significant.
13	Because as you read the two definitions
14	they both are SSCs human actions, they both need
15	special treatment.
16	The difference is one is meeting 53.210(b)
17	and I believe the other is, well, this says defense in
18	depth or performed risk significant function so, I'm
19	guessing that is 53.220(b).
20	But it really gets into, well special
21	treatment and as I looked through the rest of the
22	regulations and how these two categories are treated
23	and the special treatment along those.
24	I actually don't see any distinction
25	between the requirements that are applied to safety
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1	related and the requirements that are applied to non-
2	safety related but safety significant.
3	So, one question is, you know, what is the
4	actual difference in what a licensee is going to have
5	to do with safety related versus non-safety related
6	but safety significant?
7	The regulations themselves at least, make
8	it appear that a licensee has to treat them very
9	differently, they just are in two different categories
10	with two different names. I don't believe that's the
11	intent but that is how the regulations appear to treat
12	them.
13	MS. VALLIERE: Yes. So, Mark, I think
14	you're getting directly into the discussions we'll be
15	having on Subpart F.
16	So, you know, rather than go through that
17	presentation now I wonder if you'd be willing to wait
18	until we
19	MR. NICHOLS: Absolutely.
20	MS. VALLIERE: talk about Subpart F.
21	MR. NICHOLS: Absolutely. Yes, if you
22	could just keep that in the back of your mind. If you
23	could explain it as you go through the rest, you know,
24	and just point out specifically how those two are
25	treated differently.
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1	The other confusion I have is between that
2	non-safety related but safety significant and non-
3	safety significant in terms of, again, how the
4	regulations include them into the rule.
5	Or include them in what the licensee has
6	to put into their application and provide to the NRC I
7	should say. Level of detail.
8	So, when I look at the non-safety related
9	but safety significant definition, to me, if I just
10	try to equate my understanding of Part 50.
11	It brings in risk significant things and
12	then it also brings in some stuff that might have been
13	important to safety, this non-safety related stuff
14	that might impact the ability of a safety related
15	component to perform its function. That sort of
16	thing.
17	And so, it sort of catches all that and
18	then, if that's true then the non-safety significant
19	really is this stuff that, in my mind, I wonder why
20	the NRC even needs to review it.
21	If I look at some designs that advanced
22	reactors that are being developed. They're trying to
23	develop a balance of plant system that has no
24	possibility of having any impact on safety related or
25	non-safety related but safety significant components.
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1	So that they can completely exclude their
2	balance of plant from the application to the NRC.
3	That's sort of the stuff I see falling into non-safety
4	significant.
5	And so, by defining it this way and the
6	way the requirements are crafted in terms of what
7	needs to be done and provided to the NRC, it seems
8	that Part 53 is bringing in a lot of scope and level
9	of detail of the design description into the
10	application that Part 50 and 52 might not require.
11	And so, I don't know if I'm
12	misunderstanding it or if there's something else to
13	non-safety significant or the distinction between that
14	and Part 50. But that's sort of, you know, one of the
15	confusions that I have.
16	MR. SEGALA: Yes, thanks. This is John
17	Segala again, thanks for that comment. You know, I
18	think, as you've been asking, kind of the application
19	and the implementation is kind of where the rubber
20	meets the road.
21	And I think this is an area that we're
22	trying to address as we work with industry on the
23	TICAP and ARCAP project. The idea TICAP and ARCAP is
24	that you would have more information in the
25	application on the safety related SSCs.

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1	And then you would have, you know, maybe a
2	little bit less information on the non-safety with,
3	that are safety significant or ones with special
4	treatment.
5	And then much less information than what's
6	needed, you know, what would be needed in the
7	application for truly SSCs that are non-safety
8	significant.
9	So, I think as, you know, we'll look at
10	your comment, you know, I think it's a good comment.
11	But I think also this is something that as we look at
12	TICAP and ARCAP that should be becoming more evident
13	as we work through that project.
14	MR. NICHOLS: Okay, thank you. I
15	appreciate that. Yes, and I recognize that some of my
16	points can't be answered in the call but, you know,
17	just being able for you all to understand them and
18	take them back would be helpful.
19	And as you look at that last specific
20	comment, maybe pay special attention to how it would
21	be applied in 53.410 and 420.
22	Because what those require, the functional
23	design criteria would be required, not just of safety
24	related, you know, the first two categories there,
25	which absolutely are necessary.
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1	But it would be required for non-safety
2	significant, which if I look at Part 50 and 52, that
3	type of information is not required for non-safety
4	significant.
5	So, just the nature of how the definitions
6	are applied and flowed through the requirements may
7	require information in Part 53 that's not required in
8	50 and 52.
9	And so, what you're doing with ARCAP may
10	be undermined by requirements that don't allow that
11	flexibility that you're building. So, I'd just point
12	those out specifically.
13	And the cause may actually just be because
14	normal operations and ALARA are in Tier 1 and Tier 2
15	and just don't belong there. That might be part of it
16	but, you know. But moving on
17	MR. SEGALA: This is John, I just wanted
18	to add, you know, when you go back to Part 50 one
19	thing that we didn't carry forward into Part 53 is the
20	whole concept of important to safety and what does
21	that mean and how that evolved over the years.
22	So, I think it does get a little bit
23	confusing trying to compare this, you know, across
24	Part 50 to Part 53. But I think I understand what
25	your comment is, I'm just adding that as additional
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1	information.
2	MS. CUBBAGE: I'd like to also interject,
3	this is Amy Cubbage, that under Part 52, I'll just say
4	explicitly, the requirements are that the full scope
5	design needs to be described in the application.
6	Including non-safety systems. So, just
7	wanted to correct that we're not imposing additional
8	requirements here.
9	You know, Part 52, for example, in 52.47
10	in contents of applications, does say that systems are
11	discussed in so far as they are pertinent.
12	So, you know, there could be an argument
13	that certain things wouldn't need to be described if
14	they could be demonstrated to not be pertinent to the
15	safety of the design.
16	And that's where, you know, in the
17	guidance space, we're looking at how much description
18	is needed for non-safety systems.
19	MR. NICHOLS: Yes, and that's why I said
20	look back at 53.410 and 20, 420. Because it's
21	prescribing that the functional design criteria or in
22	Part 50 terms would be the performance requirements,
23	are included.
24	Now 50 and 52, I agree. They would
25	require that the non-safety significant systems be
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1	included and described but it doesn't specify the, all
2	of the attributes of those non-safety significant SSCs
3	that need to be described.
4	So, in Part 50, 52, you might be able to
5	just list the system and that might be fine or you
6	might go into a discussion of the function of the
7	system and describe how it's not, you know, not that
8	important to the safety.
9	Well, Part 53, the 410 and 420 don't allow
10	you that flexibility. You've got to go all the way
11	down to specifying the performance requirements.
12	And so, you don't have that flexibility to
13	say this is not safety significant, it's not that
14	important. I can just list it or I can just describe
15	it at a high level. It doesn't, Part 53 wouldn't
16	allow you to do that.
17	MS. VALLIERE: Yes, Mark, I understand
18	your comment when you specifically mentioned normal
19	operations, now I understand where you're coming from.
20	So, we'll take a look at those specific
21	sections you mentioned to make sure we don't have
22	some, you know, unintended requirements. But I think
23	I understand your comment.
24	MR. NICHOLS: Okay, great. Thank you.
25	Thank you, everyone. Page, Slide 16. I've got Slide
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1	16, Slide 17, again, apologize for taking a long time.
2	So, I think I wanted to focus here on
3	defense in depth. You asked whether it's needed, you
4	know, honestly, if you're going to have a requirement
5	on defense in depth, I don't think it hurts to have a
6	definition around it.
7	I would point out that the definition and
8	the requirement don't look the same and it's
9	specifically the requirement has the one sentence
10	about no single engineered feature blah, blah, blah.
11	That reads a little bit different than
12	this, this one reads more as, in terms of you need to
13	have one, more than one barrier or redundant layer and
14	that's, you know, much more understandable.
15	The way the requirement reads, it reads
16	much more like a single failure criteria and
17	requirement. And so, one, you may want to modify the
18	requirement to match better with this definition.
19	Because I think this definition is more
20	aligned with Part 50. So, that's just my comment
21	there and we can go on to 17 if you didn't have a
22	response.
23	MS. VALLIERE: No, understand. Thank you
24	for the comment, Mark.
25	MR. NICHOLS: Okay. So, this is the last
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1	one. So, I was just interested in 53, you used the
2	term functional design criteria and you basically say
3	it means performance requirements.
4	And performance requirements is the term
5	used in Part 50 and 52. Is there a reason you didn't
6	use the term performance requirement in Part 53 or
7	even just modify it? Performance criteria?
8	I'm just wanting to know why you changed
9	the term. I'm not opposed to it. I'm just wondering
10	why you did it.
11	MS. VALLIERE: Yes, honestly I don't think
12	I can answer why we did not use the term you mentioned
13	and chose functional design criteria. Other than, you
14	know, it's something that we were, I would say, used
15	to using from other arenas. So, let us take your
16	comment back and discuss it.
17	MR. NICHOLS: Okay. With that, that's
18	everything I had. I apologize for taking so much
19	time.
20	MR. BEALL: Thanks, Mark. That was good
21	feedback to give us, we appreciate that. Dennis
22	Henneke, you have your hand up.
23	MR. HENNEKE: Yes, great. Dennis Henneke
24	with GE Hitachi, also on the JCNRM, which handles the
25	PRA standards that have been mentioned.
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1	Couple of comments on your safe and stable
2	question on Slide 12, you know, you pulled out some
3	definitions that interface with the definitions of the
4	non-light water reactor standard.
5	And just to clarify a little bit, in the
6	actual requirements of the standard and event sequence
7	definition, safe and stable is used throughout to say
8	that when a defining success states includes safe and
9	stable to prevent radioactive release.
10	That standard, safe and stable, may not
11	be, as was described earlier, that the plant operating
12	perfectly. It may be in fact that fuel damage may
13	have occurred but containment worked so that you have
14	successfully mitigated release to within the criteria
15	that you're wanting.
16	So safe and stable includes that barrier
17	in it, which of course then means that the barriers
18	are part of your consideration for safety related.
19	But the point being, you know, safe and
20	stable really needs to be a part of that. It is
21	buried in the standard in the requirements.
22	But if you're not going to pull all that
23	out then you need to tie in the success states on end
24	state into some sort of discussion on safe and stable.
25	I did have a question on Slide 14. You
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1	list unlikely sequences between 10-2 and 5-4.
2	Shouldn't that be 1-4?
3	MR. HOELLMAN: Yes, Dennis, I think we got
4	a typo there. We noticed that too as we were going
5	through the presentation, so thanks.
6	MR. HENNEKE: Okay.
7	MR. HOELLMAN: And I appreciate your other
8	comment on the safe and stable too. That was another
9	sort of thing we noticed as we were, you know, getting
10	close to releasing the definition and just knew we
11	needed stakeholder feedback on it. So, appreciate it.
12	MR. HENNEKE: On the range on very
13	unlikely sequences, under LMP the range for the enzyme
14	basis is, you know, 10-4 to 10-6 and considered
15	uncertainty and so then we moved that down to 5-7.
16	So, the 5-7 already accounts for
17	uncertainty in the then sequence frequency. So, I
18	would recommend either moving, changing 5-7 to 1-6
19	considering uncertainty or just say 5-7 and remove the
20	requirement to consider uncertainty.
21	If you want to be consistent with the LMP.
22	Just a comment. And then on Slide 15, I think it's
23	just a minor point here, non-safety you mentioned or
24	not relied on to achieve adequate defense in depth for
25	first safety significant.
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1	You mentioned achieving defense in depth
2	but you don't use the word adequate and it's either
3	relied on for defense in depth or it's relied on to
4	achieve adequate defense in depth. I think maybe make
5	a slight pre-comment definition.
6	MS. VALLIERE: And so, was that, that was
7	the non-safety related but safety significant
8	definition?
9	MR. HENNEKE: Yes. It should
10	MS. VALLIERE: Okay.
11	MR. HENNEKE: achieve adequate defense
12	of depth.
13	MS. VALLIERE: Yes, I see that that's what
14	we used in the non-safety significant definition.
15	MR. HENNEKE: All right. That's all I
16	had. Thanks.
17	MR. HOELLMAN: Thanks, Dennis, appreciate
18	the feedback.
19	MR. BEALL: Yes, thank you, Dennis. Okay,
20	Kadambi, you have your hand up.
21	MR. KADAMBI: Yeah, this Prasad Kadambi.
22	I have a relatively simple question, I think. I've
23	heard the term safety case used in many different
24	ways, and I'm wondering is Part 53 going to clarify
25	what is meant by a safety case?
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1	MS. VALLIERE: Prasad, I probably used
2	that term offhand as a shortcut but to my knowledge we
3	do not intend to use that in Part 53. But I probably
4	used it earlier as a shorthand.
5	MR. KADAMBI: Yes, and others do also. I
6	think the implication is that when an application
7	comes forward there is going to be some kind of a
8	something that will enable a person outside to be able
9	to say, so the safety case includes x, y, z, you know.
10	I'm just wondering in your mind, Nan,
11	where would you go if you wanted to know what a safety
12	case should contain? Is it the whole application?
13	MS. VALLIERE: That's a good question.
14	Clearly from the NRC's standpoint, the application has
15	to contain enough of the safety case for the agency to
16	be able to make its findings with regard to licensing.
17	So you know, from our perspective, you know, I go
18	ahead, John.
19	MR. SEGALA: Nan, I'll just add that
20	that's something that we're working with industry on
21	in terms of the TICAP and ARCAP project trying to make
22	sure that the safety cases is well defined in the
23	application and that there's adequate guidance for how
24	you describe that.
25	MR. KADAMBI: Thank you. That's it.
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1	MR. BEALL: Okay. Thank you very much for
2	those comments. Is there anybody else on the bridge
3	line that would like to make a comment? You can use
4	Star 6 to unmute yourself. Okay. Ah, Cyril, you have
5	your hand up.
6	MR. DRAFFIN: Yes. I'll cover a few items
7	that weren't covered before. On defense-in-depth on
8	Slide 16 and 17, as Jordan raised the point on
9	inherent characteristics, you know, thinking that
10	through in terms of the definition between inherent
11	characteristics and defense-in-depth is something you
12	might want to clarify a little bit more based on the
13	discussions of how that in tune with ACRS yesterday.
14	I agree with the comments that Marc made
15	on requirements for a safety and non-safety related.
16	I think that's helpful clarification. On Slide 14,
17	under unlikely sequences, you found the typo there
18	between the overlap, but we did have kind of not some
19	observations that the examples and the definitions for
20	unlikely and very unlikely events add a little bit of
21	confusion of how the rules can be implemented because
22	the definitions do not provide that clarify, detail
23	needed to be applied for classifying postulated
24	ignition rating-initiated events.
25	So it may not be a definition, but it may

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be kind of an implementation question. And then for the definitions of unlikely events and very unlikely event sequences, to more understand the range of frequencies that constitute the design basis events that was a little bit referred to earlier. But clarification on those frequencies and they they're there is probably important.

And then a couple, maybe four or five 8 other topics, we had some concern, at least some 9 people did, on the language and the application of 10 11 design control could be interpreted that the QA 12 requirements might extend to a full range of а 13 licensing basis events versus just the language of 14 postulated accidents.

And another point, 53.110 does not include holders' and applicants' language used in 53.060 and 53.070 but provides coverage to either an applicant or 18 a licensee, and that reduces the scope from 53.010 from standard design approval and design certifications because they are not licensees. 20

Another point, the activities under the 21 22 manufacturing license are used to define manufacturing 23 and then this construct the manufacturing occur under a manufacturing license may be a little too limiting 24 25 as a general definition. And the definition of site

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1	characterization seems to expand the definition of the
2	site characteristics, 52.010, and moves it into a
3	category of leakage of radionuclide materials.
4	So those are kind of specific things just
5	to consider as you do some modifications. That's it
6	for now.
7	MR. BEALL: Okay. Thanks, Cyril. Nan,
8	you have something?
9	MS. VALLIERE: I was just going to thank
10	Cyril and say that I'm happy that we have a court
11	reporter because I could not type that fast. So we do
12	have all your comments on record and appreciate that
13	feedback.
14	MR. BEALL: Yes, thanks, Nan. Okay. I
15	don't notice anymore hands up. So I'd like to thank
16	everybody for their comments and discussion on the
17	Subpart A. So with that
18	MR. KRAFT: Bob? Bob? Bob, excuse me.
19	MR. BEALL: Oh.
20	MR. KRAFT: I had my hand up. Sorry.
21	MR. BEALL: Okay. Go ahead, Steve.
22	MR. KRAFT: Yes, sure. I'll make this
23	quick. I think something that NRC needs to think
24	about, in the definition of advanced reactor, I went
25	back and looked at the statute itself just to confirm
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1	that the way you repeated it if it was accurate, and
2	of course it is.
3	I just point out that going beyond what
4	Jeff said earlier, it is a very open-ended definition
5	in one respect because of the phrase, such as. And I
6	don't know how that gets interpreted legally, but it
7	seems to me but then again, one of the difficulties
8	is, as I'm sure Jeff will agree, is that when Congress
9	enumerates a list in a law, people tend to focus on
10	that list only even though it's meant to be not
11	exclusive, and I've seen court decisions in the areas
12	I've worked on where they've done that. But more
13	importantly is the phrase above the list, says
14	significant improvement. I am not going to step into
15	that quagmire as to what that might mean, but that's a
16	judgment, and somewhere along the line someone's going
17	to submit something and you're going to have to face
18	up to what that means. And I think that's I just
19	point that out.
20	I'm not going to offer a comment as to
21	what I think it might mean, but I think that's
22	something that they need to be thinking about in

advance because, you know, recognizing what everyone

has been saying is that I think people who will submit

under this part will want a broad interpretation,

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1	whether that's accurate for them or I don't know, of -
2	- I'm just saying what I just noticed reading this.
3	Thanks. It was just, it was a comment. I
4	don't think anyone needs to reply to that if they
5	don't feel they need to. Thanks.
6	MS. VALLIERE: Thank you, Steve. I think
7	you that just helps to articulate well why we
8	think, you know, some early discussion of these terms
9	is going to be very helpful in reaching to our
10	proposed rule for Part 53 that everybody understands.
11	Thank you.
12	MR. BEALL: Okay. Thanks, Steve. Okay.
13	Can we go to Slide 20? So we're going to start the
14	second part here. This is Topic 2 with the Subpart F,
15	and Nan Valliere is going to lead this off. So this
16	is a discussion of Subpart F, section 73.700,
17	Operational Objectives. Nan?
18	MS. VALLIERE: Thank you, Bob. Next
19	slide, please. So today we are going to continue our
20	discussion on the operational requirements in Subpart
21	F. Next slide, please. Subpart F defines the
22	requirements during the operation phase of an advanced
23	nuclear plant to ensure that the safety criteria in
24	Subpart B and other requirements such as design
25	analysis requirements in Subpart C continue to be

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1 satisfied throughout the plant's lifetime. Section 53.700 provides the 2 overall 3 objectives and general organization of Subpart F, which is to define requirements on plant structures, 4 5 systems, and components to maintain their capabilities and reliabilities, plant personnel to ensure they have 6 7 adequate knowledge and skills to perform their assigned duties to support safety functions, and plant 8 9 programs to ensure they support the performance of the identified safety functions. 10 11 These requirements are needed to ensure 12 that the advanced nuclear plant is maintained and operated such that the first and second tier safety 13 criteria are met. Next slide, please. 14 15 Section 53.710 requires preparation of a transition plan from construction to operations. 16 So, the transition plan would demonstrate that SSCs are 17 18 appropriately constructed and capable of performing 19 their intended functions, that plant personnel appropriately license and train to perform safety 20 21 functions, and that programs, procedures, and controls 22 are implemented to support the safety functions. The discussion table notes, that was the 23 discussion table that was released along with the 24

Subpart F section, it notes that this paragraph may be

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revised once the remainder of Part 53 is complete, 1 specifically to account for ITAAC related issues that, 2 3 you know, we'll be looking at more closely and preparing Subparts H and I. 4 5 And another possible discussion topic is whether these requirements would be more logically 6 7 addressed as a startup testing program in a programsrelated section of Subpart F, rather than address 8 9 separately as illustrated in our preliminary proposal language in this section. Next slide, please. 10 11 Section 53.720 provides the requirements 12 for maintaining the capability, availability, and reliability of SSCs to support meeting the first and 13 second tier safety criteria for unplanned events that 14 15 are described in Subpart B. At a basic level, this section outlines 16 that controls for safety related SSCs are to 17 be 18 provided by technical specifications in paragraph A, 19 controls for non-safety related but safety and significant SSCs are to be addressed through special 20 21 treatments controlled within licensee programs and 22 procedures. Next slide, please. Paragraph A of section 53.720 defines the 23 required limits be included in technical 24 to 25 specifications to define conditions and limitations on

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SSCs to fulfill safety functions and first tier safety criteria. The general content in control of technical specifications under Part 53 will be similar to the requirements in Part 50 and 52.

The requirements for technical specifications include limits on the inventories of radioactive materials, plant operating limits, and specific requirement for each safety related structure system or component including limiting conditions for operation and required surveillances.

11 The proposed requirements for technical 12 specification also include sections on important attributes, administrative controls, 13 desiqn and decommissioning when applicable. I'll note that the 14 15 design attribute section would be similar to the 16 design features required in the current section 50.36. However, a different term may be needed if design 17 features become a defined term within Part 53 to mean 18 19 something different than it means in Part 50.

This 20 first iteration of preliminary 21 language for this section does not include the concept 22 of safety limits or associated limiting system safety 23 settings from 10 CFR 50.36. As discussed in the Commission the functional containment 24 paper on 25 concept, which was SECY-18-0096, systematic

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assessments and more mechanistic approaches to evaluating source terms support an alternative approach to establishing area-based safety limits.

This first iteration of preliminary language for this section on technical specifications also does not include the criteria for identifying limiting conditions for operation or LCOs from 10 CFR 50.36. Instead, the staff proposes to maintain the concepts from Subparts B and C to define LCOs as providing limits on safety related SSCs, which are those associated with protecting against an immediate threat to public health and safety and the first-tier safety criteria.

Currently, 10 CFR 50.36(c)(2)(ii) provides the criteria for limiting conditions for operation and includes criterion (d), which is a structure, system, component which operating experience or or probabilistic risk assessment has shown to be significant to public health and safety.

In this preliminary construct for Part 53, 20 21 significant risk SSCs are addressed through а 22 combination of technical specifications for the safety 23 related SSCs and the introduction of paragraph B of safety this section for non-safety related but 24 25 significant SSCs, which I'll address on the next

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First, however, I'd like to comment that
some stake holders have expressed a desire to allow a
deterministic approach or approaches for performing
the design and analysis described in Subpart C, which
would necessitate a more traditional approach to tech
specs as well. And such approaches may be better
addressed within a revised Part 50. Next slide,
please.

Paragraph B of Section 53.020 -- 53. 720 10 11 defines the required controls to be developed and non-safety 12 implemented for related but safety significant SSCs. Configuration management and other 13 special treatments provide reasonable confidence that 14 reliabilities 15 the capabilities and of SSCs are 16 maintained consistent underlying with the risk 17 assessments.

These controls are needed to implement a performance-based approach and to gain operational flexibilities in areas such as supporting staffing and programmatic topics such as emergency preparedness that will be addressed in Subpart F.

As previously mentioned, changes would be needed to address deterministic approaches with different supporting analyses, safety classification

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schemes, and design approaches. 1 also carries through to other configuration control 2 and program requirements that differentiate between 3 safety related and non-safety related but safety 4 5 significant SSCs based on risk informed performancebased concepts. Next slide, please. 6 7 So Bob, we were intended to have our lunch break at this point. I also believe Mr. Reckley has 8 rejoined us. So we could take the lunch break, or if 9 -- now, or if Bill prefers to move on, we can move on. 10 Well, yes, we can take the 11 MR. BEALL: 12 lunch break now if you want or we can go for another ten minutes and finish and break at noon. 13 Bill, if 14 you want to go for a few minutes, or you want to go 15 ahead and just break? MR. RECKLEY: Given I just joined, I would 16 17 say why don't we just break. 18 MR. BEALL: Take a break now? Okay. 19 That's fine. So we'll take a 45-minute break and so 20 we'll reconvene again at 12:35 east coast time. That'll be at 12:35 east coast time, okay? Thank you 21 22 all very much for your patience this morning. And now we'll break for lunch. 23 (Whereupon, the above-entitled matter went 24 25 off the record at 11:52 a.m. and resumed at 12:35

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p.m.)
MR. BEALL: Good afternoon everyone. So
we will now restart our Part 53 public meeting. Bill
Reckley from NRR will be taking over for Nan and he'll
continue with our discussion of Subpart F, section
53.700. Bill, you can go ahead and start now.
MR. RECKLEY: Okay. Thanks, Bob. So just
a short recap since we broke kind of in the middle of
this series of sections. This part of Subpart F was -
- is intended to address the equipment, and Nan, right
before lunch went over 73 53.720, which goes to
maintaining the configuration of equipment through
tech specs for safety related equipment and through
reliability assurance type programs for the non-safety
related by safety significant equipment.
And so the next section in terms of the
requirements to ensure that the equipment is going to
perform as it was assumed in the various analysis is
the 70 53.730 that Slide 28 addressing. And that
goes to maintenance, repair, and inspection.
And this requirement is largely taken from
the Part 50 maintenance rule. The scope is defined as
being associated with safety related and safety
significant SSCs. So if you're familiar with the Part
50 maintenance rule when that was undertaken, a scope

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had to be defined for that.

One of the advantages that we're trying to maintain here in Part 53 is a consistency across the board and avoiding, if possible, the need to go into specific regulations and defining specific scopes for those requirements.

And so an advantage of having a clear set of equipment that is addressed within Part 53, the safety related and non-safety related but safety significant SSCs, is that we can be consistent in terms of the program. So maintenance rule would be an example of that.

otherwise, 13 So it -the requirement basically says to take appropriate corrective action 14 15 if it's found that an SSC doesn't meet its special 16 treatment requirements or the performance goals established for that, and the performance goals, for 17 18 example, for the non-safety related SSCs would be 19 those that tie back the reliability to and availability assumptions in the PRA and what was 20 21 needed to meet the higher level safety criteria as 22 they're defined in Subpart B.

The requirement to do an assessment of the maintenance program every two years and similar to the maintenance rule for existing operating plants that

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require them to conduct a risk assessment associated with maintenance activities as things are taken out of service for preventative or corrective maintenance. So that's really 53.730. Again, largely you would find it very similar to the maintenance rule as it was established in Part 50. So we can go on to Slide 29.

The next area within Subpart F is associated with design control and the need to maintain -- if the earlier requirements were to maintain configurations in accordance with the design that's established, then this one, 740, is intended to address what needs to be done when a design change is implemented during the operating phase. So it just basically lays out the need to coordinate those design changes with other programs to maintain and ensure that you meet the -- continue to meet the higher level safety criteria as you do those changes.

18 So again, I don' think that one has too 19 much in it. One of the things we'll assess later on is when we see all of these things together is whether 20 this type of a requirement is really repetitive to the 21 22 overall quality assurance requirements and the other 23 interface requirements. So but in terms of the actual technical requirement, I don't think it should be too 24 25 surprising. We'll get to the language and how best to

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1	address these kind of requirements as we can see the
2	consolidated package.
3	So I think with that, we can go into a
4	discussion of this first part of Subpart F that those
5	sections that are related to maintaining the hardware.
6	So Bob, sorry I missed this morning, so I don't know
7	exactly how you're doing this, but
8	MR. BEALL: That's okay, Bill. I know you
9	were busy. Marc Nichols, do you have anything from
10	NEI?
11	MR. NICHOLS: I do, yes. Let me get the
12	camera and microphone on.
13	MR. BEALL: Okay.
14	MR. NICHOLS: Nan, Bill, thanks for
15	providing that presentation. So I think conceptually
16	there's a lot of, you know, alignment on what needs to
17	be done. What I'm going to focus on is more in how
18	the rules are written and how requirements are
19	established and how they interact with each other.
20	And given, and I'll repeat this, Bill,
21	because I don't think you heard my opening
22	introduction. We're looking at Part 53 in is it going
23	to maintain equivalent safety as Part 50? Is it going
24	to be better in terms of more efficient? Does it give
25	more flexibility, reduce burden?

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1 As we look at it, we're not just focused on the academic discussion of the requirement itself. 2 We're looking specifically at how is it going to be 3 implemented, what are the practical implications of 4 5 it, and do those actually realize the benefit? So with that, let me go through some of my 6 7 thinking on this. And I want to start with, you know, and it's a general observation and I'll make a couple 8 9 of examples here. Where the NRC is proposing that are either duplicative of other 10 requirements requirements or have a great overlap with other 11 12 requirements. And while, okay, you're still requiring 13 the same thing from an applicant and a licensee, but 14 when you go to look at the application of multiple 15 requirements requiring the same thing or very similar 16 17 one, there's potential for confusion things, if 18 they're worded differently, two, there are two 19 requirements you have to meet both of them and sometimes it's not clear that doing one thing meets 20 21 both of them so you might have a duplicate effort. 22 And then specifically for the one I'm going to focus on first, it's 53.700, which is --23 sorry, it's on Slide 22 if you want to go back to it. 24 25 Which in my mind, what I think the NRC is trying to do

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is really use this 53.700 to establish the purpose of 1 this subpart. 2 And you know, perfectly fine to use a 3 requirement to establish the purpose of the subpart, 4 5 I've seen it done before, but how it's written is really important because here what this requirement 6 7 does when you look at it, it establishes very specific things that have to be done by the applicant, the 8 9 licensee. Many of those things are repeated in other requirements. 10 11 And the way they're phrased is there are 12 things that you, the applicant can be held accountable for strict compliance to the regulations, and where 13 that becomes a concern is as applicants come into the 14 15 NRC and may apply and a reviewer's looking at it and 16 they well, I've come up with this say, new 17 understanding or perspective or expectation. It's not 18 written down anywhere and as they go through the 19 process of trying to ask the applicant to provide more information and even to change their design, they 20 21 always have to say which requirement their new 22 expectation and request for desiqn change or information ties back to. 23 Well, a requirement like 53.700, and you 24 25 have a couple others that are written this way, you

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1	know, one of the ones in Subpart B and your second
2	iteration you actually fix by saying, this requirement
3	I met by meeting these other requirements. So it sort
4	of prevents that type of outcome. But this one I
5	don't think is written that way.
6	So it's very easy for the NRC to come back
7	and say, well, I want this, and the applicant says,
8	well, why should I have to do that? Well, 53.700,
9	it's this nice catchall, it requires a lot of things
10	and I can fit whatever expectation I want in there.
11	And therefore, it leads to a lot a lack of
12	predictability, a lot of uncertainty that we could get
13	these future gotchas and new expectations.
14	So I would just say this is more of a
15	formatting comment. It's not that I'm opposed to a
16	purpose objective, it's just that I think they should
17	be written very much as a purpose objective. So the
18	purpose of this subpart is to do blah, blah, blah,
19	these requirements fulfill this requirement, you know,
20	the objective of this subpart so that it does it
21	prevents that type of future uncertainty.
22	I'll pause there just to see if there's
23	response or question before I go on to my next
24	(Whereupon, the above-entitled matter went
25	off the record at 12:45 p.m. and resumed at 12:47
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1	p.m.)
2	MR. RECKLEY: No, that's a good comment
3	and you're right. That's what we had intended is to
4	lay this out as a purpose.
5	MR. NICHOLS: Yes.
6	MR. RECKLEY: So we'll consider your
7	suggestion to make sure it's written that way.
8	MR. NICHOLS: Okay. Thanks. Yes. And
9	you fixed a similar one in Subpart B 53.200, when you
10	add a added a sentence meeting these other
11	requirements to fill this. So that's one way to do
12	it, not the only way, but certainly wanted to point
13	that out.
14	The next question comment is on page 23
15	in 53.710, and as we're looking at this question about
16	whether 50 Part 53 is going to be more efficient
17	than Part 50, 52, this is one that caught our
18	attention. There's no specific requirement, or
19	standalone requirement in Part 50 and 52 for a
20	transition program, or plan, I should say, we do find
21	it in the application content that it needs to the
22	transition from construction to operations needs to be
23	described.
24	The thing that this one does, because it's
25	much more specific on everything that has to be in the
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1 transition plan, it is going to be an increase in burden on the industry. And so I just wanted to point 2 that out that the creation of it, it's not changing 3 whether a transition plan is developed. It's not 4 5 changing whether that -- how the transition is going to be done, is communicated to the NRC. 6 7 But establishing it as а standalone requirement is going to increase some burden. 8 So I 9 just wanted to make sure that the NRC was aware of that. 10 11 We can go onto slide 26 then, and back to 12 theme of duplication. So first one, mγ we do recognize that the risk informed approach on this 13 previous slide, the risk informed approach to tech 14 15 specs for safety related, is an improvement and we 16 appreciate that. When we look at the control of non-safety 17 related safety significant SSC's, this is another area 18 19 where we need to really read through the other requirements to see, is there overlap. 20 Is there 21 duplication here, and I think this is one where there 22 is duplication. So it might be that we don't even 23 need this requirement. This 720(b) to begin with. And where it duplicates, it duplicates 24 with 53.470, 53.740, those are both design control 25

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related requirements. It duplicates with quality 1 assurance itself, which is design and configuration 2 3 control over the plant. And so I really would encourage the NRC to 4 5 take a look at that and ask, well, could you do this you need four different more efficiently. 6 Do 7 requirements to try to achieve design and configuration control, or can you just rely on QA, 8 9 which I think is what we can do. We can just rely on QA to control the design and configuration control, 10 11 and not have to have many of these other requirements. 12 I'll just go back to, you know, these are areas, they're actually all worded differently, maybe 13 you can explain, there may be some greater vision of 14 15 how they all work together, but they appear to be somewhat duplicative, overlapping for 16 sure, and they're all worded differently. 17 18 So there is a log of confusion on, well, 19 how do I meet all of those requirements with, you know, very efficiently. So let me pause there and 20 just see if you have a response on those, those 21 22 overlapping requirements. 23 MR. RECKLEY: Yes, only in so far as the nature of laying out the organization by lifecycle 24 25 stages kind of naturally results in some overlap,

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1 where you have requirements in each lifecycle stage associated with something. So I know it can come off 2 as being repetitive, and to some degree it is. 3 But we were trying to include within 4 5 Subpart F, which is the requirements during the operating phase, what the requirements are during the 6 operating phase. 7 So this is how you maintain those reliabilities and availabilities. You establish them 8 9 in Subpart C, as you mentioned, you ensure they're provided in Subpart E during construction, and you 10 11 maintain them through operations, through the 12 requirements in Subpart F. So I think it's just one of those things 13 we'll continue to discuss, a natural outgrowth of 14 15 laying out this structure that way is that things get 16 addressed. The same things are addressed in each 17 subpart, but the intention is that they're being 18 addressed in relation to that operating phase. That 19 stage of the lifecycle. understand what 20 anyway, Ι So vou're 21 We'll continue to look at that and at saying, Mark. 22 some point, we might have to, you know, have the 23 discussion on if there's a better way to organize things when they're often -- when they're repeated. 24

MR. NICHOLS: Okay. Yes, thank you, thank

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1 you for the explanation. Yes, I would encourage that exercise to go through it, a comparison of 2 the options, you know, to repeat requirement, I'll just 3 call them cross-cutting requirements. Cross-cutting 4 5 mean they apply to different phases of the lifecycle. To apply them in each phase of 6 the 7 lifecycle in very nuanced ways that apply to that phase of the lifecycle, or just put it together in one 8 9 place that would apply across the range of Part 53. QA is one of those. In fact, I think 10 11 configuration control should just be left to QA. Ι 12 don't think we need another configuration control requirement, but you know, we proposed in our February 13 version that QA just be treated in one place, and not 14 15 have to repeat it over and over again. So yes, would encourage you to look at the pros and cons between 16 that. 17 18 The last comment is operations on 19 requirements related to the white paper you had put out, and I know we're still reviewing that and you had 20 21 talked about it at a previous meeting. But it really 22 gets into things like staffing and that sort of stuff, 23 and we didn't see -- or I didn't see any requirements related to that. I don't know if you were expecting 24 25 them to be somewhere else, what you were thinking

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1	about that.
2	I know in the NEI version, we actually,
3	you know, and we proposed different ways, so what I'm
4	about to say isn't a suggestion you included because
5	ours was built on a different concept here. But we
6	actually had a requirement to describe the conduct of
7	operations. So that would have caught that type of
8	consideration. But I didn't see it in your version.
9	MR. RECKLEY: Yes, really, the way Subpart
10	F is we expect to lay it out was, and it might have
11	been too subtle in 700, it basically lays it out into
12	three segments, equipment, personnel, programs.
13	And so we drafted language for equipment
14	and programs, and we have yet to write anything on
15	personnel, thinking that with the release of the white
16	paper, we would discuss that, those sections of
17	Subpart F in a future meeting, once people had had an
18	opportunity to look at the white paper and give some
19	thought on actually addressing the issues.
20	That white paper talked about some
21	possible directions we might go, but largely was
22	written as a problem statement, and so we hadn't
23	really developed specific proposals yet, how to
24	reflect this structure, when it comes to personnel.
25	So that, yes, the short answer is yes. We
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1	intentionally left that blank, and we're going to
2	address that in a future meeting, and we'll address
3	the overall topics in that white paper, and also some
4	preliminary language that we'll develop over the next
5	month or so.
6	MR. NICHOLS: Thank you. Those were all
7	my comments. Thank you.
8	MR. BEALL: Okay. Thank you, Mark. Does
9	anybody else have any comments or questions about this
10	section of Subpart F?
11	MR. PAESE: Yes, this is Rick Pease from
12	Westinghouse. I had a comment/question on Slide 25.
13	MR. BEALL: Okay. Go ahead, Rick.
14	MR. PAESE: Yeah, so slide 25 talks about
15	the tech specs and some of the requirements
16	surrounding the tech specs. My question was on the
17	surveillance requirements wording in Paragraph
18	720(a)(3) where requires the use of surveillance
19	requirements.
20	And I know that there's some precedent on
21	not having any surveillance requirements for a given
22	LCO in areas like digital I&C that have built in
23	automatic test features that can take the place of
24	manual surveillance requirements.
25	And the way the rule is written currently,
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1	it seems to require surveillances. I was just curious
2	if the staff had considered the historical precedent
3	of, in some cases, an LCO may not require a
4	surveillance requirement and if that's, that's a
5	vision to be continued to be allowed here under the
6	Part 53 wording. Thank you.
7	MR. BEALL: Bill, are you on mute?
8	MR. RECKLEY: Thanks Bob. Yes, we'll look
9	at that. It was, just basically, we used what we were
10	copying this from when we went back to 50.36 as the
11	starting point. I didn't update it to reflect any of
12	the more recent changes that might have been
13	occurring.
14	And so we'll take a look at that. I'll
15	make a note and see whether we can change that
16	language, or maybe reflect keep the surveillance
17	requirement, but reflect that there might be ways
18	where that's done automatically, or whatever.
19	But we'll talk, maybe, to the if you
20	have any suggestions, please send them to us. But
21	otherwise, maybe we'll talk or look over the digital
22	I&C side to see how that might have been addressed.
23	So thank you.
24	MR. PAESE: Okay. Thank you.
25	MR. BEALL: Okay. Cyril, you have your
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1	hand up.
2	MR. DRAFFIN: Yes, I do. This is Cyril
3	Draffin, U.S. Nuclear Industry Council. I agree with
4	what Mark said regarding having clarity and not
5	duplication regarding requirements that appear in
6	different parts of the Part 53, to avoid unnecessary
7	work for applicants.
8	As far as the discussion on operations and
9	people, we provided comments at the previous meeting
10	on and the approach had been taken, and I did note
11	that NRC had approved the, one of the things we
12	recommended, is not requiring STA's, and I think that
13	the NuScale, recently, the NRC approved the not
14	having STA's, so I think that's helpful, a helpful
15	step.
16	I did want to raise a much broader
17	question that Nan had brought up in Slide 25 and 26.
18	When she referenced Part 50, and the deterministic
19	approach. Is there plans, the industry has
20	recommended that, you know, Part 53 be inclusive but
21	is there also a plan for updating Part 50 to make that
22	to reflect non-large liquid reactors to allow to
23	deterministic approaches, so that could be an
24	alternative to Part 53.
25	So maybe a little bit detail on what your
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1	current thinking is on how you might update Part 50.
2	MR. RECKLEY: Yes, and what we're
3	requesting from stakeholders is a little more specific
4	observations or plans in terms of the technologies and
5	possible deterministic approaches, so that we can make
6	a decision of whether it's more practical to address
7	it within Part 53, and try to adjust our initial plans
8	for Part 53, which as we laid out in the rulemaking
9	plan and before that in SECY-19-0117, on the licensing
10	modernization, that that was really the avenue that we
11	were setting.
12	The course we were setting was to take
13	that risk informed approach and carry it through to
14	Part 53. And so some of the comments we're getting
15	about people wanting to take a more deterministic, or
16	traditional approach, the decision we're trying to
17	reach is where is the most practical way to do that.
18	If you going to follow things like assume
19	a single failure, assume safety related equipment for
20	AOO's and DBA's, and use that to establish specific
21	requirements on SSC's and assume, or apply the single
22	failure criterion as it was applied in Part 50.
23	If that is the general approach that
24	somebody wants to take, and I understand it. I'm not
25	saying there's anything wrong with it. But Part 50 is

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1 built that way. And so it may be more practical to create a new alternative section in Part 50 that 2 basically would say, I'm just making this up on the 3 spot here, in lieu of 50.46, that defines a specific 4 5 requirement for a large break LOCA, an applicant define a design basis accident using the following 6 7 quidance. And there's standards and a history of how that might be done in a deterministic way. 8 9 And then everything else in Part 50 would You would just replace the DBA from a large 10 apply. 11 break loss of coolant accident to a new DBA that's 12 defined for a specific design. So if that's what people want to do, we 13 want -- we would appreciate knowing that so we can 14 15 Then as part of this rulemaking, or if it's decide. possible, or a future rulemaking, we can go into Part 16 50 and we can make those adjustments. 17 18 But the difficulty we're having of trying 19 to address that within Part 53 is just the examples that were given here. The reason we're setting out a 20 21 reliability assurance program, that admittedly is 22 probably goes -- it does go beyond what was done in 23 Part 50 or 52, is because the reliability assurance program maintains the validity of the licensing basis 24 25 events as they, as we laid them out earlier.

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And part of that is to justify not having to do the single failure criterion for safety related equipment used in the DBA, and AOO's. So again, what we're really looking for in order to support that decision is a little more input from stakeholders about what approaches they want to take. We've heard people say they're reluctant and they want more flexibility in not using LMP, we understand that. But we need to know what those alternatives are so that we can write the language and make decisions. So that's what we mean about maybe going into Part 50. It might be the easier way if people are wanting to use a Part 50 type approach. The traditional structure list or barrier based approach. So what we're looking for from stakeholders is some additional specifics on what are they, what are they planning to do that they fear that 53, it's currently constructed, isn't Part as supporting. And then we can make a decision as to whether to adjust Part 53, or to go in Part 50 and make a change.

You're muted, Cyril.

24 MR. DRAFFIN: Thank you. Would you 25 consider both? In other words, if you think that

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1	there's some benefits for having the modifications to
2	Part 50, and other people see benefits of having all
3	together in Part 53, you try to accomplish both using
4	perhaps some of the same language, and have that as a
5	dual path that would be available to applicants.
6	MR. RECKLEY: Yes, I mean, we'll consider
7	anything. It just becomes more difficult. Like in
8	Part 53, if we have to start making decision boxes and
9	carrying it throughout the whole part of whether or
10	not you're using a single failure criterion, whether
11	or not you're analyzing beyond design basis events, it
12	becomes difficult.
13	And so it but that's the reason we're
14	asking for specifics in terms of what people are
15	thinking how them might approach this. If there's a
16	reference to you know, rev 1 of IAEA specific safety
17	requirements 2/1, I can go look at that and I can
18	figure out how to either apply it within Part 53, or
19	make adjustments to Part 53, or that's a case where
20	that's written a very traditional light water reactor
21	centric approach, it might be easier just to make sure
22	that that approach can be accommodated but it would be
23	accommodated within Part 50.
24	So again, as soon as people can be a
25	little more specific about what they're envisioning,

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1	then we can make the decisions about whether to try to
2	do it in Part 50 and Part 53, or as you suggested,
3	Part 50 and Part 53.
4	MR. DRAFFIN: Okay. So far, the US NIC's
5	theme is that 53 should be comprehensive, technology
6	inclusive, and would include both the PRA LMP type
7	approach, as well as deterministic. But we certainly
8	will, that's an ongoing dialog that we're all having,
9	so we'll be attentive to that.
10	MR. RECKLEY: Right. And I think, yes, I
11	mean, our intention is always to make it technology
12	inclusive, what we're getting down to is whether it's
13	methodology inclusive. And it can include all
14	possible methodologies.
15	And again, that's where we come down to
16	Part 50 is based on one traditional methodology, and
17	Part 53, as we originally envisioned it, was based on
18	the LMP type methodology. And both of them have their
19	strengths and their weaknesses.
20	But trying to address both of those which
21	are coming out a problem from different directions
22	within one rule, is a challenge. So
23	MR. DRAFFIN: Okay. I have another
24	comment, but I suspect that Mark might have a comment
25	on this one. So I'll pause here and give Mark a
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1	chance, and then I'll come back.
2	MR. BEALL: Okay, Cyril. All right, Mark
3	Nichols?
4	MR. NICHOLS: Yes. Thanks. I did want to
5	weigh in on this discussion about risk informed
6	methods versus deterministic methods, and Part 53, for
7	one, and 50 and 52 is the only way for the other. And
8	should we expand this rulemaking to include a
9	rulemaking for 50 and 52.
10	So first, I want to say entertaining that
11	notion at all is ridiculous and a non-starter. I do
12	not believe it was Congress' intention to direct the
13	NRC to create a technology inclusive rule, and then
14	for the NRC to go create an exclusive rule, such that
15	they're now going to have to go back and revised Part
16	50 and 52, in order to be able to license advanced
17	reactors.
18	So I think we need to stop discussing the
19	potential for revising Part 50 and 52, which is not
20	possible on the to add to the current scope of the
21	Part 53 rulemaking and get it all done in time.
22	So where I think we need to be going is
23	looking at making Part 53 inclusive, and Bill, you
24	said it very well. It's inclusive from a technology
25	perspective. What we're debating is whether it's
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inclusive from a methodology standpoint.
This gets to the next point, which is what
we're talking about are risk-informed opportunities,
or I should say alternatives, in Part 53. We're not
asking for any deterministic, strictly deterministic
methods. We're asking for alternative risk-informed
methods.
So we have LMP and TICAP, and we know that
those are going to work under Part 53 because Part 53
is being structured around them. That's great. We
want that. And we have, and industry is developing
more details on other approaches that might be used.
But you have two examples that you are
very familiar with that are risk-informed, that should
be allowable under Part 53, NuScale used a more
traditional, and Oklo used more of a master calendar.
Both used probabilistic risk assessments. Both
considered risk. And so both are risk-informed.
Are there degrees to which a PRA was used,
some more than others? Yes. Are there some people
that want to be able to use a non-quantitative risk
evaluation method? Yes. And we should discuss
whether those do fit or not in here.
Now so what we're talking about, we're
talking about all of these methods we want are risk-
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1	informed. So I want to make sure we're all clear and
2	agree on that.
3	The next point is that the NRC is working
4	on a graded approach to risk-informed, or a graded
5	approach to risk for Part 50, 53. You're working on a
6	paper, you've told us, we're very excited you're doing
7	that. We think that this is the right approach to go.
8	It'll answer all these questions, flush them out.
9	So I think the focus should be on that
10	effort to define this graded approach to risk. Now,
11	industry has pointed out that there are two
12	requirements the NRC still has that would be barriers
13	to a graded approach to risk-informed.
14	One is in the specific uses of PRA to
15	select LBE's, that sort of thing. And the other is
16	that the QA chose. What the NRC has told us is well,
17	those are required because if we don't have those,
18	we're not able to reduce burden in the operations
19	side. Wait until you see those requirements. We'll
20	show you the reduced burden, and we'll show you how
21	those depend on those requirements.
22	And so that's what we're waiting for. I
23	think that's the next discussion. So I won't make any
24	comments in that area. But I do think two very
25	important points. We should not be entertaining
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having to revise Part 50 and 52 to be able to license 1 advanced reactors. 2 That is Part 53's responsibility and we 3 should not be calling these alternatives that we're 4 5 seeking deterministic. They are risk informed alternatives that we're seeking. Thank you. And I 6 7 apologize for my passion. MR. RECKLEY: No, thank you. 8 We were --9 we'll await the descriptions that you're mentioning of these other approaches. So we'll wait and see. 10 The -11 - I do think in terms of some of the benefits, you 12 really have to go through. Some of them are subtle, 13 and you have to compare them of what you would get using the risk-informed modernization project type 14 15 approach, versus a more traditional approach. 16 just went through some of the So we configuration control things and the reduced number 17 18 expected to be, in terms of the safety related 19 equipment, and therefore, the reduced number of tech 20 specs. 21 But that's a subtle thing. You don't 22 necessarily see that in the requirements. You only --23 that's an outgrowth of using the whole risk-informed methodology that you're able, at the end of the day, 24 25 to have a reduced number of safety related equipment,

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and therefore, the controls.

2	So I would just caution, as you look, you
3	got to understand what you're looking for and
4	understand how the methodologies drive it, not just
5	the rule techs. Yes, there's still a requirement for
6	tech specs. So if you look at it and say you got no
7	relief, that's a premature jump.

You have to say what did the whole riskinformed methodology give me, and that, yes, I still have tech specs, but there's fewer SSC's that are controlled by tech specs. Therefore, I have more operational flexibility because a larger fraction of the plant is now being done under licensee programs versus strict tech spec controls.

15 So again, I'll just ask you to look at it in those contexts of if you're just looking at what 16 17 rules don't show up, you won't necessarily see the 18 relief. You have to carry through the whole methodology and see how it would get reflected. 19 But 20 I'll leave it there, and we can go back to additional 21 questions, or comments, or suggestions.

22 MR. BEALL: I think, Cyril, you had a, you 23 had some follow-on comments you'd like to make after Mark was done? 24

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So I -- we concur with MR. DRAFFIN: Yes.

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the desire and expectations that Part 53 will be 1 comprehensive for advanced reactors. 2 And that 3 allowing these alternative approaches, which we've mentioned in previous meetings, and which Mark 4 5 reiterated today in terms of what Oklo and NuScale, and other risk-informed approaches are appropriate. 6 7 And locking into PRA language, and QHO language, or -- may have to be changed, or should be 8 9 changed. There were discussions at the ACRS meeting that they also support a graded approach for PRA, as 10 11 we do. And I think the NRC does. And that's -- that 12 could be helpful. And there's also the questions that were 13 raised about QHO's and whether that was a strong of 14 15 case, was justified as some of the people -- staff had mentioned yesterday. 16 So I do think that expanded thought on 17 18 PRA's, and not having that as a direct requirement may 19 be helpful, but it's -- we are still expecting the 20 Part 53 to be comprehensive, and I was asking whether, 21 in addition to that, you would consider modifying Part 22 50. 23 Might, a little, elaborate on tech specs You just mention that there would be less 24 for us. 25 equipment covered there. Can you quantify that in

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terms of you said that the tech specs would be similar to previous parts. Do you have a sense of how long they would be in terms of what the applicants require, a quantitative assessment of the number of pieces of equipment that would be required under tech specs, under the approach that you're taking versus what's been in the past? It's kind of fuzzy in terms of these, the relief you've referred to that keeps being, being And so if the tech specs are one of the aspects, could you elaborate in detail on that, and what would be reduced from what the current load is? Well, that -- it's going to MR. RECKLEY:

14 be design specific. I think there's plenty of history 15 if you want to look at either the tabletops that were done for LMP, for example, or going back further than 16 that, if you want to look at the MHTGR submittals that 17 18 use similar risk-informed approaches and went through 19 exercise, much as it is laid out here, the of identifying required safety functions. 20

21 And then smartly assessing what would be the safety related function, safety related design 22 features to meet those functions. 23 I think that history exists in large part through that particular 24 25 history of MHTGR through NGNP, up through the tabletop

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elusive.
1 exercises for LMP. But it would differ by, it would differ by 2 design. And the nice thing about it is a number of 3 different technologies went through that exercise. So 4 5 I'll just refer you to those references and the reports on those tabletops for some of the initial 6 7 thinking on the number of safety related equipment. And then a designer would just have to 8 9 look at, if you did it a different way, what would be the associated number of safety related equipment, and 10 11 under this provision then, what would be the scope of 12 the tech specs. MR. DRAFFIN: A little unclear still. 13 14 Okay. Thank you. 15 MR. BEALL: Okay, Steve Kraft, you have your hand up. Steve? Hey, Bill, can you hear me? 16 MR. RECKLEY: I can hear you, Bob. 17 18 MR. BEALL: Okay. Steve's unmuted. Okav. 19 We'll wait for Steve to come on. Does anybody else 20 have any other questions or comments? 21 Okay, so we -- I quess we can come back to 22 Steve a little bit later on. So, Bill, I think we'll 23 go ahead and start on the next section of Subpart F. MR. RECKLEY: Sure. 24 25 MR. BEALL: Which is Section 53.800,

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1	programs. So go ahead, Bill.
2	MR. RECKLEY: Okay. If we can go then
3	so this is, again, we broke Subpart F into three
4	segments. Hardware, people, and programs. The next
5	series of slides and sections go to the programs part.
6	So go on to 33.
7	So the first one is, again, just an
8	overall assessment, overall requirement for each
9	licensee to do an assessment and determine what
10	programs are necessary when looking at design features
11	and human actions. What programs are needed to
12	support the safety criteria in 53.210 and 220?
13	Then going on to 34, we go into a
14	specific, start a specific list of programs. We're
15	still working with the subject matter experts within
16	the staff to kind of refine what these are. But we
17	wanted to capture what we think the programs would
18	need, which of those programs we understand well
19	enough now, that are going to be in here, and they're
20	fairly traditional.
21	I don't think there should be too much
22	surprise so a licensee under an operating license or a
23	COL, once they enter the operating phase, would be
24	expected to have a radiation protection program. That
25	is limiting the occupational exposures, in accordance
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1 with Part 20. And it's also setting up the program to 2 control and monitor effluents and that brings in what 3 has traditionally been under 50.36(a), and the 4 5 environmental tech specs, and we kept for now, just because it's a familiar term, whether we continue to 6 7 use it, we can engage in these discussions. But the role of the Offsite Dose Calculations Manual. 8 And this would also point back to what we 9 will later include in the reporting requirements in 10 11 terms of submittal of annual reports on effluent 12 releases. So again, this is basically comparable to 13 existing requirements, bringing in a couple different 14 15 rules. 16 So with that, we can go on to 35. 35 is 17 the emergency preparedness program, emergency 18 planning. So this we understand, we didn't put much 19 text in here. There's a rulemaking in progress for the emergency preparedness for small modular reactors 20 21 and other new technologies. 22 So the relationship of this program to 23 that rulemaking, and then it would tie into the analysis section where the consequence assessments 24 from the unlikely and highly unlikely events would 25

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1 support the definition of the emergency planning zone, for example. 2 Going on to 36. This is related to 3 security. So security programs would have to be 4 defined for protection of 5 information, physical security programs, cybersecurity programs, an access 6 7 authorization program, and material control and 8 accounting. 9 In addition, sometimes included within this set, because of how our organization is set up, 10 11 is fitness for duty. We kind of have fitness for duty 12 under the middle seqment associated with personnel, but as we go forward, we're developing language for 13 these various sections now. Changes to fill out this 14 15 section within Part 53, and then related changes to Part 73 for security, and Part 26 for fitness for 16 17 duty. 18 And plans to issue that our are 19 preliminary language and talk about that during the next public meeting, or two, as people are able to 20 21 look at and digest that preliminary language. 22 So not in this version, not much text there, just a placeholder, and that language will be 23 coming shortly. 24 25 So then moving on to Slide 37. This goes

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112 1 somewhat to Mark's point. QA does show up in each section, each subpart, because quality assurance is 2 important during all phases of operations, design, 3 construction, and operations. 4 5 So we can look once we see the consolidated package put together whether it makes 6 7 sense to have it repeated, or as is being suggested, maybe go to a cross-cutting format where some of this 8 9 would be put as an example into the -- something that looks more like Appendix B, for Part 50. 10 11 But what we did was just look at the QA 12 program that would be supporting operations, and go down through the various criterion to see which ones 13 of those apply, and included them in the list. 14 15 So going on to next slide. Aqain, Bob, 16 did you just want to continue through these and then 17 maybe take a break? And then open it up for 18 discussion? 19 MR. BEALL: Yes. Let's go ahead and 20 continue on. Okay? 21 MR. RECKLEY: Okay. So the next one, next 22 program that we put into Subpart F is something that, at least for now, 23 we named integrity assessment And this is a program to make sure that 24 program. 25 licensees during operation are looking for degradation

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1	of equipment, and so a couple typical examples of that
2	are aging management.
3	The next bullet, it goes to the
4	traditional tech speck requirement to look for cyclic
5	or transient loads. Make sure you don't have fatigue
6	oriented failures.
7	And then the last bullet is to make sure
8	licensees are looking for and assessing degradation
9	related to chemical interactions, operating
10	temperatures, irradiation, or other factors. So this
11	would, for light water reactors, look somewhat like
12	the material control programs that were put in place,
13	for example, after the discovery of intergranular
14	stress corrosion cracking.
15	So basically, just a recognition that
16	programs need to be in place to look for that. That
17	might be an area that is especially important for
18	designs with less operating experience. And this
19	comes, again, down to one of these subtle areas that
20	you have to think through.
21	If we have a program in place where a
22	licensee during operation is needing to look for
23	degradation, and needing to take actions if it's
24	discovered, that may show up to you as a new
25	requirement. And it may be a new requirement.
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1	But what it can enable is during a
2	licensing review, to basically say we don't have 40
3	years of operating experience to tell you how
4	materials are going to degrade under these
5	environments, with these materials, with these
6	coolants, with this pipe. And that's okay because
7	53.850 will include a requirement to do inspections
8	and look for degradation, and it will be fixed if it's
9	found.
10	In the absence of this kind of program, a
11	designer might very well have to show that they've
12	done the testing, they've done the all of that is
13	needed to be done to predict 40 years of operation
14	under those environments. So again, I just, you
15	know, as you look at how we've tried to put this
16	together, don't look and say there's no equivalent
17	requirement in Part 50. Look and say here's a program
18	that's going to carry into operations in a performance
19	based approach.
20	And the alternative to this might be that
21	the designer or the applicant, in the very beginning,
22	needs to show that there's no degradation mechanism
23	that's going to occur over the 40 year of the plant,

which is a difficult task, given the operating 24 experience for some of these designs, some of these 25

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1 materials. So let's go on to Slide 40. So fire 2 This is an area that we just copied over 3 protection. largely. We're currently engaged with our fire 4 5 protection folks to look not only at the program during operations, but also the fact that in Subpart 6 7 C, we have some placeholders for fire protection, but we didn't address fire protection probably enough in 8 9 Subpart C on design and analysis. So when we come forth with some language 10 11 related to fire protection, it might affect both 12 Subparts C and F, given the input we're seeking from But for now, this looks much like 13 our own experts. the requirements for fire protection programs for 14 15 existing plants. Again, when you look at the scope, it's an 16 area where fire protection is able to take advantage 17 18 of the previous classifications of equipment and look, 19 and be -- we don't have to define a scope, we just are qoing to use the safety related, and non-safety 20 21 related, but safety significant categories to apply to 22 the fire protection program. 23 So qoinq 41. In service on to inspections, in service testing requirements. These 24 25 are an area that is often taken care of through ASME

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Section 11 type programs. But we would expect that 1 true reference to a consensus code or standard, or 2 otherwise that there's going to be programs to govern 3 in service inspection, in service testing for the 4 5 equipment. So again, these were largely carried 6 7 through. We can look and see how some of these programs and in particular, ISI and 8 IST, might 9 interplay with some of the earlier parts of Subpart F in terms of the need to do surveillances, 10 and so 11 forth. 12 So there's a potential there may be some overlap there. But for now, we just, we're trying to 13 have at least a placeholder here to make sure people 14 15 didn't forget that these type of inspections would need to be done. 16 So if we go on then to 42. 17 Criticality 18 Safety Program. This largely just points to the

requirements in Section 70.24, the special nuclear materials regulations. We did put in the comment table, or the -- that the existing requirement in 50.68 somewhat -- well, largely developed, for light water reactors, gives some relief from 70.24, or alternatives to 70.24, and was ask for people to look at those two requirements.

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1	We currently, in this write up, just
2	reflect 70.24. It's the broader of the two. But if
3	you want us to look at 50.68, we could look to see if
4	that would be something that people wanted to for
5	us to incorporate. Kind of a built in acceptance of
6	an alternative for criticality safety.
7	Okay, going on to Slide 43. This is, we
8	had released the preliminary language for a facility
9	safety program back a few months ago. This is just
10	moving it into the program section. So renumbering
11	and moving it.
12	Some editorial changes to reflect some of
13	the other like numbering changes we did in Subpart B.
14	But otherwise, we didn't go very far in coming up with
15	a second iteration on the facility safety program. We
16	point out in the discussion table that some of the,
17	some of the impressions, I think, on the facility
18	safety program were based in, at least in part, on its
19	length and the level of detail we went into, and some
20	of the administrative parts of that program.
21	That's game for possibly looking at and
22	seeing if some of that administrative detail could be
23	taken out. Maybe addressed in guidance, documents, or
24	somewhere else.
25	We can continue to kind of the
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philosophical discussion associated with having a requirement for a facility safety program and how that interfaces with other aspects of a more global regulatory vision.

In my mind, this is one of those cases where kind of philosophically, the industry's going to have to kind of make some decisions on a overall regulatory program that's based on compliance, where a licensee says I'm safe because I comply, versus a more performance based approach that includes things like facility safety programs.

Where licensees are looking themselves and deciding on whether improvements are warranted. Yes, it's a new requirement. But it again, kind of goes to the philosophy of if the NRC is making all the safety decisions, then you have to accommodate NRC through inspections and reporting requirements.

And everything that is needed for the NRC to be the primary decision maker on what safety improvements are needed. So again, kind of a philosophical challenge.

If we go to 44. This just, yes, continues the discussion on the performance criteria. This -there was an attempt when we did the first iteration, I think these criteria would have to be enhanced, but

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look at them. They were trying to strike the balance between making sure issues were assessed, and then a higher threshold for when an action might actually be taken.

So you need to have your inspection threshold lower than your implementation threshold. And so we were just trying to lay that out and using something like five person-rem as a kind of starting point, in that a problem would have to have offsite consequences before any improvement measure would actually be needed.

So if we go on then to slide 45. This is just the, again, this is one of those areas where a lot of administrative detail on how this was laid out. That was because we basically modeled it after another agency's requirements in the transportation sector.

But this might be an area where we can take out detail from the rule, and then guidance document, or even a template for a program might be developed. We could talk about that in a future discussion.

22 So going on to 46. This was just laid out 23 under that section that the FS -- the Facility Safety 24 Program would be part of an application, would be 25 approved by the NRC. And that's also an interesting

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1	area for discussion because it goes to historically,
2	most of the programs that were listed in the previous
3	slides fall into that same category, as being part of
4	applications and part of NRC approvals.
5	So that's kind of where we were starting
6	from. But it especially as we go forward and start
7	talking about Subpart H on the licensing, it might be
8	an area that we can elaborate on and discuss the
9	existence of the programs, and whether there might, in
10	those areas, also be maybe a performance based
11	approach where the level of review of those programs
12	at the application stage can be discussed.
13	Again, we're just starting to write
14	Subpart H, but that will be part of the discussion as
15	we go forward.
16	So then going on to slide 47, the last of
17	the programs, is procedures and guidelines and this is
18	intended to capture what's often put in the
19	administrative section of tech specs, or yes, section
20	of Section 5 of tech specs, Chapter 5. That there
21	needs to be a program for procedures and one of the
22	things we can discuss is the inclusion of guidelines.
23	Especially after Fukushima, it came under,
24	you know, a lot of review and discussions. For
25	example, how to do spare accident management

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1 guidelines, extreme damage mitigation guidelines. And so I included them in this section, that they needed 2 to exist, but we would have to work out through 3 quidance and discussions the treatment of various 4 5 procedures and guidelines. So I really hadn't intended to change the 6 7 structure through this program requirement, only that this was a place to capture -- one of the Fukushima 8 9 insights was that, you know, you should have an integrated set and there should be logical connections 10 11 from plant operations and obviously, maintenance that 12 we already talked about. But then from plant operations down to 13 emergency operating procedures, and if necessary, 14 15 accident management guidelines. So that was the purpose of include procedures and guidance in Subpart 16 Again, largely this might, if you were looking for 17 F. the equivalent to this, they would be largely in tech 18 19 specs currently. So with that, I think that goes through 20 21 that part of Subpart F, the programs part. So 48 is a 22 discussion slide. Bob, if you want to --23 Yes, okay. MR. BEALL: So we've gone through the two sections now in Subpart F. 24 So does 25 anybody have any questions or comments about the one

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1	we just went over, the 53.800 programs? Hey, Mark,
2	you can go ahead.
3	MR. NICHOLS: Okay. I was actually going
4	to suggest, because Steve Kraft wanted to talk about
5	his comment on 700. Did you want to go back to him
6	before we get into 800?
7	MR. KRAFT: I assume I'm on.
8	MR. BEALL: Yes, you're on, Steve.
9	MR. KRAFT: I guess I am if you're
10	laughing, Bob. Thanks.
11	MR. NICHOLS: Hey, Mark.
12	MR. KRAFT: Hey.
13	MR. BEALL: Go ahead.
14	(Simultaneous speaking.)
15	MR. KRAFT: I'm sorry, but I had a bit of
16	a headset issue here and there are too many switches
17	you have to throw. Going back to sorry for the
18	prompt.
19	So one point Mark made, that I want to
20	just sort of elaborate on, a little bit of history, is
21	when you write a paragraph, I don't care if it's for a
22	regulation, or a business letter, or something else,
23	and then you want to say, well, I want to use that
24	paragraph from this other document.
25	How many times have you done that? And
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1 you translate it over, and you look at it and say, well, not I got to modify it because the text is, the 2 context is wrong, the language is wrong, the 3 - sometimes they got to alter grammar. And that's often 4 5 just the artifact of the English language. The problem is when you do it in a 6 7 regulation, where every single word, every comma, I mean we've argued over punctuation in regulations and 8 9 quidelines. Because they had -- all these things mean Then inevitably, there are going to be 10 something. 11 changes that then serve to confuse. Even when not intended to. 12 then, 13 And of course, we've all had experiences where, well, there was an order, and now 14 15 that order, you want to make it part of a rule, but to make the order part of the rule, you got to really 16 change it and then, of course, things have moved on, 17 18 people think a little differently. 19 So you get concerned that, well, wait a minute, which really applies. And I think Mark's got 20 21 it right that 53 needs to be inclusive, and if there 22 are enough applicants, Bill, that want to go back to 23 the original, you know, deterministic methodology, then, well, then you're going to have to see if you 24 25 can't accommodate that in 53, and not attempt to just

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1	do something that's more confusing.
2	Okay, going to the other point, Mark
3	raised an issue about increased burden in the
4	operating requirements. And Bill's answer, and Bill,
5	I don't mean to personalize it but just referring to
6	what you said, that, well, wait, you can't make that
7	judgment now about increased burden, because you have
8	to see this other section. It was about tech specs,
9	but generally speaking.
10	Asking the industry to bet on to come
11	there's going to be something else that when added all
12	up, it's going to say, hey, it's all good. I think
13	that's really asking too much and I'll tell you why.
14	What will happen if the section Mark was questioning
15	remains exactly the way it is now.
16	And then when this next stuff comes out,
17	it's together it doesn't do what was expected.
18	Then what happens. Then, well, wait a minute. Why
19	did it get written, why does the second part get
20	written that way? Well, because you said what you
21	said in the first part. So then the question is, is
22	the industry going to have to then argue, hold the
23	phone, let's go back to the original part and then
24	work on rewriting that part.
25	And then you get everyone chases their
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1	tail, and there's no maliciousness involved in any of
2	this. It's just a matter of how these processes work.
3	So I just kind of make the point that I think that,
4	you know, Bill, my experience with you has always been
5	one that you're gracious and open for comment, and
6	it's an observation that ACRS made yesterday, I'm sure
7	you heard it.
8	And I think that that's what you're trying
9	to do here. And I think that you'll agree, honest
10	people can agree to disagree, and I think that you
11	need to be sensitive to the fact that it's going to
12	people are trying to, I don't want to say guess, but
13	as you know, the industry hangs on every single word
14	the NRC staff says.
15	Translates it, interprets it, they even
16	litigate it at times. And so why get into that mess
17	now. So I just, I think that Mark's got a good point.
18	So even if you came up with some draft ideas as to
19	what you're going to do, it might I don't know how
20	to solve the problem. Mark, I'll leave it to you to
21	try to work out with Bill how that problem gets
22	solved.
23	I've seen it, Bill, you and I go back so
24	many decades in this business. We've seen it happen
25	before and so why not plan for it now. Bob, thank
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1	you, I appreciate your forbearance.
2	MR. BEALL: No problem, Steve. Thank you.
3	MR. RECKLEY: Thanks Steve. One of the,
4	just a quick reply if I can, that, you know, what
5	we're trying to do here, the novel approach, and this,
6	you know, this was reflected in SRM for this
7	rulemaking plan, and what we've been trying to do is
8	to put out the preliminary language and then work on
9	iterations.
10	And so you know, this is a novel approach
11	where you guys are seeing, you being every
12	stakeholder, ACRS and everybody, are basically seeing
13	our first drafts. Okay? And so as we're looking at
14	this as an 80/20 kind of thing, yes, we're generally
15	okay with this concept, or this concept is far enough
16	to run up the flagpole and see what the reaction is.
17	That's the mode we're in. So hopefully
18	you don't see us digging in our heels too much. We
19	are putting out by and large, first draft stuff, to
20	see what feedback we get from stakeholders and to some
21	degree, you're seeing it at the same time as some of
22	the internal stakeholders, like I mentioned, some of
23	the subject matter experts are still engaged in
24	providing us with input on some of these programs.
25	So that, you know, just leave it at that.
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So take it back, Mark.

MR. NICHOLS: Thank you, appreciate that, Steve and Bill. I'll probably touch a little bit on that in my comments. First, I just want to start with some simple ones. First, 53.800 and 810, I just wanted to point to those.

I made a previous comment about duplicating requirements, the purpose requirement, that sort of thing. So just wanted to make sure to point out that those fall within that previous comment. I don't know want to belabor it anymore, so I won't go into more detail than that.

I wanted to touch on a question you had, 13 Bill, related to 53.880, criticality safety program. 14 15 And you have a reference to 70.24. So I have some experience in criticality calculations and meeting 16 those requirements. My recollection of the history is 17 18 70.24 was prescriptive, difficult to meet, that's why 19 people started to qo to -- they actually took exemptions from that and did establish their own 20 21 performance criteria of a specific k- effective value 22 and that eventually made it into 50.68.

23 So that's experience where, yes, 70.24 24 didn't really work very well. 50.68 really was 25 performance based and worked better. Now, we may need

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a more technology inclusive version of 50.68, but I think we should start out thinking about what that is, rather than asking our self, you know, trying to get stuck with 70.24 and evaluating whether that's good enough.

I think industry experience has been that that requirement itself was really difficult to meet. With that, now I want to go into -- this will be a long, probably a longer discussion. It will probably hit on what Steve, you, and Bill had talked about. And I'll start first with the Facility Safety Program and just actually respond to your question, Bill, or your challenge.

And the way I think you had phrased it is industry needs to decide if we want to have more ownership and control, and a performance based meeting of the requirements rather than a compliance mindset. The answer is absolutely. We want performance base, we want more control, we would like to get rid of this strict compliance.

21 the whole LMP You know, and TICAP, 22 affirmative safety case, and everything we're doing 23 about the applicability issue of of non-LWR We absolutely want to get to that. 24 requirements.

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So if the Facility Safety Program is sort

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1	of the way to do that, we're open to entertaining it.
2	Now, we will say that, you know, we're not ready to
3	endorse it. We're not ready to reject it. We're just
4	interested in having the conversation.
5	But I think, and this starts to hit on
6	what Steve had said, is our decision on whether we
7	like this program is not based on whether we want to
8	be more performance based, and have more ownership and
9	control. It's whether the NRC would actually agree
10	and move in that direction themselves.
11	And that's where we're skeptical of
12	whether the NRC actually would do that or not. So the
13	Facility Safety Program, and the concept of, okay, we
14	have more control, the NRC has, you know, more
15	assurance in our control. There's less oversight and
16	inspection. There's less sort of in the design and
17	review.
18	It all depends on the NRC and
19	specifically, the staff that are involved in those
20	activities, relinquishing some of their control to
21	industry, and all of our history has suggested that
22	the NRC does not want to do that. In fact, they want
23	to go the other way. Whether it's in reviews, and the
24	NRC has no expectations, wants more information in the
25	application, wants to review more of the calcs than
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they ever have.

You know, these recent applications are the biggest applications the -- that we've ever had on designs that are much simpler and safer. So the NRC's tendency is to be more intrusive in industry, not less intrusive, even as we're moving into greater margins of safety.

So that's where our skepticism comes from. 8 9 Will the NRC ever actually implement these, and it gets to, you know, you're sort of promising us this. 10 11 We need to see it in the requirements, that says this is under the control of industry. This is where the 12 NRC's jurisdiction stops. And it needs to be there. 13

We can't, as Steve pointed out, we can't just sort of take a hope and a prayer that you're going to do, you're going to implement this in individual reviews and oversights. We know how that movie goes, and it doesn't go well for us.

19 So that's sort of the predicated -- I would ask that you not try and put the decision on 20 21 whether this different philosophical approach is what 22 industry wants or not. I would ask that you ask 23 whether it's what the agency could move to or not. I think that's really the central question to the issue. 24 25 Ι do now want to turn toward the

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conversation, and I'm just going to go back. So we're looking at this rule as whether there are benefits and efficiency. Is it more flexible? Does it have reduced regulatory burden? So the conversations we had around Subpart B and C, industry had pointed out here's more burden, here's more burden, here's more burden. Whether it's, you know, complicated two-tier structure, which adds its own burden, whether it's more prescription and detail, which adds its own burden, whether it's new requirements to design according to ALARA, which adds its own burden.

There's burden everywhere and the NRC's message to us was well, wait a second, don't make judgments yet. Wait to see what's to come because operations is going to be less burden, and in order to get that less burden, those operational requirements, you need to have these more burdensome requirements in Subpart B and C.

So we said okay, we'll wait and see. This was the meeting to see if the Facility Safety Program is a huge increase in burden. Now, it's a starting point. We could modify it. We could get it to a point to where it's a net decrease in burden, but right now, it's a huge increase in burden.

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Now, the other thing is for that Facility

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Safety Program, we had asked the NRC, presented a long 1 time ago, I forget if it was January. 2 And we had 3 asked, well, we're not making a judgment yet. Some people in the meeting did. They were outright against 4 5 it. We didn't make any decision on it. But we asked. Could you please show us where industry's burden is 6 7 being reduced, because we don't see it, or we can't understand where it might be? 8 9 And could you go through a couple of examples of past issues and how they ran through the 10 11 Part 50 process, and how they would run through this 12 facility safety program, Part 53 process, to show how this Facility Safety Program is much more efficient 13 than the way we do it under Part 50. 14 15 I will admit, I'm very disappointed that 16 the NRC did not present that because it's left us with the only information we have, which is this is a much 17 more burdensome program. 18 You then combine it with a lot of the 19 other operational programs, and I debate whether I 20 should go through each one of these individually or 21 22 But what we're left with is Subparts B and C, not. 23 increase burden. Subparts F, increase burden. And so from an industry perspective, we 24 25 have to ask ourselves, the NRC, and even in this

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meeting, has said well, don't focus on these new 1 requirements that add burden. Don't focus on all this 2 additional burden we're putting on you in Part 53, 3 look very closely because there's nuances in there 4 5 that's going to reduce the burden. And we're looking, we're looking pretty 6 7 hard. And we found some reduction in burden. Now, number one, there's a reduction in 8 Absolutely. 9 burden because it's technology inclusive. You've taken out all of the light water reactor specific 10 11 requirements. We don't have to worry about them. 12 technology inclusive You put in 13 equivalents. That's how we assure the safety. We supported those. But the only difference in burden, 14 15 keep in mind, it's not that you're not meeting the function of those requirements, we just don't have to 16 So that's the burden. 17 seek exemptions. That's much less decrease in burden than 18 19 actually not having to meet the requirements. So there is a burden reduction, but just a little, in not 20 21 having to seek exemptions. 22 There is also burden reduction 23 specifically in what you propose for tech specs and in-service inspections. So that's a great benefit. 24 25 We appreciate those. They're far outweighed by the

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1	increased burden that the NRC is proposing.
2	Actually, I will go back to one of those
3	and that's the Integrity Assessment Program, which is
4	new. It's essentially an agent management program
5	that Part 50 and 52 would not have from day one. They
6	would have it during license renewal.
7	I know you mentioned that, hey, it's
8	actually replacing these other things. But if you go
9	look at, I think it's 53.440, there's a requirement
10	there that, no, you actually have to design these for
11	the lifetime of the plant and the service conditions.
12	You're not actually getting rid of that.
13	We already have duplicate requirements, or
14	you know, requirements that you're referencing getting
15	rid of, in service inspection, and maintenance, and
16	all that. So we really don't see the reductions that
17	you're claiming there. I would just point that out.
18	So when I look at that, and I understand
19	when you're talking about well, the reduced burden in
20	Part 53, a lot of it is attributable to how you might
21	use the PRA. And I think most people would agree that
22	you use a PRA, you know, you don't need a PRA to be
23	safe. You can be safe without a PRA.
24	But what you can do with a PRA is you can
25	reduce the sort of burden that you have in

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demonstrating your safety case. And certainly that's what LMP and TICAP can do, is you use PRA in a very, very modern way. And by doing that, you can eliminate a lot of burden because you're taking a lot of components, SSC's out of safety related, moving them into this risk category and the treatment of that is a little bit less burdensome.

So what I would say is a lot of the burden 8 9 reduction that we're seeing is more attributable to the methodology used, LMP versus a traditional NuScale 10 11 approach, or something else, which gets us to the 12 well, actually question, do you need those requirements in Subpart B and C, and everywhere else 13 to be able to achieve that reduction that you're 14 15 getting with LMP.

And my assessment would be no. Most of that burden reduction that comes with LMP, I can achieve under 50 and 52, just as well as I can achieve it under Part 53. The NRC's really not done anything different in Part 53, or has not done anything in Part 53 that could not be done under Part 52.

22 There is the not needing take to 23 exemptions, requirements. to many That's one. There's the Facility Safety Program, which as I said, 24 25 today is an increase in burden. Not a decrease,

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although that could change.

2	And then there are some things going on
3	with manufacturing license that's going to be
4	different. Other than that, I can do everything under
5	50 and 52, is what's being developed under Part 53,
6	and so we really need to ask ourselves the question,
7	and I'll just sort of summarize where I think we are
8	with the Part 53 proposal that the NRC has come out
9	with, is a rule that is less flexible, more
10	burdensome, and does not have any enhancements to
11	safety as compared to 50 and 52.
12	And is that really where we want to be? I
13	don't think the answer is yes. And industry has,
14	along the way, tried to tell you where we think you
15	can make improvements. We've been we are very
16	consistent with you at high level concepts, in terms
17	of what this rule is trying to do.

We have a lot of concepts at the high level in common. It's where you get to the details, where our vision would lead to less burden, and what we're seeing from the NRC is leading to more burden. And that's where the real challenge for us is coming from.

And so you know, I really don't know what the next step is from here. We've proposed in the

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1	past modifications to Subpart B and C. I do really
2	appreciate that the NRC is looking at this graded
3	approach to risk-informed. I think that's going to be
4	very, very fruitful.
5	But a lot of our other comments were not
6	accepted, and a lot of our comments related to burden
7	that are applicable, whether you use an LMP approach,
8	or use another approach. I mean it's burden to
9	everybody.
10	And so I am still very concerned that this
11	rule is really not headed in the right direction. We
12	did wait and see, to see what you would deliver on
13	programs, to see if there was a reduction of burden.
14	And unfortunately, you didn't deliver what you've been
15	promising.
16	So anyway, I appreciate your listening to
17	our comments.
18	MR. BEALL: Okay. Thanks, Mark. Does
19	anybody else have any more comments on the this
20	part of Subpart F, or even the other part? Cyril, go
21	ahead please.
22	MR. DRAFFIN: Yes, this is Cyril Draffin
23	of the U.S. Nuclear Industry Council. And I'd like to
24	reiterate what was just raised by Mark. We also have
25	the same concerns over the language. We agree at the
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1	high-level concepts. I think what the NRC has
2	presented in their slides and their discussions, and
3	what we've heard from the Commissioners is all
4	positive.
5	And there's coherence there and agreement.
6	But when it gets down to language, there's a reference
7	to seeing the first draft. Well, now it's the second
8	draft. We've seen the second draft of B and C. We've
9	seen the second draft of Facility Safety Program, and
10	there's basically no change.
11	And so we're left with the same reaction,
12	at least the developers that I've talked to, that this
13	is very disappointing. This is not transformational.
14	This is just kind of repackaging previous
15	requirements, and adding burden.
16	And so as Mark articulated in Subpart B,
17	we've seen defense of depth, we've seen ALARA, we've
18	seen two-tier, which was not supported by ACRS either,
19	added. And therefore, that's a concern.
20	Same thing with the Facility Safety
21	Program, and the Integrated Integrity Program. It's
22	just additional things to do, and there hasn't and
23	the question of where's the benefit and will NRC staff
24	accept that in the reviews later, is unclear.
25	And the comment that was made, look at the
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1	tabletop, there's some improvement there, but as Mark
2	articulated that unless it's the regulations are
3	saying because, if you do these things, then you don't
4	have to do this. This won't be required in the
5	review, unless that's in the regulations. There's
6	really lack of clarity of what the benefits are.
7	So I think we share that from the industry
8	side as being concerned on whether this part, Part 53,
9	will actually be useful and used based on the current
10	status and the kind of accretion of requirements, and
11	not the clarity of where the advantage is going to be.
12	So I'll pause there and you know, see if
13	there's any particular reactions that the staff has.
14	MR. RECKLEY: Well, my only, I guess
15	comment to both observations is from our perspective,
16	it would be more useful for you to come back and say
17	why a requirement is not needed for safety than it is
18	to say it's less efficient or, hopefully, those would
19	come together at some point as to what is needed for
20	safety.
21	So to look at a degradation, the Integrity
22	Assessment Program, and say it's a new requirement, I
23	admit it, it's a new there's aspects of it that's a
24	new requirement. But why is looking for degradation
25	not needed to support safety decisions and safe

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1 operation. And so it's not the objective, totally, 2 but we're trying to reach this compromise. We would 3 like this to be more efficient. But in the end, it 4 5 also has to ensure safety throughout the whole lifecycle of the facility. 6 7 The advanced reactor policy statement foresaw that improvements in the design would support 8 9 operational flexibilities, and some of those we've talked about in the past. Some, we'll talk about as 10 11 we get into staffing. I think that might be an area 12 where it shows up as well. But think about what that says. That does 13 increase the burden on the design side. 14 The thought 15 that design improvements would support was less reliance on human actions. It would require less 16 activities to correct design deficiencies in the 17 18 operating space, and in the design space. 19 So as you're looking at it, again, I would just encourage you not only to say this is a new 20 21 requirement, or it's the same requirement, the reason 22 there's so many same requirements is Part 50 evolved 23 over decades to address design and operational issues that were needed to be addressed to ensure public 24 25 health and safety.

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1	So that's the bottom line. That's the
2	bottom line for us. So just keep that in mind as
3	you're making comments.
4	MR. BEALL: Okay. Thanks, Bill. Jeff
5	Merrifield, you have your hand up?
6	MR. MERRIFIELD: Yes. Thank you very
7	much. I don't want to plow the ground that was so
8	well plowed by Mark and Cyril, I would say a couple of
9	additional I'd reinforce one thing, and I'd say
10	something additionally.
11	The additional thing is I hear what you
12	said, Bill. There are you're philosophy isn't to
13	instill (audio interference). When it sort of raises
14	the bar on the advanced reactor developer, but the
15	benefit is going (audio interference) down the line
16	during operations.
17	The purpose, as I see at NEIMA, in a
18	Congress, and all the money that has been thrown at
19	the NRC to repair its advanced reactor applications
20	was to accelerate consistent with providing public
21	health and safety, the deployment of these advanced
22	reactor technologies.
23	Part 53, as envisioned by the staff, fails
24	to do that. As the the way you're going, the
25	recommendations I would certainly make to my clients,
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And nor will it meet the intent of what Congress, and I believe the commission bought into, in trying to move this forward. So I understand the philosophy behind it. But it's not going to achieve the goal which would be to enable the deployment of these designs, without all of those bells and whistles that are currently included in Parts 50 and 52, that aren't applicable to advanced reactors.

So you know, at this point, we may be pens down, and our view may be that it's just not worth our putting continued resources, as an industry, which are limited, into an effort that right now, absent change, is likely to fail.

And I say that with a heavy heart because having worked at the NRC for almost nine years, and knowing the people involved, I know all of you who are working on this at NRC, are doing so in an earnest, thoughtful, and certainly feel you're doing the right thing.

24 But there is a fundamental, in my view, 25 there's a fundamental misalignment, and we are not

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going to get to an end goal, and I don't think
Congress is going to get its wishes fulfilled. Thank
you.
MR. BEALL: Okay, thank you, Jeff. Steve
Kraft, you have your hand up?
MR. KRAFT: I did. Thanks, Bob. I have a
specific question. It's about security, 53.830. The
discussion table describes, of course, the language is
a work in progress, but apparently all the language is
a work in progress here.
The explanation says, and I'm reading it,
the proposal for Part 53 will build on the consequence
based approach developed for the limited scope
rulemaking over, you know, security space.
Okay. Why did it have to build on it?
Isn't that rulemaking self-contained? I mean, it is
what it is. Why doesn't the rule just point and say,
over there. And if over there doesn't cover all the
things you have to cover, then you can write language.
But reading this list, MC&A, access
authorization, physical security, it's all covered
someplace else. And I think it was towards the end of
last year, in one of these meetings, I just asked how
would Part 53 cover security, and the answer was
holistically.

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1	I didn't know quite what that meant at the
2	time. And this is confusing me even more. So I'm
3	just wondering, again, taking into Bill, forgive me
4	for not jumping on you, I think everyone is you got
5	the point.
6	And the views are felt very, very
7	sincerely. But this is a specific example that I
8	think you need to rethink this, whether or not you
9	actually have to say anything, other than look over
10	there.
11	I understand your point. Jordan made a
12	point at the very top of the meeting about how where's
13	there's a Part 50 thing, rather than say, okay, we're
14	going to we're just going to say go over and look
15	at Part 50, but we don't want I got that. Because
16	Part 50 is a wholly different animal, as you
17	described.
18	But that new section of 73 is specifically
19	for these plants. So why wouldn't you just say, over
20	there? That's my point. I think you'd avoid a lot of
21	trouble. Thanks.
22	MR. RECKLEY: Yes, the only thinking is
23	that the limited scope rulemaking is exactly what the
24	title implies, limited scope.
25	It addressed, or is addressing only a
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145 1 couple of items, like the number of armed responders, whereas the thought was this was an opportunity to 2 look broader than that, and maybe clarify some of the 3 language in Part 73. 4 5 So again, it's kind of hard to explain. It will be, hopefully, more plain when you see the 6 7 language that comes out in a few weeks. sure but you said 8 MR. KRAFT: Well, 9 something that made me think. That the rule, the limited scope rulemaking doesn't just say you can have 10 11 fewer armed responders, and just that's it. It says 12 you can have fewer armed responders, because you've done this other stuff in plant design. 13 14 So to me, the answer is that other 15 sections of 53 will have requirements for plant design that go into 73, if you did those, that you can -- it 16 isn't just a give-me. It isn't just a giveaway on the 17 18 number of armed responders. There's reasons for it. 19 And that so -- and then but you just said that would clarify. Really? I'm sorry, Bill. 20 Ιt 21 sounds like 53.830 will be quidance on how you meet 22 that part of 73. That doesn't -- it's going to have 23 its own quidance. In fact, NEI and NRC are going back and 24 25 forth on that quidance now. I just -- the whole thing

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1	is just, seems to me is going to lead to a heck of a
2	lot of confusions.
3	MR. RECKLEY: Go ahead, Nan.
4	MS VALLIERE: Yes, Steve, this is Nan
5	Valliere. I'm also on the working group for the
6	physical security limited scope rulemaking. So I just
7	wanted to say, you're right, it does address more than
8	just the number of armed responders, but there is a
9	limited list of the specific physical security
10	requirements that are being that alternatives are
11	being developed for under the limited scope rule.
12	Recall that when the commission approved
13	that rule, the staff offered the commission several
14	options. One of which was a full scope redo of
15	security for advanced reactors, and one of which was
16	the limited scope version. The commission approved
17	that the limited scope version, and there are some,
18	you know, limitations within that approval, that the
19	staff is working within in the limited scope rule.
20	So it can go, it can go further. The
21	alternatives could go further, and in Part 53, I think
22	you will see next month that the security requirements
23	that are going to be presented, build off of what's
24	being done in the limited scope rule, but provide
25	more.

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1	And it, in large part, requirements will
2	stay in 73, and will be pointed to, but there will be
3	some additions proposed for Part 73.
4	MR. KRAFT: Okay. Thanks, Nan.
5	MR. BEALL: Okay. Ed Lyman, you have your
6	hand up from USC UCS.
7	MR. LYMAN: Hello, yes. Can you hear me?
8	MR. BEALL: Yes, I can hear you, Ed. Go
9	ahead.
10	MR. LYMAN: So you know, I've been
11	listening to this dialog, you know, I think nothing
12	really surprises me anymore, but the tone of the
13	industry participants, I feel, is extremely offensive.
14	And maybe they need a reminder that they don't own the
15	Nuclear Regulatory Commission.
16	In fact, they're only one stakeholder in
17	this process. The NRC's obligation is adequate
18	protection of public health and safety. And there's
19	no obligation to reduce regulatory burden at all.
20	But in that context, and heaven knows that
21	I am often at odds with the NRC staff, I think they've
22	done an incredible job trying to negotiate this mine
23	field here, and maintain an intellectually consistent
24	process that maintains the current level of safety,
25	which is their obligation.
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And it's really disheartening to see this kind of dialog going on. And frankly, I'm not sure if there's any point to have these meetings anymore. I don't see why these staff should not simply revert to the normal process of notice and comment rulemaking, develop your proposed rule, put it out for public comment, go through one round, you know, industry will comment, we'll comment, other stakeholders will respond to those comments.

the draft, 10 Finalize send it to the 11 commission. You don't need to endure this because I 12 don't think the industry is participating in good They're engaged in a nihilistic effort to tear 13 faith. everything down, and build a structure on a house of 14 15 cards, based on a false notion that somehow the NRC 16 should just lie down and accept the fact that anything that the industry claims is an advanced reactor, 17 18 doesn't need the same level of review as any other 19 reactor.

And there's a less, a weaker burden of proof to show the outrageous claims that are being made for some of these designs. And frankly, I mean there has to be greater, if you're not meeting deterministic requirements, you -- there is a greater burden to show, you know, this is in performance based

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1	space, you have a greater burden to demonstrate.
2	So fine. If you don't want Part 53 risk-
3	informed, use Part 52, but I mean, I don't see why the
4	staff should continue to take this abuse anymore. I
5	don't think it's fair, and it's a waste of a lot of
6	people's time. Thank you.
7	MR. BEALL: Okay. Thank you, Ed.
8	MR. SHAMS: Thank you, Ed. Bob, can I
9	speak for a minute, if that's okay with you?
10	MR. BEALL: Sure.
11	MR. SHAMS: That's Mo Shams.
12	MR. BEALL: Yes.
13	MR. SHAMS: NRC.
14	MR. BEALL: Go ahead, Mo.
15	MR. SHAMS: Thanks, Bob. Thanks for the
16	opportunity. And Ed, thank you. We appreciate your
17	kind words for the staff. And I also appreciate,
18	actually, the industry's words and the dialog, and the
19	questions, and the comments, you know, however stern
20	they were to us.
21	But at this point, we're working extremely
22	hard, and the staff is, and I'm proud of what the
23	staff is doing to try to build a rule that balances
24	all the needs and the designers, and ultimately
25	deliver a safe framework for these advanced reactors.
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1	And I think we will continue to hold these
2	meetings, and we will continue to seek your feedback,
3	but the process that we've collectively invented here
4	is one of, as you indicate here, providing feedback,
5	addressing some of it, not addressing other parts,
6	because there are reasons for that. Improving, not
7	having the entire picture all at one time, therefore
8	you feel, you know, that you're missing parts of the
9	picture.
10	So I want to continue to indicate that we
11	value your feedback. We value your input. But you
12	know, to Ed's point, there are diverse views. There
13	are several stakeholders, and at the end of the day,
14	we're an independent agency that's going to have to
15	put out a set of rules that are delivering safety to
16	the American public.
17	So we appreciate your input. We're going
18	to continue to seek it. We're going to continue to
19	seek your views and build on them. And we ultimately
20	hope to get to the place where everyone sees that
21	their views were valued and reflected in what we're
22	offering. Thanks Bob.
23	MR. BEALL: Okay. Thank you very much,
24	Mo. Is there any other people that can make a
25	comment, please? Please raise your hand.

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1	MR. NICHOLS: Bob, this is Mark Nichols,
2	but I see Tammy had her hand up before me.
3	MR. BEALL: Okay. Okay, Tammy, go ahead.
4	MS. MORIN: Thank you, Mark. And thank
5	you for letting me have the time to just say something
6	pretty quickly. It just seems from the reading of the
7	rule language right now, is that we're trying to
8	encompass all of the aspects from that's evolved
9	over the last six decades of working with large light
10	water reactors. And I think Bill kind of touched on
11	that a little bit.
12	But what's not coming out is that, in the
13	rule, is that there isn't a way to alleviate any of
14	these programs, and other aspects, based on the safety
15	of the plant. And maybe that's going to come later,
16	but right now, it's not showing up as being apparent.
17	There's no way to say, you know, Congress
18	says we need to be at least as safe as the large light
19	water reactors. These plants are a lot safer, just
20	generally, by their inherent safety, and yet, but
21	there doesn't seem to be a way to say if you meet X,
22	Y, and Z, then you won't have to do this program.
23	But maybe that will come somewhere else in
24	the contents. That's where I feel like we're missing
25	something. It's just not apparent how you're going to

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1	demonstrate that you're, that maybe I'm not really
2	sure how to articulate it. But how you can
3	demonstrate that these programs are not necessary for
4	you because of X, Y, and Z.
5	It's just like it's going to be a program,
6	and you have to have it, and part of, you know, these
7	smaller plants, you know, small light water reactors,
8	the micros, the and things like that, is that we're
9	trying to alleviate burden because of staffing and
10	items like that.
11	These programs take up lots of people's
12	time too. So we're trying to figure out if this makes
13	sense for us because it does seem to be increasing
14	burden on plants that are inherently more safe. So
15	thank you for letting me have my comment.
16	MR. BEALL: Okay, thank you, Tammy. Go
17	ahead Mark.
18	MR. NICHOLS: Oh, thanks. I see Mike
19	Mayfield had his hand up, but it kept getting lowered
20	down. I wonder if Mike wanted to go before me.
21	MR. MAYFIELD: Thank you, Mark. What I
22	have is actually a fairly, I hope, simple question.
23	And Mark noted that in 53.440, you require qualifying
24	materials for their service conditions over their
25	life. 53.850 requires the Integrity Assessment
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1	Program, 53.870 requires an ISI, IST program, and then
2	53.890 requires this Facility Safety Program.
3	What's not clear to me is how these will
4	fit together, and why they don't become duplicative
5	requirements. It's just not clear how you guys see
6	that all going together, and I was hoping, Bill, you
7	could provide a little more insight. Thank you.
8	MR. RECKLEY: Okay. Thanks, Mike. I
9	mean, part of it again, as we had talked about
10	earlier, is just the way we structured this, and so
11	the selection of materials at the design stage that's
12	addressed in Subpart C, the designer needs to consider
13	the environments, and all of that. And I think
14	everybody would acknowledge that.
15	Then going forward, under operations, it
16	is not history has not shown that you can just
17	close your eyes to assume the designer got it right.
18	Often they will. Sometimes they don't. There are
19	unforeseen, there's lessons learned.
20	And so under operations, you have to take
21	measure in case the efforts of the designer, at the
22	design stage, to pick the right materials, for the
23	environments, there was an unknown. There was an
24	uncertainty that didn't manifest itself until
25	operations.
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1	And so I don't think that's a new concept.
2	I mean, you know, under ASME, you design it under
3	Section 3. You always had to inspect it under Section
4	11 to make sure that it performed as it was thought to
5	be.
6	So I'll acknowledge under ISI and IST, and
7	integrity management, there's some overlap, you know.
8	Just come back to us and say there's some overlap.
9	You're trying to do the same thing in a couple
10	different places. We can certainly admit that and
11	consolidate it.
12	But the notion that a requirement for the
13	designer to consider things obviates the need for an
14	operator to continue to inspect it and actually ensure
15	that it's performing as expected. I don't think we'll
16	get there.
17	MR. MAYFIELD: Bill, this is Mayfield. I
18	wasn't suggesting that you ever should get there.
19	What I was I thought I heard you say that you
20	thought that perhaps the Integrity Assessment Program
21	could relieve or relax some requirements for material
22	qualification.
23	MR. RECKLEY: Oh.
24	MR. MAYFIELD: And that led me to exactly
25	the kind of concerns you were raising.
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MR. RECKLEY: No, no. Sorry. What I meant by the observation was to put yourself in the place of an NRC reviewer. And we've tried to address this in some guidance documents on -- and it's being discussed a lot under the TICAP, ARCAP activities of how can we, during the licensing review, take more advantage of a performance based approach. And an element of performance based

9 approaches is you have to have faith in the monitoring to the performance based 10 programs that are key 11 approach. And so all I was trying to say before was, 12 as we go forward under the developing of the licensing documents, that it might be possible to say, as part 13 of an application, we've done all of this to try to 14 15 make sure the materials will perform as -- in the right way for the environments they're exposed to. 16

But there are uncertainties associated with that. We acknowledge. That's addressed in the operating phase by the requirements to have an Integrity Management Program. So I don't think that's a new concept.

But we are looking for opportunities to actually be more conscious in the review of applications on how we might fit together what has often been separate reviews of design and operations.

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1	We're trying to do it in an integrated way.
2	So I hope that helps, Mike.
3	MR. MAYFIELD: I appreciate the
4	clarification. I would just urge you, as you present
5	this in the future, to be careful about creating some
6	false expectations for folks.
7	MR. RECKLEY: And again, I'll fully
8	acknowledge that you know, if the request is to
9	guarantee how the NRC is going to behave 20 years from
10	now, that's probably something we're not going to be
11	able to do.
12	I think I explained in some of this stuff
13	early on that, you know, these some of the concepts
14	we're putting in her could support changes and broader
15	regulatory program, but to say the staff in this
16	rulemaking can guarantee the behavior of an agency 20
17	years from now, I'm not sure we'll be able to get
18	there. So anyway.
19	Bob, take it back before I start to
20	ramble.
21	MR. BEALL: Okay. No problem, Bill.
22	Cyril, do you want to go before Mark comes back? Or
23	do you want to let him go?
24	MR. DRAFFIN: That's Mark's choice.
25	MR. BEALL: Okay.
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1	MR. NICHOLS: I can go. It won't take
2	long.
3	MR. BEALL: Okay. Go ahead, Mark.
4	MR. NICHOLS: I wanted to come back to a
5	point that Bill had said, and he had said where
6	industry is, is asking or proposing to eliminate a
7	requirement, we need to be able to justify why
8	eliminating that requirement would still result in a
9	rule that would or create a rule that would result
10	in safety.
11	I agree with that, by the way. If we're
12	proposing to reduce or eliminate a requirement, we
13	have to justify how not having that requirement still
14	results in safety, and we've done that. There's only,
15	to my recollection without going back to my notes, I
16	think there's only one requirement from Part 50, 52,
17	that we've recommended not be in Part 53, and that's
18	the inclusion of ALARA in the Radiation Protection
19	Program, and we proposed that that could be a policy
20	statement, and by doing that, you can achieve the same
21	level of safety.
22	So we've tried to argue that. You know,
23	the NRC has not really been receptive to that, but we
24	have been doing specifically what the NRC had asked.
25	But I do believe that the same is true in the inverse,
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1	where the NRC is proposing new requirements in Part
2	53, that are not in Part 50 and 52.
3	The NRC has to explain why those are
4	required in order to achieve safety. There are many
5	of them. Not to belabor what they are. And the NRC
6	hasn't done that. The NRC hasn't said that we're
7	adding this new requirement and without adding this
8	new requirement in Part 53, Part 53 absolutely is not
9	safe.
10	And when we look at it, our, you know, the
11	burden of defense shouldn't be on our part. We look
12	at it and say it wasn't in part 50, 52. Looking at it
13	in Part 53, no, we don't see why it's necessary. So
14	it should be our burden of proof to justify why adding
15	requirements that weren't necessary for 50, 52, are
16	necessary in Part 53.
17	So I do think that that is an activity the
18	NRC should pursue. I also want to take make a
19	point about the distinction between regulatory burden
20	and assuring safety. And they're not the same thing.
21	It's or I should say, it's not a one to one
22	correlation such that burden equals safety.
23	You can get to safe in a very burdensome
24	way. A lot of complexity, and a lot of activity that
25	is not really productive, and that can get you to
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1	safe. Or you can get to safe very efficiently, very
2	focused, very productive way of assuring safety. And
3	that would be efficient.
4	And by the way, that's one of the NRC's
5	principles of good regulation is to be efficient. And
6	where there are multiple ways to do it, choose the one
7	that's least burdensome. That's really what we're
8	asking for.
9	And what we're point out, and why we're
10	getting so animated is when we look at the alternative
11	the NRC's putting together, we see it as this very
12	complex and inefficient way to get to safety. What we
13	proposed back in February is what we think is the
14	streamlined efficient way to get to safety.
15	There's other alternatives that could be,
16	and there's obviously everything in between. And so
17	that's the discussion we want to have. Nobody's
18	asking, on the industry side, nobody's asking for,
19	let's be less safe in Part 53. We're very supportive.
20	We're very encouraged that the NRC is being as safe as
21	they are in Part 53.
22	What we want to do is get there
23	efficiently. And that gets back to the used and
24	useful comments that we had before. So that's why
25	we're getting animated, and we're trying to be kind in
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1	our words, but we also want to be firm and clear in
2	our views because it gets to my third point.
3	The NRC had asked, or it made the
4	statement, hopefully, we're not coming across as stuck
5	in our ways, and we're open. I'll be very clear and
6	kind, you come across as stuck in your ways. Every
7	turn that we've said you're being inefficient, we've
8	not disagreed with achieving safety. We've said
9	you're doing it in an inefficient way. Here's an
10	alternative that's more efficient.
11	The NRC has not been receptive. They've
12	often shut down that conversation before it's begun.
13	We've never gotten responses on why our proposals are
14	not feasible, or not optimal. The only progress that
15	I do continue to want to, thank the NRC for this, the
16	only progress we've made in terms of seeking a more
17	efficient approach is with this graded approach to
18	PRA. So we do appreciate that.
19	But all of these other concerns that we've
20	identified, it's not the safety level that they
21	achieve, we like that. It's the inefficiency to get
22	to that point. And we're asking for more efficient
23	ways to get to that point, and that is where the NRC
24	typically comes back and says, well, our way is the
25	only way.

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1	And that's why I think you get the
2	comments from Jeff Merrifield, which is a question the
3	industry should ask itself, is there any productive
4	value in engaging with the NRC on this anymore. You
5	know, we're not being heard. And it's a role that's
6	not in the right direction.
7	So unless things change, I think you're
8	we're going to be in this friction place. And so I
9	just want to say that. Thank you.
10	MR. RECKLEY: Okay. Thanks. I mean, as
11	we go forward, one of the things, one of the things to
12	consider, and we did look at submittals that were made
13	and suggestions, is where is the efficiency gained,
14	and much of what we saw was it might be more efficient
15	in rulemaking, but it basically deferred most of the
16	decisions to be case by case decisions at licensing.
17	And we intentionally, and this maybe is
18	where the friction is coming in, is trying to be
19	specific enough that what we are developing meets
20	another aspect to the principles of good regulations,
21	which is predictability.
22	And so you know, some of this is just,
23	it's a natural friction and yes, we could go up to
24	higher levels but applicants would then have to be
25	prepared that what was allowed in the rule, or

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1	basically supported by the rule is case by case
2	reviews.
3	So we were and continue to be trying to
4	weigh that and also add a certain element of
5	predictability to it. So we do hear what you're
6	saying, but we're trying to weigh those competing
7	factors, if you will. Flexibility and predictability.
8	So Bob.
9	MR. BEALL: Okay. Thanks Bill. Cyril,
10	you still have your hand up.
11	MR. DRAFFIN: I do. Yes. I had five
12	points. First, safety is important to everybody. No
13	one's asking for a decrease in safety, and that's I
14	just want to be on record that that's important.
15	The question of efficiency and
16	predictability is a topic we've just touched upon on
17	previous meetings. But so far, at least me
18	personally, in terms I haven't seen the increase in
19	predictability of how the reviews are going to be done
20	faster, more efficiently. I've just seen the rule
21	language and a little bit of the thoughts of guidance.
22	And so therefore, that's a premise that is
23	going to be more predictable, but we haven't seen it.
24	I haven't seen the demonstration of that and so it's
25	hard to make a judgment based on hope.

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One can look at efficiency and so that's something that could be judged probably more near term, and so we are judging that. But if there's a long-term case to be made, it has to be made, it has to be clear, and so far, that hasn't happened. And I guess that creates the frustration that you've heard from some of the speakers today.

third point regarding, 8 The let's say 9 integrity, why don't you consider making it an optional approach? If you think it's going to be 10 11 better, it's not going to be a path that companies 12 might want to take, make that as an optional path, 13 rather than a requirement.

And there would be a couple of these 14 15 things where you're adding requirements for the, potentially the good of the applicant, but perhaps 16 it's not necessary, or they don't want it, and so 17 18 therefore, if you think it's better, but not really 19 required for safety, then make it optional. And so that might be a path to take in terms of how you 20 21 approach the ruling.

Fourth, you made the comment that all requirements need to be justified for safety, and I guess you heard Mark's response to that. Just because something's stated for safety, doesn't mean it has to

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1	be captured in the regulations. There's lots of
2	things that are important to safety that the industry
3	does, that have been used in the past, the way the
4	licensing's done, that are not in the regulations, and
5	Part 53 seems to be adding them to regulations.
6	You know, defense of depth, PRA, you know,
7	virtual bar and regulations. So just because it's
8	something that's safe and helpful there, doesn't mean
9	that everything has to be loaded up to a formal
10	requirement.
11	And then finally, I do think that the
12	process you've been using, which is releasing language
13	when it's available, and particularly the discussion
14	columns, and the verbal presentation is helpful. So I
15	do commend the staff for the process that's underway
16	in doing this. That's all my comments for today.
17	Thanks. Or at least this section.
18	MR. BEALL: Okay. Thanks, Cyril. Not
19	seeing any other hands raised, I think this would be a
20	good time to take a break. So let's plan on coming
21	back, let's take a 15 minute break and come back at
22	3:05. So we will restart our, and move on to the last
23	topic we have, which is discussion of previous
24	released subparts at 3:05 p.m. East Coast time. Thank
25	you very much.

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1	(Whereupon, the above-entitled matter when
2	off the record at 2:52 p.m. and resumed at 3:06 p.m.)
3	MR. BEALL: Good afternoon, everyone. So
4	we are we ready to get started here for the last part
5	of our Part 53 public meeting. We are going to now
6	start on the discussions on Previously Released
7	Subparts. Before we get into that, though, I want to
8	make sure there's no final comments on the Subpart F
9	we just went over. Okay, not hearing anything.
10	Bill, why don't you go ahead and get us
11	started on our last topic for the night. Thank you.
12	MR. RECKLEY: This is just largely a
13	session to bring up any continuing discussions. Go to
14	slide 50. There were a few because with the focus on
15	Subparts B and C we had released some language but
16	thought maybe we needed to continue some of the
17	discussions on D and E, but we're open to any
18	discussion.
19	One of the items on Subpart D was in
20	regards to using this as an opportunity to actually go
21	away from the concept of having exclusionary
22	boundaries and low-population zone defined and
23	replacing that with a requirement basically to ensure
24	no dose at the site boundary would exceed the 25 REM
25	over the course of the event and, thereby, you could
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in theory eliminate the exclusionary boundary, or EAB, in the low-population zone boundary.

I would be interested in kind of maybe exploring that a little bit as a topic. As we prepared Subpart D and referred to the SECY paper on population-related siting considerations, our thought was the way it's worded where we keep the EAB and lowpopulation zone concepts that allows those zones, those boundaries, to collapse to the site boundary if that's where the dose calculation goes so you can in effect have an EAB and an LPZ defined as the site boundary as we discussed in that SECY paper.

13 Whereas if the requirement is put in specifically to exclude a dose of over 25 REM outside 14 15 the boundary, then that would preclude -- actually it would become a technical requirement that no reactor 16 could result in a dose exceeding 25 REM offsite. 17 Ιt 18 seemed to be making things more restrictive and taking 19 away some flexibility, albeit I realize most advanced 20 reactors may not foresee that, may not foresee having 21 a dose that large offsite.

The question is do we really want to preclude it by writing EABs and LPZs out of the rule. I'll leave that as a question. Then, like I said, really this is a free form allotment of time to talk

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1	about any of the previously-released subparts.
2	With that, Bob, I'll yield to anybody who
3	has questions or comments.
4	MR. BEALL: Okay. Thanks, Bill.
5	So, Mark, go ahead.
6	MR. NICHOLS: Yeah, thanks. Bill, thanks
7	for that explanation on siting. I think we see it the
8	same way in terms of, one, thank you for the
9	clarification that your version could allow for the
10	LPZ, EAB, and site boundary all to be the same so
11	there is the flexibility to be able to do that.
12	I agree with your assessment that if you
13	require it that way that it's more restrictive. In a
14	sense, yes, it does limit flexibility but I think it
15	does more than that. I'll just point out that our
16	proposal back in February would have done that.
17	It would have said that the 25 REM the
18	first two hours and the EAB site boundary are
19	essentially the same to begin with. Then over the
20	entire plume, I think, is the terminology that it
21	would be the site boundary as well versus the LPZ.
22	Now, what that does, though, actually is
23	create a higher level of safety. We somewhat knew
24	that when we proposed it. We proposed it primarily
25	based out of the efficiency. Essentially what you
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could advertise if you were to go that way which is 1 the site boundary EAB and LPZ all have to be the same 2 and you meet that 25 REM criteria is that you could 3 say Part 53 is actually going to require higher levels 4 5 of safety. That does come with tradeoffs. 6 As you 7 mentioned, it decreases the potential for designs to make it in here. A design that would not be able to 8 achieve that could still be licensed under Part 50 and 9 52 so it's not the end of the world but it is, 10 in 11 itself, exclusionary. I know we made several comments 12 about trying not to be exclusionary. 13 The one thing that made it somewhat 14 palatable from our perspective is that in looking at 15 these advanced reactors they are able to easily meet that more conservative safety criteria, or 16 that 17 enhanced level of safety so it really wasn't a 18 concern. 19 Now, you know, looking at a large PWR would they be able to meet that? 20 I don't know. 21 That's something that would have to be figured out. 22 Certainly, the designs that we're all pursuing today 23 would, and then it would have benefits as well.

24 One, because you have a higher level of 25 safety that's resulting from that criteria you might

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feel comfortable in not having all more those requirements that we're concerned about. You also have a good discussion or, I would say, а qood reassurance with other stakeholders that are watching the process that Part 53 is actually enhancing safety in that regard. Now, I would say that our proposal had built in siting with the design, the safety and

security design, in EP so we looked at it as a complete integrated approach. In that context we are able to achieve a lot of efficiencies. It was, therefore, acceptable to propose it.

13 If the NRC were to go down that road, you know, we would reserve out judgment on it because if 14 15 it doesn't achieve all those additional efficiencies 16 we are proposing, then it may not have a net benefit overall so I would say there's that consideration to 17 18 add to it. I think it's a great conversation. I would 19 encourage anybody else in this meeting to chime in with their thoughts on that topic because I don't 20 21 think we've had a very robust discussion around it and 22 I think it's worthy of it.

I want to move onto the manufacturing --Subpart E, manufacturing and license. Two points. One is Cyril made an earlier comment based around the

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1	definition that manufacturing any manufacturing
2	requires a manufacturing license.
3	If you look at 1552 you can do
4	manufacturing outside of a manufacturing license. In
5	fact, if you have a construction permit operating
6	license or a COL, you delegate that manufacturing and
7	you don't need a manufacturing license so we would
8	like to preserve that in Part 53.
9	The question then becomes what do we want
10	to achieve with the manufacturing license. This is
11	one of my earlier comments in terms of what is
12	something Part 53 is trying to accomplish that can't
13	be done under 1552. Manufacturing license was one of
14	those that I mentioned. So we're looking at different
15	business models and we're putting together our
16	thoughts and we want to give those to the NRC in
17	writing, but I'll just give you a preview on some of
18	the stuff that we've been thinking about.
19	First, as we look at the scope of the
20	manufacturing license requirements, it should be
21	focused on the safety; the safety of the design and
22	manufacturing leading to operation so it should be
23	focused on the safety. It will need to consider other
24	general requirements that are applicable such as QA,
25	codes and standards, Part 21 reporting. Those are all

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1 interfaces. Ιt doesn't need its of own set requirements, but it will have to figure out how it 2 interfaces with those. 3 Then it will have to figure out how it 4 5 interfaces with the broader set of requirements depending on the type of activities. If there's going 6 to be fuel involved, what's the connection to Parts 7 40, 70, thing. 8 30, that sort of Ιf there's 9 transportation involved, what's the connection with Part 71. 10 11 A11 those need to be and then _ _ 12 environmental considerations. All those need to be 13 factored in. Those aren't where we need specific 14 manufacturing license requirements Part 53, but we 15 need to understand how they are all fitting together. 16 So let me move to the business activity, or business strategies and activities that we are 17 18 thinking about considering around here. So in this 19 concept that manufacturing and license should enable something that's not available with a construction 20 21 permit operating license, DCD, COL, that sort of 22 thing, it's really looking at a couple of things. 23 So would you assemble a fully-functional reactor and so the only thing it's lacking is the 24

fuel. Otherwise, it's completely -- in primary

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manufacturing license we're thinking in terms of micro-reactor so it doesn't need that building necessarily. So all you're lacking is the fuel. Does that need a manufacturing license or could you actually still do that under, say, a DCD? That's one question we're trying to look at.

7 Fueling. If you actually put the -- you have that fully assembled -- that assembled fully-8 9 functional reactor and then you put fuel in it at the factory, we're pretty certain that's going to need the 10 11 manufacturing license so let's make sure the 12 manufacturing license is looking at that and there are 13 people that are interested in it.

What about the transportation of that reactor either with or without fuel that's under the manufacturing license to an operating site. I'm guessing, you know, we're envisioning it's transported to a site where somebody has an operating license, or combined operating license, so you're transporting it to them.

But then some other considerations. 21 What 22 if you want to subcontract with others that have 23 capabilities here, acquiring some components from some things. Maybe 24 people or some other you're 25 subcontracting some design. The Part 50/52 seems to

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1 prohibit that. It seems to require that the manufacturing 2 license holder has all capabilities and facilities 3 that are needed under that manufacturing license so 4 5 there's no ability to subcontract or delegate. That might be something we want to look at enabling under 6 7 Part 53. Then there's а question what about speculative manufacturing. Speculative is like a spec 8 9 house. You build it without knowing who's going to buy it. 10 11 In this instance the manufacturing license would be able to -- if it can't be done with the DCD 12 would manufacture, say, 100 of these not knowing who's 13 going to buy one through 100 and then some time before 14 15 they're completed, or maybe even after they're completed and on the shelf, a customer comes by and 16 says, "I want that one off the shelf. 17 I've qot a 18 truck out back. Why don't you hook it up and we'll drive it to my site." That type of thing. Of course, 19 design and analysis function that 20 there's that 21 manufacturing license capability is going to have. 22 Now, there are some activities that, you 23 know, probably fit outside the manufacturing license. They might fit underneath the COL or operating license 24

and that would be things like you have that operating

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site. What is that interface between a manufacturing 1 license and the site. 2 What if you want mobile operations, mobile 3 operations meaning you take it to a site, operate it 4 5 there, shut it down, move it to another site and operate it there. Is that a whole set of 6 new 7 considerations that have to be put in there, or is it 8 pretty simple that you can just move it from one 9 operating license location to another operating That will be things to consider. 10 location. 11 Then what if the manufacturing license 12 themselves want to be at that site and be the owner of where it's going to operate? Is there an opportunity 13 that the manufacturing license can come with some site 14 15 or do you have to file a combined manufacturing license and operating license to be able to do that? 16 So there's all of those factors. Then below 17 it there's a whole bunch of considerations in terms of 18 19 technically how do you assure that those activities 20 are being done safely. 21 I did want to lay out a framework because 22 think the most important thing to inform Ι the 23 manufacturing license is what are these new business models that people are pursuing so that we can write 24 25 requirements that enable them and ensure that they're

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With all that said, please ask me any questions you want. We're working on a paper to help provide to you but we wanted to give you those thoughts. We don't have any major issues with what you put out, but we do see that more is needed in order to enable these business plans.

Hey, Mark, this is John SEGALA: 8 MR. Segala. 9 Thanks for that. I think those business models will be very helpful to us. I don't know if 10 11 you can do it or if it's feasible but I think it would 12 be helpful for us if we had some idea of the timeframe for when somebody might want to implement a business 13 model because it could be that tackling one of these 14 15 might be a huge effort so we want to be able to understand, you know, if that's not needed for 15 16 years from now, is that something that we need to 17 include in the rule today, or is that something that 18 we could modify the manufacturing license later. 19

I'm just trying to look at, you know, we've got about a year left to get the proposed rule finished. I'm just trying to add some realism. We want Part 53 to do as much as we can have it accomplish but, at the same time, being realistic as to when we need those things.

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1	As we look at fusion, we're seeing that
2	fusion is a little bit further off and so that might
3	be something that we handle in Part 53 or outside of
4	Part 53 but by 2027. Just trying to have some idea of
5	the timeframes when those business models might be
6	needed to be implemented will help us. Some of these
7	might be much easier to address quickly and some of
8	them might be much more involved. I don't know.
9	MS. CUBBAGE: This is Amy Cubbage. Just
10	wanted to add to that real quickly. Where it gets
11	tricky is if there are things that would require a
12	change to the act. You know, they are kind of by
13	definition not as feasible on the current schedule.
14	MR. NICHOLS: Yeah, absolutely. I left
15	off the one that we know would require a change to the
16	act and that's a general license type of approach
17	where you would get these things licensed and you
18	wouldn't have to have site-specific licensees. The
19	siting aspect is sort of taken care of generically
20	within the generic license but you would have to
21	notify the NRC before you put it at a site.
22	The generic license would have, you know,
23	a certificate of compliance which would specify the
24	site conditions that have to be met in order for it to
25	be a suitable site and you'd have to verify that and

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1	provide it to the NRC, that sort of thing. We didn't
2	include that. That might be longer term.
3	MS. CUBBAGE: Some of the things you were
4	saying sort of touched in that direction so I wasn't
5	sure how far you were taking it.
6	MR. NICHOLS: Okay. Yeah, you might be
7	aware of some things that require a change to the act
8	that we haven't identified. Everything I mentioned we
9	identified as not needing a change to the act but
10	certainly you might identify some things that we
11	missed. We'll also take a look at that.
12	John, we'll provide you on timing. I
13	would say part of it depends on what could be done
14	under a DCD or what could be done under DCD COLs right
15	now. That could get into policy issues. Maybe it
16	doesn't, but things like could you speculatively
17	manufacture some of these. Could you assemble a fully
18	functional reactor in a factory, both of those under,
19	say, a DCD.
20	Fueling a reactor, I'm sure you need more
21	than a DCD but could you do it with that plus a Part
22	70 license or just a Part 70 license. Are there other
23	fixes that we might be able to use before we get a
24	more efficient solution under Part 53 would be part of
25	the question.
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1	MR. MERRIFIELD: Mark, this is Jeff. May
2	I interject for just a second?
3	MR. NICHOLS: Please do.
4	MR. MERRIFIELD: I just want to get back
5	to John Segala's question, is it released to fusion.
6	I just want to I think that's a fair question. The
7	Fusion Industry Association has made it pretty clear
8	that they do see fusion going on a separate track.
9	They've suggested Part 30. That's obviously a
10	discussion that's going to need more time to play out.
11	But to your point of the timing, in their
12	business plans will they want to see progress
13	continue. The 2024 deadline that's been imposed by
14	the Commission on advanced reactors is not necessary
15	to allow the fusion industry members to move forward
16	with their plans. They certainly would feel
17	comfortable with a separate track for 2027.
18	MR. RECKLEY: Yes, thank you, Jeff. You
19	said that better than I did so I appreciate that.
20	MR. NICHOLS: And I was done with my
21	comments. Thank you.
22	MR. BEALL: Okay. Thank you, Mark.
23	Would anybody else like to make a comment
24	or ask a question? Go ahead, please.
25	MR. DRAFFIN: Thanks. Just a couple
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things kind of going back to the ACRS meeting yesterday. They indicated that they did not find value in the two-tiered approach to safety requirements which is a concern we have as well.

Also, for discussion of PRAs, as we said before PRA insights that are important for design, not specific numerical requirements and we don't believe the PRA should be evaluated and elevated to a compliance tool in the application calling for a construction permit. We think that the graded approach does have certain merit so we look forward to seeing that when it's available as an approach because I think that would be helpful.

14 And then just to reiterate that just 15 because something is important such as ALARA as a good 16 business practice and defense of depth doesn't mean it has to be in the regulations. Just because things can 17 18 be used and deployed as a criteria without being 19 something that's forced in regulations which has lots of other ramifications for implementation. 20 I would 21 just pause with that comment for Part B and C. The 22 other comments we've made earlier you have that from 23 previous meetings. Thanks.

24 MR. BEALL: Thanks Cyril. Does anybody 25 else have any other comments they would like to make?

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1	Steve Kraft.							
2	MR. KRAFT: Hey, thanks, Bob. Am I on?							
3	MR. BEALL: Yes, you are. We can hear							
4	you.							
5	MR. KRAFT: Thank you. I think I finally							
6	figured out the magic here. First, what Cyril said							
7	about the ACRS. Until you see the ACRS letter, you're							
8	not going to really know where they are. They were							
9	working on a letter this morning, as I understand it,							
10	or this afternoon. They did say what Cyril said, no							
11	question.							
12	One of the questions they did raise and,							
13	Bill, they asked you this quite a bit, was Mark raised							
14	a question of transportation from the factory to the							
15	site, but they were asking the other way around. What							
16	happens at the end of life of one of these plants and							
17	they were really focusing on micro reactors but it's a							
18	good point. Whether it's 20 years, or whatever it is,							
19	and there's still no place to send spent fuel, then							
20	what happens? Do you have to expand the site? Do you							
21	have to have a different EP? Do you have to have guns							
22	and guards? All that sort of stuff.							
23	Bill, is that going to be covered in the							
24	life cycle, under the full life cycle of requirements							
25	in this part?							
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1	MR. RECKLEY: Yeah, we would envision that
2	we will need to cross that bridge. We haven't started
3	yet really looking at the decommissioning retirement
4	stage, Subpart G. We had even talked early on about
5	whether that would be one we would try to get done in
6	this period, or maybe one we would reserve and come
7	back to.
8	The thought is somewhere we will need to
9	address the end of life questions. Some of that will
10	interface with Part 71 in terms of how it will be
11	transported away from the site. The short answer is
12	yes, we'll have to address it somewhere. We may not
13	address the actual transportation requirements. That
14	will be under Part 71 and might be a different
15	activity, but we'll have to make sure that we have an
16	appropriate interface with those other requirements.
17	MR. KRAFT: So going back to the
18	manufacturing question, though, transport from a
19	fully-loaded unit from the factory to, then that unit
20	must meet new fuel transportation requirements which
21	may be different from HALEU that needs to be
22	addressed.
23	Secondly, if you think about it. Bill. I

, I t, Bil .y, ii y mean, if you imagine the ability to transport, you 24 know, the classic sort of battery reactor, as we 25

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1 discussed, some place else, then you would imagine either the reactor itself would have to be qualified 2 3 as a special transport which is really onerous, or an overpack be designed at some point. 4 5 Then the question just sort of if you're going to deal with it in advance, it needs to be 6 7 pointed to or say, hey, there's something that needs to be considered going forward. It may not be part of 8 9 the licensing requirements now but you need to be aware that this is something that might come up. 10 11 MR. RECKLEY: Right. That goes to John 12 Segala's question of -- our thought is we will need to The question is do we need to address 13 address this. it in this first round of Part 53 or maybe we could 14 15 come back and fill in this area after this first 16 effort that's due by 2024. 17 That's a question and why we were asking 18 about potential business models and timeframes. But 19 the thought is that there's enough effort going into 20 the development of these types of reactors that we 21 will likely need to address it in Part 53. The big 22 difference comes with the loading of the fuel at the 23 factory. No question. 24 MR. KRAFT: 25 MR. RECKLEY: That's what we're asking

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1	about.
2	MR. KRAFT: Yeah, no question. This may
3	be more applicable to micro reactors than anything
4	else. But one of the things that you said that just
5	sort of rang a bell, if you think about again, it's
6	micro reactors. If you think about a 10 to 20-year
7	course, and the fact you're going to have to have
8	pretty heavily enriched material to do that, close to
9	higher levels of HALEU, attempting today to specify a
10	requirement of transport 20 years from now is hard
11	enough now.
12	Beyond that, if you don't I'm just spit
13	balling here, but if you don't, then you get subject
14	to requirements that you don't know yet that you have
15	to then 20 years after you put it in operation, you
16	then have to figure out how to meet the requirement.
17	That's a lot different than now when, yeah, you have
18	to meet requirement transport now but the fuel is out
19	of the pot. It's in storage some place. That's a
20	different matter altogether. I don't know how to
21	answer these questions, Bill. I'm not smart enough.
22	I'm just saying it kind of comes to mind
23	if we're going to try to be as comprehensive as
24	possible, then the question arises, I'll just raise it
25	again, is that you could have indicators, you could

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have place holders, you can have pointers, but then 1 the question comes do you license against that and 2 3 say, wait a minute, this is all good with the exception of there's a Part 71 thing you're not 4 5 meeting now. Just think about the complications that gets into. I have no answer to the question, I'm just 6 7 thinking about it as we're talking. 8 MR. RECKLEY: Right. And I quess all 9 we're saying is we have the same questions and designers will have to think through, as much as we're 10 11 trying to do for Part 53, the whole life cycle of the machine with the added -- for these fueled variations 12 the added complexity of transport and safety in the 13 14 factory. 15 Mark, you're right based on the last conversation we're looking at what combinations of 16 Part 70 requirements and what, if anything, would be 17 18 needed in the manufacturing license to address safety 19 in the factory. All of these are questions in play. As NEI prepares its input, we will be very interested 20 21 in seeing it. 22 Bob. 23 Thank you, Bill. MR. KRAFT:

24 MR. BEALL: Okay. Are there any other 25 discussions on this topic? Okay. Not seeing

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1	anything, can we go to the next slide, please? Okay.
2	Are there any additional comments or questions from
3	the other topics we discussed today; Subpart A and the
4	two sections in Subpart F? Anybody on the bridge line
5	also? Use star 6 to unmute your phone. Okay.
6	Do you have any follow-up comments or
7	anything, Bill, you'd like to say?
8	MR. RECKLEY: No, I don't have anything.
9	I missed this morning so if Nan has anything, or
10	Jordan.
11	MS. VALLIERE: No, I have nothing further.
12	Thank you.
13	MR. BEALL: Okay. Can we go to the next
14	slide, please? This slide provides an overview of the
15	current Part 53 rulemaking schedule. As you can see
16	on the slide, we are still on the first milestone with
17	staff performing public outreach meetings with ACRS
18	and working on the draft proposed rule package.
19	The staff has 11 months to complete these
20	activities before the draft proposed rule package is
21	submitted to the Commission on April 2022. The staff
22	is still projecting that the Part 53 proposed rule
23	will be published for public comment in October of
24	2022.
25	Next slide, please. The staff is planning

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to host additional public meetings each month. We are proposing to hold future meetings on the first Thursday of every month with our next public meeting tentatively scheduled for June 3, 2021. These public meetings will cover additional topics and will include the release of additional Part 53 preliminary proposed rule language.

8 The staff will continue to also post 9 preliminary proposed rule language and any additional 10 comments submittals received on the preliminary 11 proposed rule language on Regulations.gov under our 12 docket ID, NRC-2019-0062, prior to the public meeting. 13 The staff is also meeting with the ACRS

Future Plants Subcommittee to receive feedback on the Part 53 rulemaking. The next meeting with the ACRS Subcommittee will be May 20, 2021. Additional ACRS meetings will be held every month.

18 Next slide, please. Ιf you have 19 additional input or suggestions for future topics 20 related to the Part 53 rulemaking, please send an 21 email to Bill and I at the email addresses on this 22 slide. Your interest and comments will improve our 23 rulemaking effort. I also encourage you to monitor the rulemaking docket 24 Part 53 ID, aqain on 25 Regulations.gov, which is NRC-2019-0062, for updates

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1 and important documents related to this rulemaking. Finally, we are always looking for ways to 2 improve our public meetings and your feedback is 3 important to us. At the end of the meeting, please go 4 5 the NRC Public Meeting website and click on to recently held meeting button and look for this 6 7 meeting. The meeting feedback form will be at the bottom of the meeting announcement. 8 9 Ι would like to thank everyone for participating in today's meeting and I hope everyone 10 11 has a good evening and this meeting is now closed. 12 Thank you very much for your participation. MR. HOELLMAN: Hey, Bob, this is Jordan. 13 It looks like Cyril has his hand up. I don't know if 14 15 you want to -- I know people are dropping off now but 16 Quick question for 17 MR. DRAFFIN: Thanks. 18 Bill. What percent of the documentation do you think 19 we've seen so far in terms of the language you'll be provided and maybe anything with guidance, just as an 20 21 order of magnitude quess. 22 MR. RECKLEY: Less than half probably. 23 MR. DRAFFIN: Thanks. MR. BEALL: Okay. Thank you very much for 24 your participation today. 25 **NEAL R. GROSS**

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