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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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683RD MEETING

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
(ACRS)

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THURSDAY

MARCH 4, 2021

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The Advisory Committee met via
Teleconference, at 9:30 a.m. EST, Matthew W. Sunseri,
Chairman, presiding.

COMMITTEE MEMBERS:

MATTHEW W. SUNSERI, Chairman

JOY L. REMPE, Vice Chairman

WALTER L. KIRCHNER, Member-at-Large

RONALD G. BALLINGER, Member

DENNIS BLEY, Member

CHARLES H. BROWN, JR., Member

VESNA B. DIMITRIJEVIC, Member

JOSE MARCH-LEUBA, Member

DAVID PETTI, Member

PETER RICCARDELLA, Member

1 ACRS CONSULTANTS:

2 MICHAEL L. CORRADINI

3 STEPHEN SCHULTZ

4
5 DESIGNATED FEDERAL OFFICIAL:

6 LARRY BURKHART

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P R O C E E D I N G S

9:30 a.m.

CHAIRMAN SUNSERI: Good morning, everyone.
It's 9:30. The meeting will now come to order.

This is the second day of the 683rd
meeting of the Advisory Committee on Reactor
Safeguards. I'm Matthew Sunseri, the Chair of the
ACRS.

I'll call the roll now to confirm a quorum
and that communications are clear.

Ron Ballinger?

MEMBER BALLINGER: Here.

CHAIRMAN SUNSERI: Dennis Bley?

MEMBER BLEY: Here.

CHAIRMAN SUNSERI: Member Brown will be
stepping away for a few minutes, but he'll join us
here in a minute.

Vesna Dimitrijevic?

MEMBER DIMITRIJEVIC: Here.

CHAIRMAN SUNSERI: Walt Kirchner?

MEMBER KIRCHNER: Here.

CHAIRMAN SUNSERI: Jose March-Leuba?

MEMBER MARCH-LEUBA: Here.

CHAIRMAN SUNSERI: Dave Petti?

MEMBER PETTI: Here.

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1 CHAIRMAN SUNSERI: Joy Rempe?

2 VICE CHAIRMAN REMPE: Here.

3 CHAIRMAN SUNSERI: Pete Riccardella?

4 MEMBER RICCARDELLA: Here.

5 CHAIRMAN SUNSERI: All right. Loud and
6 clear on everyone, and we have a quorum.

7 The Designated Federal Officer for this
8 meeting is Mr. Larry Burkhart.

9 During today's meeting, the Committee will
10 consider the following: we will have a briefing on Be
11 riskSMART, EMBARK Venture Studio, and finally, we'll
12 have a briefing later this afternoon on regulatory
13 basis of 10 CFR Part 50 and Part 52, and other related
14 business.

15 Additionally, we will be conducting report
16 preparation on a digital I&C conduct of access letter
17 that we're working on.

18 The phone bridge line has been opened to
19 allow members of the public to listen in to
20 presentations and Committee discussions. We have
21 received no written comments or requests to make oral
22 statements from members of the public regarding
23 today's session.

24 Members of the ACRS staff monitor the
25 remote aspects of this meeting and are in position to

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1 correct problems with open mics, excessive audio
2 interference, or other problems that may be
3 encountered.

4 There will be an opportunity for public
5 comment. We have set aside time in the agenda for
6 comments from members of the public attending or
7 listening to our meeting. Written comments may be
8 forwarded to Mr. Larry Burkhart, the Designated
9 Federal Officer.

10 A transcript of the open portions of the
11 meeting is being kept, and it is requested that the
12 speakers identify themselves and speak with sufficient
13 clarity and volume, so that they may readily be heard.

14 And most importantly, participants should
15 mute themselves when not speaking. Having open mics
16 of people not presenting or speaking contributes
17 greatly to the interference, the audio interference.
18 So, we respectfully request everyone to mute yourself
19 if you're not speaking.

20 Members, I'll now turn to you, if there
21 are any questions or comments regarding the activities
22 we're getting into or questions about the agenda.

23 (No audible response.)

24 All right, hearing none, then we will
25 proceed to the first topics, and let me introduce

1 these.

2 The ACRS began its own transformation
3 activities a couple of years ago. We wrote a letter
4 to the Commissioners about what we were doing. And in
5 that letter, we promised to keep abreast of Agency
6 transformation initiatives. So, we have a couple of
7 topics here today along that line.

8 Additionally, during our Commission
9 briefing last fall, last December, the topic of EMBARK
10 Venture Studio was brought up, and it sounded like
11 something we should learn more about. So, today, we
12 will hear on both of these topics. The first one will
13 be an update on the Be riskSMART Initiative, and the
14 second one will be EMBARK Studio.

15 So, let me introduce a member of the
16 staff, a familiar -- I was going to say, "a familiar
17 face," but I'll call her "a familiar voice," Mirela
18 Gavrilas, with the Office of Nuclear Security and
19 Incident Response. I'll turn to Mirela to offer any
20 comments; Mirela?

21 DR. GAVRILAS: Thank you very much.

22 So, I'm Mirela Gavrilas. I'm the Director
23 of NSIR, but, for the purpose of this meeting, I'm the
24 very proud leader of the Be riskSMART team. And I
25 will share with all of you that it has been an

1 absolute pleasure to lead this team over the past year
2 and a half.

3 I'm going to keep my remarks short, but I
4 want to start with an overarching assessment of what
5 the Be riskSMART framework accomplished. And in my
6 mind, the biggest contribution of the framework is
7 that it takes the mystique out of risk-informed
8 decision making and it allows people to talk about
9 risk, even if they never heard the term "Boolean," let
10 alone "Bayesian," in their professional lives.

11 So, with that, next slide, please.

12 The charter of the team was pretty simple:
13 provide a high-level framework applicable to all
14 disciplines -- technical, legal, and corporate --
15 because risk-informed decision making happens in all
16 arenas of the Agency. And our intent was to engage
17 all arenas in a meaningful way.

18 The folks you're going to hear from today,
19 we started out with a team of five. We've grown to a
20 team of 15. And now, most recently, we've added a
21 very large number of ambassadors, but I'm very proud
22 to say that the speakers today are members of that
23 original team. We stayed together over this past 18
24 months.

25 So, one of the other objectives of the

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1 team was to address obstacles that were perceived to
2 be in the way of including risk considerations in
3 decision making. And I'm going to talk a bit more
4 about that because we had a somewhat separate, but
5 related effort when the Commission sent an SRM for the
6 IAB in 2019. So, that's going to be the topic of the
7 next slide.

8 One of our mantras has been do not
9 reinvent the wheel. In other words, make sure that
10 whatever we do does not harm any of the risk-informed
11 decision making aspects of the Agency; for example,
12 the use of probabilistic risk assessment for reactor
13 safety; the use of enterprise risk management in
14 Agency decisions. So, we wanted to make sure that our
15 framework becomes an umbrella rather than a deviation
16 from existing practices.

17 And then, finally, we realized there was
18 some confusion originally about the intent of the
19 framework. So, we explicitly offered that we had no
20 intention of revisiting existing criteria. So, the
21 framework does not target the criteria familiar to the
22 Committee from Reg Guide 1.174. It doesn't change any
23 of the steps in STP for oversight. But it facilitates
24 the explicit consideration of those criteria in
25 decision making.

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1 Next slide, please.

2 So, I've mentioned the parallel effort.
3 So, there was an SRM on Commission direction on
4 applying risk-informed principle in regulatory
5 decision making. And in response to that, we were
6 tasked by the EDO to sort of assess what the obstacles
7 are.

8 And what you see on this page were what
9 the team -- and I was on that team as well -- the team
10 who wrote that response to the view that's the most
11 significant obstacles. And not surprisingly, at the
12 top of the list was inconsistent management support
13 and expectations.

14 You'll see a letter after each of these
15 obstacles, and the letter is actually the letter in
16 the Be riskSMART framework, where "A" stands for
17 "act". We'll talk about that on the next slide. That
18 is the main contributor to removing that obstacle.
19 So, one obstacle: inconsistent management support and
20 expectations.

21 Another obstacle, potential flexibilities
22 not reflected in the guidance, in other words, rigid
23 guidance.

24 Another obstacle is reluctance to adapt
25 processes, I mean, thinking that the processes is the

1 ultimate authority.

2 In some cases, it's the total lack of
3 guidance. One very common pitfall that we had
4 observed in time was that risk information was
5 introduced too late in the decision-making process.

6 And the next one is a huge sort of faux
7 pas, which is the limited considerations of benefits.
8 We were so focused on what can go wrong, that we
9 didn't consider that the benefits can offset that
10 wrong.

11 The next one is the presence of
12 uncertainties. This is, you know, sort of inherent in
13 human nature. We were thinking specifically about
14 lack of information and how we, as humans, react to
15 not having sufficient information.

16 Another one was siloed organization in
17 risk-informed decision making, especially in risks
18 that canvass a variety of disciplines, as risks
19 associated with all kinds of work you usually do.
20 Working in siloed organization is detrimental to
21 making the sound decision.

22 Treatment of low-likelihood events, that's
23 another one that's sort of inherent in human nature.

24 Where regulations provide flexibility,
25 overly rigid interpretation of regulation, that was

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1 another big one in the staff's view.

2 And finally, limited awareness of
3 guidance.

4 So, the Be riskSMART team was a complement
5 to the identification of all these obstacles, and it
6 had the explicit purpose of removing these obstacles.

7 And with that, I'm going to pass the
8 presentation over to Eric, who is going to talk about
9 the framework on the next slide.

10 MS. DE MESSIERES: And so, actually, this
11 is Candace De Messieres. So, I'll be presenting on
12 the framework. And again, my name is Candace De
13 Messieres. I'm a Technical Assistant in the Office of
14 Nuclear Reactor Regulation, and I have the pleasure
15 this morning to walk through this.

16 And again, I echo Mirela's comments that
17 being on this team has been an honor, and it's just
18 been a great experience to see so many people from
19 different backgrounds coming together to get behind
20 this approach and framework.

21 So, without further ado, I'll start just
22 by noting that the first, the very first step, and
23 very important step, is to be clear about the problem.
24 There's a note here at the bottom. You know, part of
25 this step is, of course, knowing and fully

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1 understanding what is required. We are not, as Mirela
2 stated, changing any of the existing requirements or
3 criteria, but we are optimizing our decision-making
4 process and how we make that decision.

5 So, the problem could be a simple binary
6 decision. It could be something that an individual
7 makes that is a yes-or-no answer. They can certainly
8 use this framework. Or it could be more complex. For
9 example, how to optimize a process or procedure to
10 enhance the principles of good regulation.

11 And again, it's very scalable, this
12 process. In many cases, the steps, you know,
13 depending on that complexity, are more detailed or
14 not. But, again, it can be used for simple decisions
15 or those that are the most complex.

16 So, the first step here, "S" for "spot,"
17 may look very, very familiar to you. And that's
18 because it really envelopes the risk triplet. And
19 that is, what can go wrong, how likely is it, and what
20 are the consequences. What you'll notice is there are
21 a few changes that you'll notice. And one Mirela
22 already mentioned is that, of course, in the reactor
23 safety realm, focused on things like core damage
24 frequency, there is an implicit what-can-go-wrong
25 approach. However, this framework, which, again, is

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1 applicable to all disciplines, explicitly considers
2 those opportunities or things that can go right and
3 wrong.

4 We also, again, from thinking how this
5 could be applied in non-technical contexts, thought
6 about what is intuitive from a psychological
7 perspective. And, you know, you might not
8 automatically jump to how likely is it, which may
9 involve some further thought or analysis. So, you'll
10 notice that the next step is: what are the
11 consequences? And then, once you've identified those,
12 thinking either, again, in a qualitative or
13 quantitative way how likely is it.

14 And so, with that, I'll move to the next
15 step. And this is --

16 CHAIRMAN SUNSERI: So, Candace, this is
17 Matt.

18 MS. DE MESSIERES: Oh, sure, uh-hum.

19 CHAIRMAN SUNSERI: So, at least in my
20 experience, this could be the hardest step in the
21 sequence of things because people that are steeped in
22 their paradigm often can't see beyond that. So, they
23 can't spot the right or the wrong because they're so
24 entrenched, if I can use that terminology. Have you
25 thought about that and things to overcome that?

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1 MS. DE MESSIERES: Yes, absolutely. I
2 mean, that's a very, very good point. And I'll say,
3 prior to being a Technical Assistant, I was a
4 Reliability Risk Analyst in the Division of Risk
5 Assessment. And coming from that background, I
6 absolutely had to kind of shift my thinking to
7 overcome some of those unconscious biases from our
8 training, if you would call it.

9 The thing is that the beauty of this
10 framework, and one way that we overcome it, is that
11 it's a collaborative effort. The spot step -- and we
12 have a detailed guidance document -- it really
13 involves engaging all stakeholders in the decision.
14 And that collaborative aspect I think can help with
15 advancing a culture that's kind of receptive to things
16 that can go right or wrong. And there's definitely an
17 aspect of training folks to really understand that
18 that's an important aspect, and that just doing things
19 differently doesn't mean that you're not, again,
20 following the guidance or following the requirements.
21 It's not that you're changing criteria; it's just a
22 different approach, which leads you to maybe a more
23 focused way to accomplish the problem you're trying to
24 solve.

25 So, that's an excellent question. It's

1 something we think a lot about every day, and we work
2 with our culture team as well to overcome some of
3 those issues.

4 CHAIRMAN SUNSERI: Just a little bit of a
5 follow-up on that -- and maybe it comes in later in
6 the follow-up steps -- but if you learn something,
7 let's say, during the act step, does this allow for
8 looping back to the spot, and then, reassessing what
9 the best --

10 MS. DE MESSIERES: Absolutely. Yes.

11 Then, Mirela, you wanted to say something
12 as well. Go ahead.

13 DR. GAVRILAS: Yes, I think that that's a
14 great question, and we will address it explicitly.
15 But I wanted to say that, even in traditional PRA,
16 because I thought about this for a while, in
17 traditional PRA you don't need to say what can go
18 right or what can go wrong, because you have a common
19 figure of merit, right, that takes into consideration
20 what's working and what's not working. You're like
21 looking at core damage frequency, but you're sort of
22 considering systems responding or not responding.
23 But, in more general risk decisions, you may not have,
24 nor would you need, a common figure of merit. And it
25 makes it even more imperative to consider right and

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1 wrong separately.

2 That was all that I wanted to add.

3 MS. DE MESSIERES: Yes, that's a great
4 point. Thank you.

5 And then, yes, to your second question
6 about the iterative nature, that's absolutely part of
7 that, and I will talk a little bit more about that
8 under "realize" in just a minute.

9 And so, I think we're now to the manage
10 step. Again, this framework is meant to be intuitive.
11 It means exactly what it says. This is really
12 managing what you can. It involves anything from a
13 range of possibilities -- for example, additional
14 public meetings, increased resources or focus to some
15 issue. It could be additional inspections. So,
16 there's many different management techniques,
17 depending on what your problem is.

18 And again, this is an explicit focus on
19 those techniques to know that there may be risks that
20 you identify and spot, things that could go wrong.
21 But if you really have the correct management in
22 place, those things can sometimes be okay in that
23 context, to proceed with that action. Sometimes not.
24 And again, it can go either way, but there is an
25 explicit step for that.

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1 Once you've managed what you can, you,
2 then, act on the decision. And I'd ask, Eric, if you
3 could --

4 MR. DUNCAN: Yes, let me just jump in real
5 quick.

6 MS. DE MESSIERES: Oh, sure. Of course.

7 MR. DUNCAN: This is Eric Duncan here.

8 So, right, manage what you can; those are
9 the guardrails, right, that we put in place. And we
10 already do this often. I think one great example of
11 that is the use of pilots, right? Typically, when the
12 NRC rolls out a new program, what we'll do is we'll
13 test it with a smaller group of people, just to find
14 out how well it works for us. And then, we can make
15 adjustments to that as necessary. And so, that pilot
16 would be, I think a great example of a manage-what-
17 you-can action that we can take to assess the
18 effectiveness and overall efficacy of whatever the
19 program is or whatever the new idea is that we're
20 getting ready to implement.

21 Thanks.

22 MS. DE MESSIERES: That's a great example,
23 yes.

24 Eric, or I think it's Jason, would you
25 mind going to the next slide for a second? Thank you.

1 So, for the act step, what I put on the
2 screen here is just a tool that we've adopted from
3 enterprise risk management, and this is a heat map.
4 And again, on the act step, after collaboratively
5 hearing all the different perspectives, evaluating all
6 the challenges and opportunities, managing those
7 things, documenting that, this step is really the step
8 where you can explicitly consider all of those things
9 holistically and see where, as an organization, as an
10 individual, depending on the decision, what is your
11 risk appetite.

12 And again, if you have a low-risk
13 appetite, you really need risks that have a very low
14 consequence or likelihood, and that might be totally
15 appropriate. In other cases in other areas, you might
16 have a high-risk tolerance. If something goes wrong
17 from an organizational enterprise risk perspective, or
18 whatever the perspective it may be, that may be
19 acceptable. And again, we use our guidelines,
20 organizations, guidelines, and criteria in helping
21 develop these risk appetites.

22 And I would mention that this could be,
23 again, very qualitative or it could be quantitative.
24 So, we mention Reg Guide 1.174 in the reactor safety
25 realm. That's like a quantitative example for CDF and

1 LRF risk appetites.

2 However, again, in a corporate or a legal,
3 or any other type of decision, where quantitative
4 numbers may not be available, or to a less degree, you
5 know, this could literally just be where your group or
6 organization has identified that risk appetite. And
7 that's one tool that you can use as part of the Be
8 riskSMART framework to help you in acting on a
9 decision.

10 If you can go back --

11 DR. GAVRILAS: Can I --

12 MS. DE MESSIERES: Yes, uh-hum.

13 DR. GAVRILAS: Can I jump in?

14 MS. DE MESSIERES: Absolutely.

15 DR. GAVRILAS: Because one of the
16 objectives of the team was to make this framework
17 accessible to everybody. And what we did is -- I'm
18 noticing that when we're talking to you guys, we're
19 falling back on PRA examples -- but what we did in the
20 context of the framework, we actually came up with a
21 simple example to walk everybody through all the steps
22 of the framework.

23 And the feedback that we got initially
24 when we rolled out the example -- I'll tell you what
25 it was in a moment -- was this is too simple. And we

1 were delighted that people were telling us that this
2 is too simple. Because in the back of our mind, we
3 were walking through sort of PRA type of thinking,
4 enterprise risk kind of thinking, but the example that
5 we rolled out was somebody having to make a decision
6 on whether to commute to work on a bicycle or to
7 continue to drive their car.

8 And the decision had the positives, which
9 were better health, and the negatives, such as you'll
10 fall and get hurt, right? And then, the mitigation
11 was, the manage what you can was travel during daytime
12 and only in good weather, and use proper equipment.
13 And then, we played up the risk appetite, that
14 somebody who has osteoporosis or another preexisting
15 condition may have a low risk appetite while somebody
16 who is an expert bike rider will have a high risk
17 appetite. So, that example was actually what we used
18 to roll out the framework.

19 Sorry for the interruption, Candace.

20 MS. DE MESSIERES: Oh, no, that's a great
21 example, and I'm glad we had the opportunity to bring
22 that up for sure. Yes, I mean, this is really meant
23 to be very intuitive to any person, regardless of your
24 background. And that's a great example.

25 MR. DUNCAN: Hey, Candace?

1 MS. DE MESSIERES: Uh-hum?

2 MR. DUNCAN: Yes, let me also add real
3 quick here, when we're talking about risk appetite,
4 we're talking about risk appetite in a specific area.
5 Okay? Because if you think about, if you go back to
6 spot and think about what can go wrong and what can go
7 right, there's lot of, usually more than one thing
8 that can go wrong, but there's also different areas
9 that they can go wrong in.

10 So, you may have a financial risk or you
11 may have a public perception risk or a technical risk.
12 So, there's all kinds of areas. And so, when you
13 apply this framework, it's not just one area. It
14 could be many, many areas, and each of those areas
15 could also have their own risk appetites that would
16 collectively have to be considered when making a final
17 decision in this act-on-a-decision step in the
18 framework.

19 Thank you.

20 MS. DE MESSIERES: Yes, that's a great
21 point.

22 And I mention one of the foundational
23 documents we used when we were trying to benchmark
24 with other organizations is the USAID had a risk
25 appetite statement that did explicitly what Eric was

1 talking about. As an organization, they defined their
2 risk appetite in different areas, and that was really
3 helpful to us in kind of giving us an example of how
4 this could actually be played out in a more
5 organizational level.

6 MEMBER KIRCHNER: Candace, this is Walt
7 Kirchner.

8 This diagram is a good one. It's often
9 used in investment management. And sometimes risk
10 appetite correlates with age. I won't reveal mine.
11 But it's good, then, to have stakeholders that have a
12 good spread in terms of age also when you start
13 approaching taking on risk, not in investment areas,
14 but in things like programmatic opportunities.

15 MS. DE MESSIERES: Yes, yes. Sure. Yes,
16 it's always good to get that diversity of perspective.
17 And, yes, that's, again, I think a highlight of the
18 framework, the ability to really get that consensus
19 among all your stakeholders.

20 MEMBER KIRCHNER: Well, as a former biker,
21 to use that example, my appetite was pretty high --

22 MS. DE MESSIERES: Yes.

23 MEMBER KIRCHNER: -- for risk when I was
24 much younger. I don't think so now. My balance
25 probably isn't as good as it used to be.

1 MS. DE MESSIERES: Absolutely.

2 MEMBER RICCARDELLA: This is Pete
3 Riccardella.

4 I think that an issue is, I mean, you've
5 got 3,000 employees and every one of them has a
6 different risk appetite. How do you adopt a
7 corporate, where's the proper corporate risk appetite?
8 And then, how do you get everyone to sign up for that?

9 MS. DE MESSIERES: So, that's a great
10 observation. I think part of it -- and again, other
11 team members can jump in -- is that this is really
12 scalable. So, we have some guiding principles that
13 could give us insights into what the actual risk
14 appetite is for our organization. We have our
15 mission. We have our principles and we have other
16 things.

17 But a lot of the decisions that we're
18 talking about here, while that could be a helpful
19 thing, something similar to have like the USAID risk
20 appetite statement that is an organizational
21 benchmark, a lot of the decisions that use this
22 framework are at a much smaller level. I mean, it
23 could be a working group. Well, we'll show you some
24 of the examples later. It could be a working group
25 that is trying to seek all of those different

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1 perspectives in arriving collaboratively at that risk
2 appetite that's appropriate.

3 So, yes, it is definitely a challenge when
4 you're dealing with an organization close to 3,000
5 people. But when you look at the bulk of the
6 decisions, a lot of these can be discussed at a much
7 more granular level. And we have some examples later
8 on in the presentation that demonstrate that.

9 DR. GAVRILAS: Let me help here, Candace.

10 MS. DE MESSIERES: Absolutely.

11 DR. GAVRILAS: Because I think the
12 guidance that we put in place explicitly addresses
13 this, that the team has to decide that the risk
14 appetite is unique to not only individuals, but also
15 organizations and the decision. So, the team who's
16 been designated to work on that decision has to,
17 basically, talk about risk appetite. And in
18 recognition of the fact that there are different risk
19 appetites, we emphasize the importance of having a
20 decision maker. So, it's if the team cannot
21 converge -- you know, that's part of the hierarchical
22 process -- having the decision maker is imperative,
23 but only if the team cannot converge by themselves.

24 MEMBER RICCARDELLA: Okay. Thank you.

25 MS. DE MESSIERES: Okay. So, Jason, could

1 you go back up to the previous slide, please?

2 So, after you act on the decision, then
3 you realize the result. And this was mentioned
4 earlier about iterating, the iterative nature. So,
5 after you've acted, you, then, implement your
6 management strategies and you also realize the
7 results. Do things need to be adjusted? Is there new
8 information that you've realized. And so, this is
9 extremely iterative and there's no reason at any time
10 you really can't go back and revisit spot/manage. You
11 may even need to act on either a different decision or
12 make a revision to the decision. So, this is
13 definitely iterative, and this realize step explicitly
14 encourages that, that you revisit the decision and see
15 how things are going.

16 And then, that kind of leads to the teach.
17 As you're realizing the result, as you're learning
18 more, seeing what went well, what didn't. If things
19 need to be modified, there's also a really important
20 teach component. And maybe this approach went really
21 well and you could apply it in different contexts.
22 Perhaps lessons learned are needed.

23 And so, I think the teach step is
24 something that we do think the framework, the realize
25 and teach is something we do really think the

1 framework has a strength, in that it goes an extra
2 step to make you think about have you engaged all your
3 stakeholders, and let them know how things are going,
4 and do you need to adjust? And so, I think those are
5 definitely the important parts of the framework.

6 Any other thing on it or?

7 CHAIRMAN SUNSERI: Okay. So, this is
8 Matt, Candace.

9 I was reflecting on Member Riccardella's
10 comment about the organization and this teach ties in
11 with it. My experience with organizations in
12 transformation is that you've got to look for your
13 role models, if you will, and sometimes those are
14 managers, but sometimes they're other people. And
15 those role models setting a good example can help move
16 the organization, the 3,000-strong organization, or
17 what have you, and have role modeling behaviors that
18 don't always, I'll say -- I want to say this right --
19 don't succumb to the lowest common denominator of risk
20 appetite, which may not be appropriate for the overall
21 strategy, but, you know, on an individual basis, might
22 be quite appropriate.

23 So, trying to find that balance and set
24 those stages and being good role models and
25 demonstrating the right behaviors is critical, I

1 think. I'll just leave it as a comment.

2 MS. DE MESSIERES: Yes, and -- oh, go
3 ahead, Mirela. Go ahead.

4 DR. GAVRILAS: So, two comments in
5 response to the chairman's comment right now. We
6 explicitly consider the importance of engaging
7 knowledgeable people who can -- I mentioned the
8 ambassadors orally, and you saw that our objective is
9 building the community of practice to do this. And
10 that's who we envision carrying, basically, the word
11 and spreading it, and becoming those role models that
12 you mentioned. And we'll talk in a few moments about
13 sort of our view of the role of management and the
14 individual contributors when it comes to risk-informed
15 decision making.

16 But I want to talk about, because we
17 mentioned the iterative process, and if you noticed on
18 our logos, the Be riskSMART logos has actually an
19 arrow underneath, and that arrow is described in our
20 guidance as the opportunity to rethink the decision as
21 substantial information becomes available.

22 CHAIRMAN SUNSERI: Let me say there are
23 open mics that need to be closed. Unless you're
24 speaking as a presenter, close your mic.

25 MS. DE MESSIERES: Great.

1 CHAIRMAN SUNSERI: Okay. Thank you. Go
2 ahead.

3 MS. DE MESSIERES: Great. Yes, and I was
4 also -- thank you, Mirela -- I was also going to
5 mention that I believe Eric is going to go over that
6 explicit importance of modeling the behaviors and kind
7 of seeking a state where this framework would be
8 organically used in, again, kind of a staff-driven
9 process. And so, I think Eric will be able to go a
10 little bit more into detail on that one.

11 MR. DUNCAN: Yes, I've got that, and I
12 also wanted to mention under teach, part of teach
13 could also be teaching others about the use of the
14 framework and how the use of the framework benefitted
15 their organization in their decision. And that could
16 take a lot of different forms. It could be maybe
17 there were numerous options to choose from and that
18 the framework is used to identify the option in act.
19 It could be maybe there's more than one risk area that
20 was considered, and how the framework benefitted the
21 decision in discussing these various risk areas that
22 were considered.

23 It could be risk appetite. I think that
24 will be a big one that we're going to see, in fact,
25 because risk appetite is something that we all have,

1 but we always don't talk about explicitly. In fact,
2 I think you're aware sometimes there's not complete
3 alignment on decisions. And I think part of the
4 reason for that could be that, basically, decision
5 makers and those that are involved in the decision may
6 have different risk appetites, and they're generally
7 not discussed. Those appetites aren't discussed;
8 they're implied.

9 So, I think this framework could help to
10 make these decisions, and the basis for these
11 decisions, much more transparent to everyone. So
12 that, in the end, although there may not be complete
13 alignment on the decision, I think there could be a
14 much better understanding of the decision and why that
15 decision was made the way it was.

16 MS. DE MESSIERES: Yes, and we have some
17 examples of that coming up that I think really hit
18 that right on the mark, indeed, that alignment piece,
19 getting everyone's perspectives documented, getting
20 them realized; understanding where you have different
21 ideas and where you have similarities, and how you can
22 really explicitly address them, again, through
23 managing techniques.

24 And sometimes that's made the difference.
25 Sometimes people that haven't been aligned previously

1 see their differences, understand what their issues
2 are, and then, because of this process, have
3 explicitly said, okay, well, you know what; if you
4 beef up this management, I think I may be okay with
5 this. So, definitely, in our pilots we've seen that.

6 Okay. So, I think, then, Jason, could you
7 go to slide 6, please?

8 And just one quick note. We've mentioned
9 this many times now, about how this is an umbrella
10 over many of the existing, you know, many times the
11 risk-informed processes. And so, I just wanted to
12 share this not to dig into the details, but the team
13 developed posters in areas like materials safety,
14 legal advice, security preparedness and response,
15 reactor safety, research, corporate support -- mapping
16 the Be riskSMART framework to those existing processes
17 that you have. And this is to show staff and to be
18 used as tools to really see where the riskSMART
19 framework can help advance or bolster those existing
20 processes.

21 And with that, I guess I'll turn it over
22 to Eric.

23 MR. DUNCAN: Yes, next slide, please.

24 Okay. So, I've got the next few slides.
25 I'll be talking a little bit about the vision or the

1 goal that Candace just mentioned here, and then, we'll
2 also talk a little bit about data, the trajectory of
3 perspectives, the using staff feedback, just what
4 we've gathered in surveys, things like that, to help
5 to inform us and you where we were and where we are,
6 and then, where we're heading.

7 This first slide, though, I think depicts
8 the ideal organization, okay, in terms of use of risk-
9 informed decision making. You'll see along the X-axis
10 you've got management driving, and that represents to
11 what level or what degree management is driving risk-
12 informed decision making in an organization. It's
13 reflected there, basically, as low, medium, and high.

14 And then, also, on the Y-axis you have
15 individuals contributor driving. And so, this would,
16 of course, represent the individuals, the staff, those
17 that are doing the work, and how much are they using
18 risk-informed decision making to develop their
19 decisions, to develop their recommendations for
20 decisions at these low, medium, and high levels.

21 And so, as you can see in this chart right
22 here, the ideal organization is actually the
23 management driving at a low level with the individual
24 contributor driving at a high level. And that may be
25 a little counterintuitive. I think maybe some natural

1 view might be that it should be high in both
2 categories. But, in fact, it's not. In fact, it's
3 low in management driving, and that's because what
4 we're striving for here is an ideal organization, is
5 an organization where management is certainly
6 promoting, certainly monitoring, the use of risk-
7 informed decision making, but it's really the staff.
8 The staff is leading. The staff is leading risk-
9 informed decision making, and there isn't a need for
10 a high level of management engagement in risk-informed
11 decision making.

12 And you can see from this chart, you know,
13 we've mapped out a typical organization and just
14 wanted to express, I think, that there's different
15 paths to overcoming these challenges. Each
16 organization is unique and different in how they're
17 going to get to this ideal organization. Nonetheless,
18 the ideal organization will be the same in all
19 organizations across the NRC.

20 Next slide, please.

21 Okay. I talked about data. So, we're
22 going to give you a little bit of data here. We call
23 this "trajectory of perspectives." In 2018 -- and
24 we're focused on the left side of the slide here -- in
25 2018, NRR conducted a survey on the staff's

1 perspective on risk and risk-informed decision making
2 within the individual offices.

3 And so, on the left-hand side of this
4 slide, the question, "It would be appropriate for the
5 Agency to expand the use of risk or risk insights,"
6 was asked. From the survey, attitudes toward risk
7 were generally positive, with only about 25 percent of
8 the staff having an unfavorable view of the idea of
9 expanding the use of risk or risk insights in decision
10 making.

11 And then, two years later, there was an
12 OIG safety culture and climate survey, and they asked
13 what we believe is a similar question, the question
14 being, "The risk-informed initiative effectively
15 supports the NRC's mission?" The results of this
16 survey indicated a shift toward even more positive
17 results, with an increase in favorable responses by 10
18 percent, raising favorable responses to 58 percent at
19 the Agency level with little or no change at the
20 neutral level. So, what that really means is, you
21 know, you have a number of people going from
22 unfavorable to neutral and neutral to favorable, or
23 some combination of that. So, this is being viewed as
24 a positive trajectory overall.

25 And then, next slide, please.

1 Okay, the last thing that I have here,
2 using staff feedback. The 2018 NRR rhythm survey
3 again, consistent with anecdotal evidence received
4 over the years, also identified that staff were not
5 comfortable with the available guidance, though, for
6 making risk-informed decisions in their daily work.
7 Only about 25 percent of those who responded to the
8 survey felt comfortable with the existing guidance.

9 The survey also found that the majority of
10 staff perceived a gap between management expectations
11 and the staff use of risk or risk insights in decision
12 making. And so, also note that, in more than the 100
13 respondents, only one actually had a favorable
14 response to the existence of an expectations gap. So,
15 that could be compared to 2020, where each office and
16 region applied a facilitated diagnostic tool to
17 identify who in each NRC organization initiates or
18 drives the use of risk insights in decision making,
19 the individual contributor or management. Think about
20 a couple of slides ago we talked about that.

21 So, this survey captured responses from
22 about 25 percent of the Agency, with the results as
23 shown here on the right. And the results reflect that
24 only about 10 percent of the staff believe that their
25 office is operating at the ideal state. Okay? And

1 that's that top left-hand corner there.

2 And there's also a majority view, though,
3 that the staff is operating at a medium level of
4 driving the use of risk-informed decision making, with
5 various levels of management engagement. So, that
6 would be that middle band there, that middle
7 horizontal band.

8 But, all in all, the results, as well as
9 the 2018 risk-informed decision-making survey and the
10 2020 IG safety culture and climate survey, suggest
11 that, although there have been improvements in the use
12 of risk-informed decision making, some additional
13 effort is needed to close that gap. And, in fact, the
14 Be riskSMART framework has been developed specifically
15 to meet the staff where they are and to close that
16 gap.

17 And that's what I have. I'll turn the
18 presentation over to -- I think we're going to do some
19 examples now, right, some case studies?

20 Thank you.

21 Candace, do you have the first one?

22 MS. DE MESSIERES: Sure. Yes, this is
23 just a slide showing each of them, and I'll go right
24 into subsequent license renewal.

25 So, again, it's my pleasure to share this

1 early pilot example of the framework as it applies to
2 subsequent license renewal. And I would mention
3 you'll be hearing from EMBARK later, and this example
4 was part of a larger EMBARK and NRR, Division of New
5 and Renewed Licenses, initiative, coined RISLR, or
6 Risk Informing Subsequent License Renewal. And that
7 initiative was led by the NRRL's Lauren Gibson at that
8 time. And so, the challenge with this, this pilot,
9 was really, should we modify the number of keywords as
10 part of these SLR operating experience audits to
11 improve focus?

12 For some background -- and I'll be really
13 brief here -- these operating experience audits,
14 historically, involved staff providing a long list of
15 keywords and licensees investigating their corrective
16 action program for those keywords. And the question
17 is, sometimes maybe that process wasn't fully
18 optimized. A lot of times, you get long, long lists
19 of entries, some of them very relevant, some of them
20 not. So, this was really a challenge to see, well,
21 can we do better in this area and really optimize
22 these operating experience audits?

23 And without going into details, I want to
24 say that these pictures on the screen were real photos
25 from a bit over a year ago where the team, the working

1 group team here, we went through each step of the Be
2 riskSMART process, and actually, team members, over a
3 week or two, they thought about what opportunities and
4 challenges were associated with this. We came
5 together as a group, plotted those. On the right-hand
6 screen here, you can see our work here.

7 And what was great about this was there
8 were things that people hadn't originally thought of.
9 So, the decision was based on a full suite of
10 scenarios that, again, wouldn't have been otherwise
11 considered. Like plotting everyone's ideas on one
12 page here, we were able to identify a few items that
13 some people were really uncomfortable with. And how
14 do we manage those?

15 And so, we really achieved a common
16 understanding of the attributes that are most
17 important and require the most management. There was
18 enhanced transparency and documentation. At the end
19 of this process, we had a database of things that
20 people were concerned about or things that we thought
21 were really big opportunities. And we were able to --
22 you know, not everyone was in alignment at first, but
23 we were able to, again, address and apply management
24 strategies to move forward with pursuing this.

25 And I'll mention that, ultimately, this

1 was, you know, some of these ideas were provided in a
2 larger context to external stakeholders. And in the
3 end of the day, there was a different approach taken
4 to the operating experience audit. However, it was
5 through the discussion of these management strategies
6 that staff discovered there were multiple ways to
7 obtain the information that was needed for these
8 audits.

9 And so, I would say it was a really
10 successful pilot. We learned a lot not only about how
11 to address the challenge, but also how to adapt the
12 framework itself to improve it in future examples.
13 So, the learning piece was huge.

14 MEMBER MARCH-LEUBA: Candace, this is Joe
15 March-Leuba.

16 MS. DE MESSIERES: Yes?

17 MEMBER MARCH-LEUBA: Can I ask a question?
18 Are you done?

19 MS. DE MESSIERES: Yes, uh-hum.

20 MEMBER MARCH-LEUBA: Yes, okay. This
21 brings to mind one of my favorite topics. How can you
22 know the suite of scenarios you analyzed is full and
23 that you didn't forget one that was very important?

24 MS. DE MESSIERES: Yes, that's true. I
25 mean, I think this is -- and I don't know if I have

1 the full answer for you -- but I would say that in any
2 decision-making framework that at least I've
3 encountered, you try to capture all of the scenarios.

4 But what we found with this is that, by
5 identifying what we could readily think about, and
6 then, discussing it as a group, we were able to say,
7 well, what if this happened and what if that happened?
8 I would say that I can't give you a definitive answer
9 that we couldn't have achieved this result another
10 way. But what I will say is this methodical approach
11 definitely enhanced like the path to getting there.

12 So, I don't know if that answers your
13 question, but --

14 MEMBER MARCH-LEUBA: I can give you the
15 definitive answer. The suite of scenarios analyzed is
16 not full.

17 MS. DE MESSIERES: I'm sure.

18 MEMBER MARCH-LEUBA: It's impossible.

19 MS. DE MESSIERES: Oh, impossible, I agree
20 with that statement.

21 MEMBER MARCH-LEUBA: Okay. But the
22 question is, does your framework teach us, the users,
23 that identifying as full as possible a suite of
24 scenarios is the key step on any risk-based decision
25 making? I mean, this is not hypothetical. It

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1 happened last year. We were certifying a reactor and
2 they forgot the most critical scenario that had to
3 lead to a reassign because it couldn't be survived.
4 It's not hypothetical.

5 And if we move into the risk-informed,
6 "risk informed, risk informed", then we don't do the
7 detailed reviews and we miss those. So, I think in
8 your framework you need to emphasize that identifying
9 -- I mean spend more time on identifying scenarios
10 than on everything else.

11 MS. DE MESSIERES: Yes, great. Great
12 observation. And, yes, I think this really did, at
13 least in this case, I would say did enhance the suite
14 of scenarios, but I completely agree with you, you
15 know, perfection is illusive. But we certainly have
16 explicitly considered that desire to examine that
17 suite. So, I do --

18 MEMBER MARCH-LEUBA: The other thing, I'm
19 looking on the picture on the right. I assume you
20 selected the ones you circled, but in order to select,
21 you really had to analyze all of them.

22 MS. DE MESSIERES: Yes, and we did. So,
23 we did. So, the ones that were circled I believe were
24 ones that we thought needed some management or that we
25 had -- oh, actually, wait a minute. I'm looking a

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1 little closer. You know, we binned these in different
2 ways, but we did examine each individual challenge and
3 opportunity individually. And so, I think, yes, those
4 circles, I can't remember exactly what we were trying
5 to recognize there, but --

6 MEMBER MARCH-LEUBA: I key point is, if
7 you don't analyze them first, you don't know which
8 ones are closer to the purple line.

9 MS. DE MESSIERES: Yes. Absolutely. And
10 we did look at every single dot on that chart
11 individually and evaluated it, uh-hum.

12 MEMBER MARCH-LEUBA: All right. Another
13 thing I want to tell you is we, ACRS members, are
14 talking among ourselves. We consider an important
15 input we can provide is how to select the design basis
16 events for an advance reactor. What do you need to do
17 to make sure that you consider all scenarios? So, we
18 may want to talk to you about what you did. Maybe you
19 can trigger our brain cells into figuring out a
20 methodology or at least an emphasis on how to identify
21 all scenarios.

22 Okay. So, thank you.

23 MS. DE MESSIERES: No, thank you. Thank
24 you.

25 MR. DUNCAN: Yes, let me just jump in on

1 this just a minute. So, I think you've asked about
2 identifying maybe unknown unknowns. You know, how do
3 you wrap your head around that? And as Candace said,
4 these are not perfect processes. However -- however
5 -- this framework does, though, handle it a little bit
6 in that, as you've heard, the arrow allows us to go
7 back. It's an iterative process. So, when new
8 information is identified or comes to light, we can go
9 back and review that information. You can start the
10 framework at any step at any time to include that.

11 And the other thing is the realize-the-
12 results step also, I think, incorporates the lesson.
13 So, when you implement whatever your act was, whatever
14 the decision was, and you start to get that
15 information back, maybe one of your management actions
16 is the implementation of a pilot. So, you're going to
17 get that pilot information, and you may find some
18 things or you may get some results that you didn't
19 expect, right? And so, that allows, the framework
20 provides, then, for going back, maybe revising your
21 management-what-you-can actions. Maybe you identify
22 a new what-can-go-wrong that has to be considered as
23 well. So, there is some, I think, treatment of those
24 types of issues.

25 MEMBER MARCH-LEUBA: Let me bring a new

1 concept to this discussion which is very relevant.
2 The concept of deadlines. The staff has committed to
3 send the SER for review to ACRS in September, and
4 they're committed. And even worse, they're committed
5 to the Commission maybe, and then, those are
6 impossible to break. And you find something else. Do
7 you go into the recirculation loop and tell ACRS, "No,
8 you are not going to get this in September because we
9 need to do more work."? Real life tells you that
10 tells you that you wouldn't.

11 DR. GAVRILAS: Can I take that?

12 MEMBER MARCH-LEUBA: But, yes, please, go
13 ahead.

14 DR. GAVRILAS: Yes. So, let me take that.

15 I think that there are cases in which it's
16 not that we -- the staff can, and does on occasion, go
17 back to the Commission and tells the Commission that
18 we've found something and we need to change the
19 deadline. And we do it. You know, I can tell you
20 that I've approved lots of requests for extension from
21 SECY for items when we found something. So, we do
22 that.

23 And I think that the staff, by and large,
24 has the attitude that what we care more about is
25 quality versus timeliness. We don't think that

1 timeliness is -- but it's one of the considerations,
2 right? I mean, on the one hand, you don't want to
3 delay the decision indefinitely. On the other hand,
4 when you find something important, you want to have
5 the ability to go back and revisit the timeline.

6 MEMBER MARCH-LEUBA: It would nice if, in
7 the teaching section of the framework, or somewhere in
8 the framework, you mentioned that deadlines should not
9 take precedence over doing a good job.

10 DR. GAVRILAS: Yes.

11 MEMBER MARCH-LEUBA: Nothing is perfect.
12 You can never do your job perfectly. And as I always
13 say, the student always studies better the night
14 before the exam. So, having deadlines is good.

15 DR. GAVRILAS: Yes.

16 MEMBER MARCH-LEUBA: But somewhere you
17 should provide some cover in framework and say, hey,
18 deadlines are there to make you get to a point, but if
19 you cannot make it, you cannot make it. I don't know;
20 I think it would be worthwhile to have that in
21 writing.

22 DR. GAVRILAS: Yes, so we'll consider
23 that.

24 But let me also address your earlier
25 question with the completeness of scenarios. I don't

1 think that we put it that way. But we, basically, in
2 the spot step, we emphasize the importance of spotting
3 everything. And I can't remember if we kept that
4 statement or not, but at one point we were explicitly
5 thinking that most of the work, if we were to judge
6 where most of the work goes, that most of the work
7 needs to go in spot and manage. So, I don't know if
8 that answers, but, again, you asked a very specific
9 question and we have to go back and think if we have
10 addressed it or how to better address it.

11 MEMBER MARCH-LEUBA: Just putting some
12 ideas into your mind of what could go wrong. You're
13 telling us what could go right, which is the first
14 step. I'm telling you what could possibly go wrong
15 and you try to fix it.

16 Thank you.

17 DR. GAVRILAS: So, we emphasize
18 completeness, right? We emphasize that one needs to
19 be complete in their thought with regard to both
20 wrongs and rights, because they can offset each other.
21 To make the right decision, you need to understand
22 both the bad and the good.

23 But I'm going to think about it, and I
24 think we all are going to think about if we
25 sufficiently emphasized the importance of being

1 comprehensive.

2 MEMBER BLEY: Mirela, it's Dennis Bley.
3 It's Dennis Bley.

4 Along this same line, and not just within
5 your framework, but if one looks over at what's done
6 in PRA, this area that Jose was talking about with you
7 is one where we've always just told people to be
8 complete, as complete as possible, but it's probably
9 the only area in both these processes where we haven't
10 really thought out and provided guidance.

11 DR. GAVRILAS: Yes. I think that your
12 question goes beyond our charter, but that doesn't
13 mean that we can't think about it. So, we'll think
14 about it. I understand, I think we all understand,
15 the need for completeness, but we have to think more
16 about how to get there.

17 MEMBER BLEY: I have another question for
18 you. You and the other members of your team, while I
19 like the enthusiasm you've brought to this, it's
20 exciting, but you've mentioned the guidance. And I
21 just went into the public website, and then, I went
22 into the NRC website and tried to search saying, gee,
23 if I'm somebody here and want to do this riskSMART
24 stuff, where do I find the guidance? It's not trivial
25 to find whatever guidance you have.

1 DR. GAVRILAS: Yes. So, first, we're
2 working on a NUREG, and the NUREG is almost done.
3 You'll hear about that in a few minutes.

4 But, for internal, for the staff, the Be
5 riskSMART framework is linked to the initiatives.
6 We've discussed the initiatives with all the offices.
7 We've shared with them the SharePoint site. Everybody
8 has access to the SharePoint site, and that's where we
9 have presentations, guidance. So, we think we've done
10 a pretty job inside Agency telling people where to
11 find additional information.

12 But, frankly, this is still a work-in-
13 progress. You know, we're not done. We'll tell you
14 in a moment that we're still working on finalizing the
15 guidance. Again, it's going to be a NUREG/CR. We're
16 working on finalizing the training module. You'll
17 hear a bit about that, if time permits.

18 So, I am not surprised that external
19 stakeholders wouldn't have access to the information.
20 Internal stakeholders, however, we made huge efforts
21 to disseminate the information, to disseminate where
22 they can find material.

23 MEMBER BLEY: Thanks. And I'm sure that's
24 true. If I were a new hire, though, and I came to the
25 internal website and did some searching trying to find

1 it, I'll tell you, I had trouble doing it, but that's
2 just me.

3 DR. GAVRILAS: Okay. So, we'll address
4 that.

5 MEMBER BLEY: And my boss would be able to
6 point me; I'm sure that's true.

7 DR. GAVRILAS: But we'll address that.
8 We'll take that comment. The fact that it's not
9 easily found needs to be addressed. So, we'll take
10 that feedback.

11 MEMBER BLEY: Okay. Thanks. I did find
12 some of your presentations, including the ones folks
13 talked about earlier. But go ahead.

14 CHAIRMAN SUNSERI: Hey, Mirela, this is
15 Matt.

16 A time check here. It looks like you've
17 got five or six more case studies to go over and we
18 only have 30 minutes. So, I don't know how you want
19 to proceed. Perhaps you could pick some of the more
20 compelling ones and go in detail versus shortcutting
21 all of them, or something. I don't know; it's your
22 choice.

23 DR. GAVRILAS: So, let me make a
24 suggestion. Let me make a suggestion that we go
25 through one more case study because this is more on

1 the technical, maybe two case studies.

2 The one, Elizabeth, if I can ask you to
3 present the one that's CFO developed as an example of
4 something on the corporate side?

5 And, Mike, if you can talk about the one
6 that OGC developed as an example on the legal side?

7 And please do it quickly, so that we allow
8 sufficient time for questions.

9 CHAIRMAN SUNSERI: Well, we have 30
10 minutes. So, you know, use it wisely.

11 MR. GARTMAN: Hi. Good morning. My name
12 is Michael Gartman. I'm an attorney with the Office
13 of General Counsel, and I am a proud member of the
14 riskSMART team.

15 So, given the timeframes, I just want to
16 quickly present the issues that we looked at with
17 regard to analysis of timing of legal reviews. So,
18 the issue was, should the Office of General Counsel
19 defer formal legal review of certain staff initiatives
20 until after the staff has had early engagement with
21 external stakeholders?

22 So, the background to this issue was that,
23 on occasion, OGC would devote time and resources to
24 the legal review of staff initiatives, only to have
25 those initiatives abandoned or significantly modified

1 following stakeholder feedback. This analysis comes
2 from a desire to balance the advantages of a thorough
3 legal review with staff's eagerness to get early
4 stakeholder input, which, too, can have great
5 advantages.

6 Now, as you heard, when analyzing, we look
7 at what can go right and what can go wrong. So, for
8 example, one benefit was that early stakeholder
9 engagement can save OGC resources while allowing the
10 staff to sharpen and focus policy guidance. A
11 potential downside, for example, is that there could
12 be embarrassment or confusion if the proposal
13 ultimately raises significant legal concerns, as the
14 staff may need to modify or abandon the policy. Also,
15 the revised policy or guidance resulting from after-
16 the-fact legal review has the potential to indirectly
17 reveal attorney-client privileged information.

18 So, then, we looked at, well, how do we
19 manage these risks, both the positive and the
20 downside? In this case, OGC can manage the risk by
21 fostering early communications with our offices. In
22 partnership with client offices, OGC can look for
23 opportunities to conduct less resource-intensive, what
24 we call, fatal flaw legal reviews. So, these are
25 legal reviews where there is known legal impediment or

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1 showstopper. We could also pilot reviews in lower-
2 risk scenarios; for example, low public concern where
3 there's no pending litigation.

4 Ultimately, OGC believes that using the
5 riskSMART analysis will promote consistent engagement
6 with client offices to discuss when early OGC
7 engagement with policy proposal development would be
8 most useful.

9 Thank you. Any questions?

10 MEMBER BLEY: I don't have a question, but
11 I do want to back up. This is Dennis Bley again.

12 I want to withdraw my last comment. I
13 hadn't searched SharePoint. That's not the way I've
14 been using SharePoint. But if one searches
15 SharePoint, Mirela, I'm buried in all kind of guidance
16 and information. So, I think you're in really good
17 shape.

18 DR. GAVRILAS: Thank you.

19 MR. DUNCAN: And there's even more coming.
20 So, as Mirela mentioned, this NUREG is absolutely
21 comprehensive. It will walk the staff through every
22 single step of the Be riskSMART framework in detail.
23 It provides background on how we got to where we are
24 today. It provides a lot of the data that you are
25 hearing today in terms of the surveys, things of that

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1 nature. It provides the examples, more examples,
2 actually, than the ones that you are hearing today.
3 It is absolutely comprehensive, and it will be a
4 legacy document that the staff will be able to
5 reference and use for years and years to come.

6 MEMBER BLEY: We will look forward to
7 that. When I said I was buried, I really meant it.
8 You might actually have too much for people to find
9 their way through.

10 MR. DUNCAN: Right. And hopefully, we'll
11 be able to show you just a snippet of this training
12 that all the staff -- in fact, there's an OKR that 85
13 percent of the staff complete this training by the end
14 of year. And we're going to show you just a small
15 portion of that. It is entertaining and interactive,
16 and I hope you really enjoy it, too.

17 Thank you.

18 DR. GAVRILAS: So, again, thanks for the
19 feedback.

20 Let me just mention, you know, like all
21 NUREGs, if we should decide that it warrants expanding
22 on something such as completeness, right, in spot, we
23 can always open it back up and revise it.

24 MS. BOWLIN: Good morning. Oh, good
25 morning. Hi. I'm Elizabeth Bowlin, an accountant

1 with the CFO, and just will talk a moment on how
2 riskSMART we use for forward funding.

3 The Be riskSMART initiative is also trying
4 to increase awareness of how risk information is
5 helpful in corporate support issues, broadening
6 enterprise risk management at NRC beyond senior
7 leadership, and as Mirela mentioned, for all staff to
8 have a common language to identify and talk about risk
9 information and a common structure to compile
10 information across disciplines.

11 Because risk information is part of every
12 job -- we weigh options and consider challenges and
13 opportunities -- the CFO used the riskSMART framework
14 to look at the issue of how to improve efficiency
15 around the Agency's forward funding, forward funding
16 being prior year obligated funds already placed and
17 available to spend. And the main focus is weighing
18 options for placement of funds in an optimized manner.

19 The spot step was very helpful in this
20 issue. It approaches the issue from a neutral
21 perspective, looking at all available information and
22 possibilities. There are multiple uses for forward
23 funding, among them, balancing the purposeful
24 placement of forward funding for things that require
25 it, with the risk that the timing of availability of

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1 funds could cause a stop work on a project; and also,
2 balancing with the risk of having a balance on lower-
3 priority work when higher-priority work could have
4 received the funds.

5 And sometimes a perspective may emphasize
6 one of them. And from today's discussion, you, of
7 course, saw this straightaway. The spot step helps to
8 ensure that all potentials are considered. And the
9 decision in this case was to have a standard and
10 repeatable process for offices to review and
11 categorize prior year balances, and as a result, we
12 have a greater understanding of what comprises the
13 balance.

14 And what we learned that we can share with
15 others is to proactively manage a balance as the year
16 progresses rather than what is often used as a metric
17 at the end of the year to see where we are, and to
18 look at how the budget execution influences
19 formulation in that full cycle. And I should say that
20 this decision was built upon and made possible by
21 recent standardizations and automation in budget
22 execution, and that would really be a starting point
23 as part of a teaching message.

24 And thank you for the chance to share this
25 example. If there's not questions, I'll have you

1 continue, please.

2 CHAIRMAN SUNSERI: Thank you. Very nice.

3 MR. CHAZELL: Hello. Good morning. My
4 name is Russ Chazell, and I'm an attorney in the
5 Office of the Secretary.

6 As part of the Be riskSMART initiative,
7 each office was asked to identify an ambassador to the
8 team. I am the ambassador from SECY.

9 As you can see, many people were involved
10 in the development of the Be riskSMART program. There
11 is the original project team, denoted by a single
12 asterisk, who worked to develop the program. There
13 are the executive sponsors to the team, denoted by a
14 double asterisk, who provided guidance to the project
15 team, and there are the office ambassadors, who are
16 most of the people listed on this slide, whose role it
17 is to socialize the Be riskSMART program within their
18 offices and to help their teammates understand the
19 benefits and execution of the program, in order to
20 build the community of practice that Mirela discussed
21 earlier.

22 Next slide, please.

23 In 2020, the Agency adopted the concept of
24 Objectives and Key Results, or OKRs. OKRs, originally
25 developed by Google, are a schema whereby a broad

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1 qualitative goal or objective is driven by
2 quantitative key results that measure whether the
3 objective was met.

4 In 2021, the Agency objective for the Be
5 riskSMART program is to increase the use of the Be
6 riskSMART framework across all sectors of the NRC.
7 There are four key results we'll use to measure
8 whether we've successfully met our Agency objective.

9 First, as discussed earlier, at least 85
10 percent of the staff will successfully pass a
11 knowledge check following completion of the Be
12 riskSMART training before the end of calendar year
13 2021.

14 Second, the Be riskSMART framework is used
15 to inform the evaluations and analyses that support at
16 least 50 percent of the key decisions in each office
17 in 2021.

18 Third, in 2021, each office will submit to
19 the IdeaScale Success Gallery for examples where use
20 of the Be riskSMART framework improved the timeliness
21 and quality of decision making.

22 And fourth, at least 75 percent of
23 external stakeholders surveyed by the NRC during 2021
24 will agree that the use of risk information has
25 improved the timeliness and quality of the Agency's

1 decision making over the past year.

2 We're confident that successful completion
3 of this OKR will inculcate the Be riskSMART framework
4 into the decision-making culture of the NRC.

5 Next slide, please.

6 As discussed earlier, the Be riskSMART
7 team has developed, or is currently developing, a
8 number of resources to assist NRC staff in effectively
9 implementing the framework. These include:

10 A diagnostic tool to demonstrate to users
11 of the framework how to get to the ideal risk-informed
12 decision from wherever their starting point is.

13 Two, a NUREG that lays out the framework
14 in detail. And as we discussed, we're still working
15 on that, but it's nearly complete.

16 Case studies that can be used to show how
17 the framework can be applied to diverse situations, a
18 few of which you've already seen today.

19 Posters showing discipline-specific
20 guidance and applications.

21 And lastly, a TMS training course to
22 provide staff with baseline knowledge of the Be
23 riskSMART framework and its implementation.

24 Before I hand off this presentation back
25 to Mirela for closing remarks, we'd like to give you

1 a brief taste of the TMS training course.

2 Please start the video.

3 (Whereupon, the video was played.)

4 VICE CHAIRMAN REMPE: So, is this a good
5 time to ask a question while we're waiting to get the
6 video off? Or is there something else going on here?

7 DR. GAVRILAS: It's always a good time to
8 ask a question. I think that's the only snippet that
9 we were going to show.

10 MR. DUNCAN: Right, right. That's right.

11 DR. GAVRILAS: We just have one more slide
12 which is the slide that actually points to the
13 SharePoint site. If we can have that one up, and we
14 can have discussions while that slide is on the
15 screen.

16 VICE CHAIRMAN REMPE: Okay. So, I have a
17 question, and I'm thinking about a Topical Report that
18 we recently reviewed. And in this case, the guidance
19 in the SLP was not as clear as perhaps it should have
20 been. And the staff in this case applied their risk
21 insights and precedent, and a bunch of things. And
22 they concurred with the applicant

23 But some of these decisions are
24 subjective. And I'm thinking about what might have
25 happened, and I think some of what you're proposing

1 here, the decisions are also going to be subjective.
2 And if there is a disagreement between the staff and
3 the applicant, have you thought in your framework
4 about how -- because if the staff disagrees with the
5 applicant, there are other avenues they can take, like
6 an exemption, that are more costly.

7 And would it be appropriate to have some
8 earlier, like this legal thing about earlier
9 engagement, would there be a way to have an earlier
10 engagement between the staff and the applicant when
11 there are disagreements and some things that are
12 subjective?

13 DR. GAVRILAS: Wow, so that's loaded. Let
14 me try to start with answer, and then, I'd appreciate
15 if the team wants to add something.

16 So, I'm not sure which Topical Report
17 we're talking about. I think the framework emphasizes
18 the need for early engagement of everybody who
19 supposed to be a contributor to the final decision.
20 The framework also emphasizes, which is very important
21 to us, it's not supposed to be empowering the staff to
22 say yes. It's supposed to empower the staff to say
23 yes, and it's supposed to empower the staff to say
24 no, depending on the particular circumstances.

25 So, again, I don't know if they explicitly

1 applied the framework or they just applied some of the
2 concepts in the framework. I'm just not familiar with
3 that decision.

4 VICE CHAIRMAN REMPE: They applied the
5 concepts, the way it was presented to us. Okay? And
6 we agreed with them that they made a wise decision.
7 And so, life is good; the applicant is happy.

8 But I'm thinking about what you've been
9 presenting today about other cases where there will be
10 a disagreement or other cases I've seen in the past
11 where there have been disagreements. And I'm
12 wondering if there should be some recognition about
13 the earlier process where the applicant may feel like
14 they've been treated unfairly, and should there be
15 recognition that there's uncertainties and allow for
16 some sort of additional earlier engagement where they
17 could have not an override, but you're saying, no, we
18 want to empower the staff to make the right decisions,
19 is, I think, what your response back is. But I just
20 am bringing this up because I'm thinking of the future
21 here.

22 DR. GAVRILAS: Yes. So, not knowing
23 exactly what it was, I'm going to fall back in my
24 former position, which was Deputy Director in NRR.
25 And we have a system of, you know, we always say

1 engage early, engage often to make sure that we're on
2 the path; that we understand what finding the staff
3 must make and we understand what the licensee or
4 applicant provides in order for the staff to make that
5 finding.

6 And that position, which was the position
7 that I think we've had in NRR for almost as long as I
8 can remember having been part of NRR, definitely for
9 the past 10 years or so. Maybe it started as a kernel
10 of thought, but it's grown to a point which today I
11 think it's the practice. That position is actually
12 confirmed by the framework, which, again, emphasizes
13 the need to bring all the contributors together to
14 make a decision. And if that involves legal counsel,
15 too, so be it.

16 VICE CHAIRMAN REMPE: Okay. It's just a
17 thought. And again, in this case, the case is
18 irrelevant. It's just I always kind of apply it to
19 what I've seen and what I think might occur in the
20 future. And everybody was happy, including ACRS, that
21 we thought the staff made the right decision. But I
22 just am thinking about other cases where the applicant
23 doesn't agree with what -- I mean, the applicant's not
24 always going to be happy with what the staff says.
25 And would there be a recognition that some of this is

1 subjective and they should have an avenue to complain
2 earlier or, no, you think this is framework is not
3 going make any changes in that type of situation?

4 DR. GAVRILAS: So, I think that part of
5 what this framework does is acknowledges that most of
6 the decisions that we make do not have perfect
7 information. The other thing that it does, it
8 actually emphasizes the fact that information can come
9 along the way. That's again the arrow. You can get
10 information at any time in the process, including
11 while you're teaching it.

12 MS. RICHARDSON: Hey, Mirela?

13 DR. GAVRILAS: Yes?

14 MS. RICHARDSON: Hey, this is Rebecca.
15 Can I jump in with an example?

16 DR. GAVRILAS: Absolutely.

17 MS. RICHARDSON: We didn't have time to
18 get to the security example in the slides, but this
19 isn't directly related, Joy, but I think it's a good
20 example of how the framework did work to include
21 differing opinions and views.

22 So, the security example was a SECY paper,
23 a recent SECY paper. And we were able to include in
24 the SECY paper differing views from not only staff
25 internal to the Agency; there was an entire enclosure

1 on some views where our staff disagreed, that we were
2 able to provide to the Commission for consideration.
3 But we were also able to, through public meetings,
4 engage industry and provide some of their views in the
5 paper. We also had a separate legal enclosure that
6 outlined the differing risk appetite from the legal
7 perspective as well.

8 So, I think that the framework does lend
9 itself to those types of differing perspectives. This
10 is a little bit different than directly working with
11 an applicant, but I just wanted to bring that up.

12 VICE CHAIRMAN REMPE: Well, there's been
13 examples in the past where people wanted to have,
14 especially with all these non-LWRs coming down the
15 pathway, there's going to be some people wanting to
16 get exceptions to, whether it's the GDCs or the
17 advanced reactor GDCs, and all that. But that takes
18 money to go and get an exemption. And if they have an
19 opinion that they don't need one, for whatever reason,
20 going up to the Commission and having the options
21 takes a lot of time and money and delays schedules.
22 And I'm just wondering if there is a path to think of
23 an alternate way that could do things more
24 efficiently. But, anyway, it's just a thought.

25 DR. GAVRILAS: So, let me just take that.

1 Sometimes exemption is, if regulatory requirements are
2 clear, the staff has no option other than to process
3 an exemption. But I would offer that an exemption can
4 be initiated at anyone's request. I mean, most of our
5 regulations are written so that the staff can initiate
6 exemptions, provided that the balance exists between
7 public good and maintaining reasonable assurance of
8 adequate protection.

9 And we did that during COVID. If you've
10 been privy to all the exemptions during COVID, you
11 will see a lot of that.

12 But I want to, at the risk of sounding a
13 bit defensive, I'm going to make a statement that keep
14 in mind what the original charter of this framework
15 was. It was, basically, to inculcate, to take away
16 the fear of risk-informed decision making among the
17 staff, right? So, that was our main objective.

18 I think that, as we exercise this
19 framework -- and right now, frankly, the majority of
20 the staff has an idea of what the framework is, but
21 they're not applying it rigorously because we're still
22 working on training the staff. We're still working on
23 providing them with a NUREG and any other support that
24 they need, such as the support of ambassadors, right?

25 So, it will take time to apply the

1 framework appropriately. And the framework, you know,
2 I had a side chat with Mike Gartman and I want to give
3 him credit for putting the thought in my ear. The
4 framework is not supposed to be the be-all of
5 regulatory decision making. It needs to work in
6 concert with other processes and the other practices
7 that we have throughout the Agency.

8 CHAIRMAN SUNSERI: All right. Thank you
9 for that thorough response.

10 I would ask that, if there's no more
11 questions, that we try to wrap this one up now.

12 Members, any more questions?

13 (No audible response.)

14 Mirela, your team, anything else that you
15 want to present?

16 DR. GAVRILAS: No, we thank you for your
17 time, and as always, we've learned something in
18 meeting with the ACRS.

19 CHAIRMAN SUNSERI: Well, thank you, and I
20 think your team did a wonderful job of presenting a
21 topic that we weren't all that familiar with.
22 Conceptually, we are, but the details are certainly
23 helpful.

24 And as Member March-Leuba mentions, there
25 may be an opportunity for us to visit with you on a

1 specific case study for some work that we do with the
2 advanced reactor design in identifying case scenarios
3 for accident sequences, or something like that. Don't
4 get hung up on the details of what I just said. We
5 need to talk about it as a Committee, but, certainly,
6 it stimulated enough interest by us to think we might
7 reach out to you in the future. So, that's part of
8 the reason why we wanted to have this briefing today.

9 So, if you got something out of it, we got
10 something out of it, success was on all sides. So,
11 thank you very much to your team.

12 DR. GAVRILAS: Great. Thanks. We're
13 looking forward to it.

14 CHAIRMAN SUNSERI: So, Members, at this
15 point, it is a little after 11 o'clock. We've been at
16 this a long time and I hate to put off the next
17 presentation, but I'm going to call for a 20-minute
18 break right here.

19 We will ask the EMBARK Venture Studio
20 folks to come back at 11:25, and we will reconvene
21 then. Until then, we are in recess.

22 Thank you.

23 (Whereupon, the above-entitled matter went
24 off the record at 11:03 a.m. and resumed at 11:25
25 a.m.)

1 CHAIRMAN SUNSERI: All right. Welcome
2 back from the break. It's 11:25. We will reconvene.
3 I'll call the roll to verify a quorum.

4 Ron Ballinger?

5 MEMBER BALLINGER: Here.

6 CHAIRMAN SUNSERI: Dennis Bley?

7 MEMBER BLEY: Here.

8 CHAIRMAN SUNSERI: Charles Brown?

9 MEMBER BROWN: Here.

10 CHAIRMAN SUNSERI: Vesna Dimitrijevic?

11 MEMBER DIMITRIJEVIC: Here.

12 CHAIRMAN SUNSERI: Walt Kirchner?

13 MEMBER KIRCHNER: Here.

14 CHAIRMAN SUNSERI: Jose March-Leuba?

15 MEMBER MARCH-LEUBA: Here.

16 CHAIRMAN SUNSERI: Dave Petti?

17 MEMBER PETTI: Here.

18 CHAIRMAN SUNSERI: Joy Rempe? Joy?

19 (No audible response.)

20 Pete Riccardella?

21 MEMBER RICCARDELLA: I'm here.

22 CHAIRMAN SUNSERI: All right. I'm not
23 seeing any response from Joy's mic.

24 But we have a quorum, so we will resume.

25 Let me, first, start by saying I

1 appreciate the patience of the EMBARK folks for
2 allowing us to work in a break there. We're scheduled
3 to end this session at 12:30, but if you need
4 additional time because of the time we took for the
5 break, then we'll allow that to occur.

6 So, at this point we are going to continue
7 with today's session. The next presentation is on
8 EMBARK Venture Studio, and I will call on Shaun
9 Anderson, Managing Director of the EMBARK Venture
10 Studio, for any remarks.

11 VICE CHAIRMAN REMPE: Matt, this is Joy.
12 I don't know if you called roll, but I was tied up.
13 I'm back.

14 CHAIRMAN SUNSERI: Okay. We got you.
15 Thank you.

16 MR. ANDERSON: Thank you, Chairman and
17 ACRS Members.

18 I just want to confirm, can everyone see
19 my screen?

20 CHAIRMAN SUNSERI: Yes, sir.

21 MR. ANDERSON: All right. Thank you.

22 I'll keep my remarks short. I just want
23 to thank you for the time that we have here. I'm
24 happy that we can kind of share a lot of the
25 activities that we've been involved with over the last

1 year and a half as it relates to our innovation.

2 I'm just going to turn it over to Jen
3 Whitman. She's currently our Strategic Director for
4 EMBARK Venture Studio, and we'll just get right into
5 the presentation.

6 Thank you.

7 MS. WHITMAN: Good morning. As Shaun
8 said, I'm Jen Whitman, the Strategic Director EMBARK
9 Venture Studio. And I'm going to be giving you a
10 brief overview of EMBARK and some of our activities.
11 I've brought some of the team who's actually doing all
12 of the heavy lifting to provide more details about a
13 few of our projects.

14 We're also going to have a RIC session
15 next week, in case anyone is interested, on Thursday,
16 at 1:30, on "Technology Advances and Regulatory
17 Decision Making for Nuclear Reactors."

18 So, here at EMBARK we support the reactor
19 safety program by optimizing processes, leveraging
20 technology, and advancing the use of data and data
21 analytics to better inform decision making.

22 We are partnering with all parts of the
23 Agency, especially the fantastic team in OCIO, to
24 drive and accelerate changes to how we do business.
25 Many of our approaches are scalable and have the

1 potential to impact Agency business beyond just the
2 reactor safety program.

3 So, what is EMBARK? We are an innovation
4 accelerator, a small team of dedicated people, whom I
5 really can't thank enough, that are working to change
6 the minds and culture at NRC to allow staff to make
7 real change. Our focus is, first and foremost, on
8 safety, and we use staff ideas to spark initiatives
9 and remove barriers, so that we can improve the way we
10 work. We've been accomplishing this at a tactical
11 level by helping staff bring their ideas to fruition
12 in various aspects.

13 Next slide, please.

14 So, how does EMBARK work? Within EMBARK,
15 no two initiatives are alike. We lead entirely some
16 of them; some of them, we just provide support.
17 Others, we partner with other organizations, and
18 sometimes we just remove some barriers.

19 So, our operating model is to combine
20 whichever of these are necessary to complete the
21 project at hand. We enable. We advise. We partner.
22 We create. And we teach. But, most importantly, we
23 inspire.

24 We want to inspire staff to innovate. We
25 believe that creating a culture of sustained and

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1 permanent innovation is key to organizational agility,
2 and inspiring staff to look at old problems in new
3 ways is helping to build innovation capacity across
4 all levels of the Agency.

5 Ultimately, we want to inspire all staff
6 to feel empowered to try new things that contribute to
7 NRC's mission. If those things don't work out
8 sometimes, that's okay. We're a learning
9 organization, and we'll learn from that experience and
10 work to make it better next time. Our goal is to
11 create a permanent culture of innovation at NRC.

12 Next slide, please.

13 So, how is EMBARK structured and what
14 projects do we take on? We have four departments --
15 The Garage, Neurology, NextGen Data, and
16 #HASHTagChange. And they nicely align with the
17 Agency's four transformation focus areas.

18 So, in The Garage, that's where we have
19 all of our process improvement efforts. We're
20 revamping the infrastructure for the foundational work
21 of the reactor safety program, like our licensing
22 processes.

23 Neurology, there it's all about mindset,
24 about understanding risk, and being open to try new
25 approaches to the problems than we have in the past to

1 the same problems.

2 You just heard from the Be riskSMART
3 folks, and one of our projects over the last year was
4 actually helping them to develop that training video
5 that you saw a piece of.

6 Then, we have NextGen Data. And that's
7 all about embracing data, the use of data, and data
8 analytics, and developing tools to monitor and manage
9 how we conduct business; expanding the use of data and
10 applying visualizations to help increase our
11 curiosity, drive us to be asking the right questions,
12 and ultimately, making better informed decisions.

13 Lastly, we have #HAShtagChange, where it's
14 all about the cultural experience, how we interact
15 with each other and with our stakeholders. We want to
16 create a positive culture of innovation that empowers
17 staff and includes varying stakeholder perspectives
18 and improves interactions at all levels.

19 Next slide, please.

20 Here, I just want to highlight a few of
21 the activities that we've been involved in over the
22 last year and a half. We have the risk-informed
23 process for evaluations; requests for confirmatory
24 information; subsequent license renewal enhancements;
25 oversight and inspection activities, and mission

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1 analytics portal. And I'll get into the details of
2 the first three and I'll have some team members cover
3 the last two.

4 So, next slide, please.

5 So, the risk-informed process for
6 evaluations. You may have heard it called RIPE. This
7 is a grassroots staff effort to leverage the
8 significant PRA work that's been done by staff and
9 licensees over the last few years.

10 The staff developed guidance for providing
11 an acceptable means for characterizing the safety
12 impact of issues identified at licensee facilities for
13 which the safety impact can be modeled using the PRA.
14 And the RIPE team is actually going to be briefing
15 ACRS, a full, more detailed briefing on this, sometime
16 in the future.

17 Next slide, please.

18 So, requests for confirmatory information.
19 This falls into both The Garage and the Neurology
20 departments, and it's a more clearly defined subset of
21 the traditional RAIs, or Requests for Additional
22 Information. To facilitate docketing of high-
23 confidence, low-complexity factual information that
24 the staff has identified during the course of the
25 review at a public meeting, at an audit, at a

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1 clarification call, somewhere they found information
2 that they need to make their safety finding and need
3 to get it on the docket. Using the RCI process saves
4 both staff and licensees time getting the needed
5 information on the docket.

6 Next slide, please.

7 So, subsequent license renewal
8 enhancements. We partnered with the staff in the
9 Division of New and Renewed License to complete a
10 process improvement evaluation for subsequent license
11 renewal, and we've identified a number of activities,
12 many of which are currently being implemented.

13 An example of some of the activities is
14 the expanded use of pre-submittal meetings and
15 integrated review teams; elimination of one of the
16 standalone audits; capturing of all audit activities
17 into a single aging management audit, and then, use of
18 integrated review teams when applicable.

19 And next slide, please.

20 So now, I'm going to turn it over to
21 Andrew Lerch to talk about our oversight and
22 inspection activities.

23 MR. LERCH: Thanks, Jen.

24 As she said, my name is Andrew Lerch, and
25 I'm an inspector from Region II on rotation to EMBARK.

1 I'll be presenting inspection and oversight projects
2 that focus on the regions.

3 Our project ideas are sourced from the
4 Regions, and we've been using those ideas, along with
5 EMBARK's resources, to develop these projects that
6 relate to both process improvement and data-driven
7 decision making.

8 Right now, there are several inspection
9 initiatives going on. We just concluded an Innovate
10 2.0 campaign using the IdeaScale platform. Our
11 moderators were a team of staff from EMBARK and the
12 Division of Reactor Oversight.

13 We ranked the ideas from that campaign,
14 and ultimately, four ideas were picked to develop
15 project plans for further implementation. The first
16 meetings for these groups are being scheduled for the
17 next week, and as we finalize these ideas, we will be
18 briefing management for a decision on the path
19 forward.

20 Additionally, I'm leading a team that's
21 developing dashboards and analytics for regional use.
22 The regional dashboard team is made up of Regional
23 Inspectors, Branch Chiefs, Project Engineers, and
24 Resident Inspectors who are all driving the ideas and
25 the implementation of the dashboards that we want to

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1 develop.

2 We solicited ideas from the Regions on how
3 we can use data to make our lives as inspectors and be
4 more efficient, especially on tasks that are overhead
5 tasks.

6 The first project that we're doing is a
7 dashboard to automate data collection for the end of
8 cycle. The goal is to reduce the time to develop end-
9 of-cycle packages that we have to prepare for those
10 meetings.

11 There's a good amount of work in
12 collecting data, and freeing staff from this data
13 collection will let us focus more on safety efforts.
14 And as this information is available from the cycle,
15 we can expand its use to reduce time when we develop
16 briefing sheets for visiting management.

17 We have other projects that include
18 automating the ROP metrics; inspection planning roles
19 that we are developing with the Operating Experience
20 Branch, and resource management analysis for regional
21 inspections.

22 And lastly, we're working on a Resident
23 tracking tool that's going to be developed as a part
24 of RPS to move the Residents to tracking online
25 through RPS rather than on whiteboards or notebooks or

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1 Excel files. This drive will help the Residents
2 communicate inspection status more quickly and for
3 turnover for either Regional Inspectors or Residents
4 who are supporting them, either through backfill or
5 Resident support. The pilot for this idea was
6 developed by one of the Residents, and we are working
7 with him to expand the use of this tool across the
8 Regions and to the different reactor sites.

9 Thanks for this opportunity to present to
10 you guys, and next, we will present on MAP.

11 MS. LAMB: All right. Good morning. My
12 name is Taylor Lamb. I am the Product Manager for the
13 Mission Analytics Portal, and I'm going to talk to you
14 a little bit about MAP and what we do.

15 So, I am just one member of this really
16 fantastic team. Andrew Lerch is, of course, one of
17 the regional leads. Michael Lee will be presenting
18 today, as well as Jason Carneal.

19 And MAP is really all about empowering the
20 NRC staff to keep them better informed, more
21 effective, more agile through the use of more data and
22 data analytics tools.

23 Next slide, please.

24 All right. So, the MAP approach. The
25 first step in our approach is to create the data

1 analytics environment that contains authoritative
2 datasets anyone at the NRC can access. We take the
3 data from NRC systems that the staff already uses,
4 standardize it, and we centralize it in the data
5 warehouse.

6 The next step is we develop the data
7 analytics skill sets and partner with the program
8 organizations to ensure the end users are getting
9 tailored -- no pun intended -- analytical tools,
10 otherwise known as user-centered design. So, this is
11 because what might interest a Branch Chief, it might
12 not necessarily interest a technical reviewer.

13 Third, we empower the staff by providing
14 them access to the data and the tools that they need
15 to enhance their current positions. This might mean
16 access to Tableau or Power BI, as well as training
17 resources.

18 An example of this is the NRC dashboard
19 developers' community that actually has about 150
20 members across the Agency. The group meets routinely
21 to discuss analytical tools being developed in all of
22 the offices across the Agency, while also providing
23 training based on what the community needs are.

24 And finally, we work to acquire the
25 technologies needed to enable more effective

1 communications and analytics.

2 And Michael Lee is actually on the line,
3 and he's going to talk to you a little bit more about
4 that.

5 MR. LEE: Good morning, everybody. My
6 name is Michael Lee. I'm the Product Owner of the
7 Mission Analytics Portal. And today, I'm going to go
8 over some of the benefits that we've realized, even in
9 ways in our infancy in terms of becoming a more data-
10 mature organization.

11 So, a lot of the tools that we've created
12 have served many purposes. First and foremost, we
13 have created many dashboards that have served in ways
14 to enhance performance, providing dashboards that
15 provide live, real-time understanding to leadership of
16 where the program is, how it's performing, and those
17 areas at risk. And those insights have really allowed
18 leadership the information it needs to make corrective
19 actions, and thereby, improve performance over time.

20 Other tools that we've created have really
21 boosted the Agency's ability to analyze and estimate
22 its data. One great tool is some of our precedent
23 analysis dashboards that we've created that allow end
24 users to isolate certain types of licensing actions
25 and see the level of effort and the time it took to

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1 accomplish those things over a period of time, which
2 has, in turn, allowed us to provide better estimates
3 for a lot of the products that we're issuing out.

4 And, of course, from a workload management
5 perspective, it's been tremendous. Oftentimes, there
6 are hundreds of different licensing actions and
7 thousands of different milestones that leadership and
8 project managers have to keep track of at one time.
9 The tools that we provide provide this information in
10 an easily understandable way. So, these people
11 running these different projects and running these
12 different programs can effectively manage them and
13 report.

14 Of course, resource management, we've
15 created many tools that have served to help us
16 allocate our resources optimally, including budgets-
17 based, where we've developed tools that track actuals
18 over a period of time and compare them to proposed
19 budget years, to allow us to see whether or not the
20 resources that we are requesting are consistent with
21 historical actuals.

22 So, that's just the taste of some of the
23 benefits that we've realized as an Agency through data
24 analytics. Now I'm going to pass it over to Jason --

25 MEMBER PETTI: So, I have a question on

1 this.

2 MR. LEE: Oh, go ahead.

3 MEMBER PETTI: It sounds like you've
4 developed a lot of tools that are useful for a variety
5 of stakeholders in the organization. Is there a
6 mechanism to make them sustainable, so that everybody
7 uses them? Or will you get 400 different tools that
8 kind of do all the same thing because everybody likes
9 their own flavor, if you will Is the goal to try to
10 streamline and have a next-generation set of tools for
11 people to do some of these things? Or is it more
12 towards the other, that everybody will get to
13 customize the tools as they would like to see it?

14 MR. LEE: That's a very, very insightful
15 question, and it kind of goes to the data strategy
16 that we are taking. So, even though we're creating
17 these dashboards, on the way to creating these
18 dashboards, we're creating these centralized datasets
19 that everybody has access to. We're distributing
20 technologies that allow very rapid, easy-to-use tools
21 that can create these dashboards. So, what we're
22 doing is we're creating these dashboards for these
23 major stakeholders, as well as providing the
24 foundations for staff in ways to become their own data
25 analysts through the availability of data and by

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1 providing these in ways transformational tools that
2 allow them to become data analysts of their own. So,
3 it's really about empowering the staff, as well as
4 spoon-feeding them along the way, too. But that's a
5 great question.

6 MEMBER PETTI: Because, I mean, there must
7 be some tools now that are out there. And sort of my
8 experience is there is huge inertia. People are used
9 to the way they've always done it. And to get them to
10 kind of think differently and to use some of these
11 more advanced tools, is that also part of the overall
12 program, you know, how to persuade the hearts and
13 minds of people to do it differently?

14 MS. LAMB: Absolutely, yes. So, let me
15 pitch in there. That kind of goes back to what I was
16 talking about with the dashboard developers'
17 community. That's just one of many ways that we're
18 reaching out to the staff and trying to increase usage
19 across the Agency and make data analytics more
20 normalized and less scary for the staff. We also
21 provide all sorts of training materials for the staff
22 and specifically show them how to use these to help
23 improve their everyday work.

24 MEMBER PETTI: Okay. Great. Thanks.

25 MR. LEE: All right, Jason. I'm going to

1 hand it off to Jason Carneal. Jason's one of our key
2 members of the Mission Analytics team. He leads a lot
3 of the efforts in the oversight inspection area and
4 does a lot of analytics related to operating
5 experience.

6 Jason, do you want to take it over?

7 MR. CARNEAL: Sure. I'd like to verify
8 that everyone can see my screen.

9 MR. ANDERSON: Yes, we can see it.

10 MR. CARNEAL: Okay. So, my name is Jason
11 Carneal. I work in the Operating Experience Branch in
12 the Office of Nuclear Reactor Regulation. I've been
13 in the Branch about five years. Before that, I was a
14 rule maker in various positions throughout the Agency.

15 The Operating Experience Branch, we deal
16 with a lot of different sources of information. So,
17 we're constantly pulling information from multiple
18 systems, both in-house, external, the international
19 reporting system from IEA, INPO's event, databases,
20 multiple internal systems. And what we found was we
21 were doing similar types of requests over and over
22 again and using a lot of staff time in order to
23 provide management with updated trends on specific
24 topics.

25 So, what I was going to show you today is

1 a subset of one of the dashboards that we have
2 developed, the Operator Reactor Inspection Oversight
3 Dashboard. This is specifically showing you all of
4 the public data that's available in that module, so
5 the MAP oversight module.

6 There's a lot of information here. It's
7 pulling from, again, multiple sources. And I just
8 wanted to step through some of the functionality you
9 see to show you some of the tools that we are
10 developing.

11 So, what you're seeing here is our entry
12 page. And on the map, you're seeing an overview of
13 the entire fleet and the current action matrix status
14 for all the reactors. So, most of them are in action,
15 matrix column 1, which means no additional oversight.
16 And we have four plants -- Clinton, Callaway, Surry,
17 Grand Gulf -- that are in action matrix level 2.

18 On this screen, also, we have a summary of
19 important findings matrix. So, here at the top left,
20 you are seeing recent greater-than-green issues. So,
21 these are the 2020 finalized greater-than-green
22 issues. We've got four of them -- Browns Ferry,
23 Clinton, Surry, Vogtle 1 and 2.

24 We're also showing a trend of findings for
25 the last three years and how we're stacking up in the

1 current year versus those previous years. So, you can
2 see the three years divided up by Region and the
3 findings trend associated with that. Of course, we're
4 pretty early in 2021 calendar year. So, we don't have
5 a lot of findings in 2021 at this point.

6 One area where we got a lot of management
7 request is scam trending. This is actually the
8 initial tool that we developed and deployed. It was
9 a scam tracking tool. It just shows the overall
10 trend in scams over the last 10 years, the average
11 over the last 10 years, and also, summarizing the
12 number of event notifications by Region, and total
13 number of licensee event reports received this year.

14 So, the nice thing about these types of
15 tools is it allows us to drill down and get more
16 information in any of these areas. And so, for
17 instance, if I just start with scams, it drills down
18 and gives us some more details. So, it gives a
19 summary of the scams this year for this year, 23
20 projected and 44 in the last 365 days. It gives us
21 the same trend that we saw on the previous screen, but
22 allows the user to focus in, if they wish to do so, on
23 PWRs or BWRs; and also, allows the user to select a
24 specific plant, if they wish to do so.

25 I also see the scams by month for the

1 last three years and how our current year is stacking
2 up versus the previous two years, and versus the 10-
3 year average plus and minus one standard deviation.
4 So, you can see, as we're projecting, 23 scrams this
5 year, based on a linear projections. You can see the
6 scrams this year have been relatively low relative to
7 the 10-year running average. And you can see, for
8 instance, that last year we had a very active August,
9 significantly over the average number of scrams in
10 August.

11 We're also able to break out scrams by
12 system, the initiating system. So, you can select
13 different systems, design condensate, main
14 transformer, RPS. So, you can do some trending here.

15 We also have scrams broken out by
16 overarching cause. So, mechanical, electrical, and
17 human performance. Let's take a look at those type of
18 trends. And I'll go back. So, that was for scrams.

19 And how this really benefits our Branch is
20 50 times a year the old model was each time there was
21 a scram, there would be a PowerPoint exercise to
22 update all the graphics and send it up through
23 management, get approval. Now we have a centralized
24 tool that you're just automatically pulling the data.
25 It saves our Branch a lot of time.

1 I'll go also go into the event
2 notifications as an example, another example. So, if
3 I click into the detailed page on event notifications,
4 I can get the EN trends by Region, by reporting code,
5 and a list of all the historical event notifications.
6 And the user is able to hover over and actually read
7 any of the reports that they would like to read using
8 this interface.

9 We have the ability to, for instance, do
10 an EN title search. So, I just put in the term
11 "breaker," and you can see the trend in events by
12 Region for breakers. It also updates all the other
13 graphics. If I cancel that out, it does respond like
14 that.

15 One of the more popular features we've had
16 is a search by utility company. So, I were to go into
17 it and type "Exelon" for a utility company, you can
18 see the event reporting by that specific, by all the
19 plants owned by that specific utility. And it's also,
20 again, updating the distributions by CFR code and the
21 historical trend. And again, once you whittle down
22 the results you would like to see, you can do further
23 reading. Or if you want to see a specific year, you
24 can even zoom in on 2015 per se and really drill down
25 into the data and get to the question you're trying to

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1 answer.

2 MEMBER PETTI: I have a question.

3 MR. CARNEAL: Yes?

4 MEMBER PETTI: Is this on the Tableau? Is
5 this based on the Tableau platform or is it a
6 different commercial --

7 MR. CARNEAL: Yes, this particular tool is
8 in Tableau. We also had some previous versions of
9 most of these tools in Power BI. So, we kind of have
10 multiple reports. This specific one is developed in
11 Tableau, though, because that was the technology
12 selected for the Mission Analytics Portal.

13 MEMBER PETTI: All right. Thanks.

14 MR. CARNEAL: Sure.

15 So, the last one I'll show, I won't go
16 into every one, but each of these has a different
17 detail screen. I'll just go into the site-specific
18 page. So, if I click on "Grand Gulf," for instance,
19 for the public data, this is pulling together six
20 separate reports. So, if you wanted to compile this
21 type of report yourself from the existing systems, it
22 would take several hours to do so, accessing the
23 existing systems.

24 Let's say we've got the action matrix
25 column that the plant is currently in. And what's

1 received a lot of positive feedback is the power
2 history for the site. You can look at the current
3 year or previous year, and whenever you see a down
4 power, you can get to the notes for that specific down
5 power. So, if I hover here, you can see, for
6 instance, back in June they were down at 65 percent
7 due to maintenance on Bravo feed pump.

8 I also have the site-specific ENs it's
9 pulling from the same data source, but getting at the
10 events in the current year, you can look at previous
11 year, and, of course, look through all the events,
12 completed licensing actions that are recent, because
13 the inspectors might -- there might be some change
14 that the inspectors need to look into at that site.

15 Recent findings, again, we default to the
16 current year, but since we're so early in the year,
17 there aren't that many. But you can select previous
18 years and the overall inspection schedule for that
19 site. So, again, just trying to compile and
20 centralize data from multiple sources and make it easy
21 for people to get to the data and get the information
22 that they need.

23 So, right now, this is an internal tool.
24 What we would really like to look forward to in the
25 future is getting versions of this, or at least some

1 type of revision of these types of visuals on the
2 public website, so that external stakeholders can be
3 looking at the same data that we're looking at.

4 And that's a good lead-in to our next
5 speaker, Caty Nolan.

6 Caty, are you online?

7 MR. LEE: Hey, this is Mike Lee, the
8 Product Owner for the Mission Analytics Portal.

9 Just to chime in before we transfer to
10 Caty, you know, another effort that we're doing in
11 data analytics space is we are working with the Office
12 of Research to take a lot of the datasets from the
13 site-specific SPAR models that they've created, that
14 provide risk insights per plant, and provide a variety
15 of statistics, based on different scenarios, and
16 creating dashboards that offer a kind of easy-to-use,
17 easy, understandable interface for PMs and inspectors
18 to leverage. So, they can benefit from a lot of the
19 research and insights that the Office of Research has
20 been working on for decades.

21 So, I think that's the next big step for
22 us. And as I was saying before, we are still at our
23 infancy, and it's only going to get better from here.

24 And then, I guess, Caty, do you want to
25 chime in?

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1 MS. NOLAN: Yes. And so, speaking of
2 being only in our infancy, I would like to talk to you
3 guys about MAP-X. And so, I'm Caty Nolan. I am the
4 Product Owner, which is basically like the lead, the
5 team lead, for the Mission Analytics Portal
6 externally-facing side.

7 And so, the reason I say we're still in
8 our infancy is because we are, basically, coming up
9 with a vision at this point. And so, I want to share
10 that vision with you, and then, kind of let you know
11 our thoughts, ideas, and where we are.

12 And so, our vision for this is to be able
13 to create this external portal, this interface for our
14 licensees, the public, anyone to be able to use.
15 There will be a log-in section that is for the
16 licensees/applicants. They will go through normal
17 protocols in order to log in, and then, they will be
18 able to interact with our data that we keep talking
19 about. And so, they will be able to submit
20 information to us, be able to retrieve that data from
21 us, such as workflow, status, things like that, and
22 then, also be able to interact with our data.

23 And so, also, beyond a log-in section, we
24 want to be able to show some of these visualizations,
25 these dashboards that you just got a demo of. And so,

1 this is where MAP and MAP-X can come together. So, we
2 want to engage these stakeholders with these data
3 analytical tools, but also providing a secure,
4 flexible, and personalized self-service gateway, like
5 I just talked about. And it will all be able to be
6 through a standard web browser rather than being on
7 some special computer and needing specific
8 certificates or anything like that.

9 And so, if we can go to the next slide,
10 the key functions of the portal, I know this question
11 was sort of asked before, but I just want to also
12 reiterate that, in order to create this portal, since
13 we'll be having so many different key functions in the
14 portal, we'll be empowering staff to initiate the
15 change and their own innovation of their own business
16 processes that they use every day.

17 And so, having better business process
18 automation through system integration is what we're
19 going for here, at least on the external side, or on
20 the internal -- both really. So that we can have
21 more resource saving and it will be -- I just see it
22 as such a great product.

23 So, what types of things do we see in this
24 portal? As I already mentioned, having current
25 status; being able to submit documents to us; retrieve

1 documents; have a billing, being able to pay bills
2 right in there; just viewing any related documents;
3 potentially, a reading room in there. And just like
4 I said on the back-end, integrating all of these
5 systems so that they each talk to each other. So, we
6 can go into one place and be able to work all in one
7 place, like a one-stop, a patient portal through your
8 doctor or medical insurance, and launch into an app
9 and be able to see all of your personalized
10 information. That's the kind of theme that we're
11 going for, once logged into the portal.

12 MEMBER BROWN: Excuse me. Can I ask a
13 question?

14 MS. NOLAN: Yes. Yes, please.

15 MEMBER BROWN: NRC staff has to pay a bill
16 to do this? What's billing information mean?

17 MS. NOLAN: I'm sorry, yes, so that's
18 really more for the licensees/applicants. There's
19 currently an e-billing feature that I believe sends
20 you to pay.gov. I am not 100 percent on that. But we
21 would like to have a billing thing, not for the
22 internal side, for NRC staff, but more for the
23 external-facing.

24 MEMBER BROWN: So, licensees can access
25 this if they have subscription or something? Is that

1 the point?

2 MS. NOLAN: Shaun, do you want to answer
3 that for me? Or do you want to help me?

4 MR. ANDERSON: Sure, sure. And, Caty, you
5 were probably getting to it.

6 It's more about that experience of where
7 you're logging into a certain application and you have
8 a certain product. You want to be able to not only
9 see the current status of your licensing reviews or
10 your application you submitted, but why can you not
11 also see your billing information or immediately go to
12 your billing information in that same -- I'm going to
13 use air quotes -- "portal," for lack of a better word?
14 So, we're trying to make sure that we can be
15 responsive and create a collection of information
16 that's relative to a particular licensee or applicant
17 related to the work that NRC is currently conducting
18 under their request.

19 MEMBER BROWN: So, NRC bills them, and
20 they can see what they have to pay?

21 MR. ANDERSON: Correct. NRC currently
22 does the billing and --

23 MEMBER BROWN: Okay. All right.

24 MR. ANDERSON: The only thing that we want
25 to do here is create that view to that system, so that

1 they can easily see it without, oh, going to another
2 location and logging in, or going to here to log in.
3 That one-stop-shop feeling is what we're trying to
4 create.

5 MEMBER BROWN: Okay. Thank you.

6 MR. ANDERSON: Okay. Thank you.

7 MEMBER KIRCHNER: Are submissions
8 applications or is this data coming in from the field?

9 MS. NOLAN: So, the kinds of submissions
10 that we think would be prime for this would be --
11 actually, we have a pilot project -- which are the
12 proposed alternatives or web-based relief requests,
13 submissions such as reporting requirements, different
14 licensing actions like a license amendment request or
15 an exemption, that type of thing.

16 MEMBER KIRCHNER: Okay. So, this is not
17 data coming into your system?

18 MS. NOLAN: Well, so they would be
19 submitting the data, yes.

20 Go ahead, Shaun.

21 MR. ANDERSON: Okay. Sorry, Caty.

22 But I like that point of where you're
23 going for the information such as the web-based relief
24 request. You know, one of the options to submit it is
25 actually documenting your application online. So, the

1 future state down the line is we want to take that
2 data, that data that applicants currently submit to
3 the NRC, not necessarily the PDF, but the actual data
4 that we can easily take, you know, put it in part of
5 our Agency record, but also immediately take that data
6 to add it to MAP, you know, and put it as a part of
7 that repository, so we can immediately do data
8 analytics on that new data that we have.

9 Right now, there's a processing timeline
10 and lag that's required because many of the requests
11 that we get are either documentations or its own PDF.
12 The goal is to kind of streamline that and just
13 leverage the clean data that we can receive.

14 MEMBER KIRCHNER: Now who validates the
15 data that comes in outside of the NRC?

16 MR. ANDERSON: Do you want me to take
17 that? I can take that.

18 MS. NOLAN: Sure. And I have a
19 clarification point when you're done.

20 MR. ANDERSON: Okay. Just like any
21 submissions that we have from licensees and industry,
22 we still follow our protocols in terms of the licensee
23 communicating to the NRC, who has the responsibilities
24 and authority. And we have our security protocols
25 that each individual will have to have approval to

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1 actually submit anything. So, you can get access to
2 the portal, actually, and they have to have additional
3 approvals to have certain permissions to actually
4 submit or author documents within the portal.

5 MEMBER KIRCHNER: Just one last question.
6 Going back to your dashboard on the operating fleet,
7 we had a presentation from INPO management, oh, I
8 would say a year and a half ago. I don't remember
9 exactly when. And they showed very similar kind of
10 graphics, as well as information tracking on many of
11 the same items that you've covered. To what extent do
12 you coordinate with INPO?

13 MR. CARNEAL: So, I can take that. Our
14 group, the Operating Experience Branch, we actually
15 have a very solid working relationship and Memorandum
16 of Understanding with INPO. So, we actually meet with
17 them every Friday to discuss topics of interest, and
18 oftentimes, we're talking about a lot of data issues.
19 They actually send us a lot of their data on a
20 quarterly basis, and we have access to that. But, of
21 course, it's all internal to NRC because it's
22 considered INPO proprietary.

23 But we have a very close working
24 relationship with INPO, and we do a lot of data-
25 sharing back and forth. And yes, we have been

1 presenting our products to INPO and getting feedback
2 and doing the same on their side.

3 MEMBER KIRCHNER: Great, Jason. Thank you
4 very much.

5 MS. NOLAN: Yes, and this is Caty Nolan
6 again.

7 And to that point, I was going to also
8 next mention that I had planned to have quarterly
9 public meetings. I had my first one in January to
10 just kind of launch the idea of MAP-X and ask for any
11 feedback from anyone, from the public, industry, and
12 to gather thoughts and see what product pieces would
13 be useful for them, and if we could add any or help
14 with any burden or anything like that.

15 And so, because the first one was in
16 January, the next one will most likely be in April.
17 And so, that's another way for us to be able to
18 interact. So, I just wanted to make sure I pointed
19 that out.

20 And before you were asking about data. I
21 just wanted to make the clarification point, I'm not
22 sure if you're thinking of the ERDS data, the
23 Emergency Response Data System. That is not the data
24 that we're talking about here. That is a separate
25 system used in the Ops Center. So, in case that may

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1 be where you were thinking about --

2 MEMBER KIRCHNER: No, I was thinking more,
3 Caty, more the operating data like INPO has. And it
4 seems like you're coordinating on that. So, that was
5 the kind of data, and then, of course, that begs the
6 question, you know, how validated is the data that you
7 put into an NRC system. But, based on what Jason just
8 shared, I think you have a strong relationship with
9 INPO. So, that answers my question.

10 MS. NOLAN: Okay. Great. I just wanted
11 to make sure we answered your question.

12 And then, to the last point that I'll make
13 before I pass it back to Shaun, it is that this
14 project is, I think it's an amazing effort that we're
15 doing, that we're working on. And it is just another
16 option, basically, for the licensees and applicants to
17 use, such as they have the EIE, or -- what is that? --
18 Information Exchange. The Electronic Information
19 Exchange is one option they have.

20 But we're hoping to make this such an
21 intuitive and innovative process that everyone wants
22 to use this as their option. But I just wanted to
23 make sure that we're not making this a requirement.
24 It is just an option for use for them.

25 So, unless there are any questions, I will

1 pass it off to Shaun.

2 Shaun, you're on mute, if you were
3 talking.

4 MR. ANDERSON: Thank you.

5 I think I just want to thank the ACRS for
6 the time today. I'm definitely opened up to the
7 questions. Hopefully, this gives you a little bit of
8 flavor in the activities and products that EMBARK has
9 been working on. And thank you for the staff that's
10 been here to present.

11 That, hopefully, gives you also another
12 sense that EMBARK is a small organization, but we
13 can't do it without the ideas from the staff and,
14 also, the support from our leadership and the
15 partnership that we have across the entire Agency, as
16 we're trying to improve the way that we do business
17 within the reactor safety program.

18 So, that's all I have, and if you have any
19 questions, we're here.

20 MEMBER BLEY: Shaun?

21 MR. ANDERSON: Yes?

22 MEMBER BLEY: Dennis Bley.

23 While you guys have been going through all
24 your talks, I've been listening, but I've also been
25 nosing around through the NRC website and SharePoint

1 and your part of the SharePoint. It looks like almost
2 all your people that I see listed there are associated
3 with other jobs, and this is something to come to.
4 Where does this fit in the overall NRC organization,
5 and are there people permanently attached to EMBARK,
6 or are they all people coming into solve specific
7 problems?

8 MR. ANDERSON: It's a combination between
9 the two, and I'm happy that you're poking around in
10 SharePoint at pages. Excited to hear about that.

11 So, EMBARK, we are small organization.
12 The way that we operate, we have approximately three
13 staff members that are dedicated to you in EMBARK that
14 help more of the IT or the MAP initiative continue to
15 move forward. Most of the staff that are working with
16 EMBARK are either on rotations or details. But, to
17 your point, it's to provide for two goals.

18 One, to come in and help elevate or move
19 some projects along. Many of them are staff ideas,
20 and the staff ideas are many times their own ideas
21 that they had and they want to leverage and move it
22 forward.

23 But the majority of the staff that are
24 working with EMBARK is part of or pretty much belong
25 to, or operate or work under another organization.

1 And that's a good benefit, or the benefit to that is,
2 you know, the resources support their specific
3 program. For example, Jason Carneal is doing a lot
4 with OPI. We're helping to advance the activities and
5 the projects that they're specifically doing on a day-
6 to-day basis.

7 We're partnering with Research. We're
8 helping Research to kind of make sure we're moving in
9 a direction, so that we can leverage the data as we
10 can move forward.

11 If it's subsequent license renewal, that's
12 another project or initiative that it's only going to
13 help our program as a whole overall as we move
14 forward.

15 And even, for example, the RCI project,
16 the request for confirmation of information, that's an
17 idea where the individual started, gets a project that
18 started in license renewal, and the question was,
19 well, can we use this and leverage this for licensing?
20 And, well, I don't know; let's see that. So, the
21 person helped us kind of move that project forward and
22 communicate that out to the staff. And now, we have
23 a recommendation, and are looking for feedback, on
24 what are our next steps on leveraging RCI. And not
25 only that, it's now being asked, hey, how can we

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1 leverage this in NMSS?

2 So, the benefit there is the staff that
3 are coming to help work on many of these initiatives
4 are doing it so that they could help propose or, you
5 know, move their programs forward.

6 MEMBER BLEY: Thanks.

7 MR. ANDERSON: Any other questions?

8 CHAIRMAN SUNSERI: Members, any other
9 questions?

10 MS. WHITMAN: I was just going to clarify,
11 too, that we're in NRR. We're one of the Divisions
12 and we report to the ET.

13 CHAIRMAN SUNSERI: Okay. Thank you.

14 All right. Well, I don't hear any other
15 questions.

16 So, Shaun, I will thank you and your team
17 for enlightening us with the EMBARK Venture Studio.
18 We had not known much about it, and then, it came up,
19 as I mentioned earlier today, in our Commission
20 briefing. So, we thought we should get to understand
21 it better, and you certainly have done a good job.
22 Your team, your entire team, has done a good job of
23 raising our awareness. And so, we thank you for that.

24 MR. ANDERSON: Thank you. Thank you for
25 having us.

1 And thanks to the team and all in the
2 background supporting. Greatly appreciate it.

3 CHAIRMAN SUNSERI: You're welcome.

4 All right. Members, we are about 15
5 minutes away from our lunch period. I don't think
6 there's enough time there to squeeze in anything with
7 respect to the report that Charlie is facilitating us
8 on preparation.

9 So, I guess my recommendation would be we
10 start our lunch early and reconvene at 1:30 with the
11 regulatory basis discussion. Does anybody have an
12 alternative?

13 MEMBER PETTI: Well, Matt, we could do
14 another read-in. The document has changed a lot. We
15 could just read it in.

16 CHAIRMAN SUNSERI: Do you think we would
17 have enough time to read it in? Do you think?

18 MEMBER PETTI: Fifteen minutes? I think
19 so.

20 CHAIRMAN SUNSERI: Okay. Well, I'm up;
21 I'm okay with that, yes.

22 MEMBER RICCARDELLA: Could someone please
23 send out the revised version, so we would have it to
24 look at the whole thing rather than just what's on the
25 screen?

1 CHAIRMAN SUNSERI: So, let me check with
2 Alicia.

3 (Whereupon, the above-entitled matter went
4 off the record at 12:14 p.m. and resumed at 1:30 p.m.)
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1 A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2 1:30 p.m.

3 CHAIRMAN SUNSERI: We will reconvene the
4 683rd ACRS meeting. I'll confirm a quorum by roll
5 call. Ron Ballinger?

6 (Laughter.)

7 CHAIRMAN SUNSERI: Dennis Bley?

8 MEMBER BLEY: Here.

9 CHAIRMAN SUNSERI: Charles Brown?

10 MEMBER BROWN: Here.

11 CHAIRMAN SUNSERI: Vesna Dimitrijevic?

12 MEMBER DIMITRIJEVIC: Here.

13 CHAIRMAN SUNSERI: Walt Kirchner?

14 MEMBER KIRCHNER: Here.

15 CHAIRMAN SUNSERI: Jose March-Leuba?

16 MEMBER MARCH-LEUBA: Yes.

17 CHAIRMAN SUNSERI: Dave Petti?

18 MEMBER PETTI: Here.

19 CHAIRMAN SUNSERI: Joy Rempe?

20 VICE CHAIRMAN REMPE: Here.

21 CHAIRMAN SUNSERI: Pete Riccardella?

22 MEMBER RICCARDELLA: Here.

23 CHAIRMAN SUNSERI: And Ron Ballinger?

24 Okay. Without Ron we still have a quorum so I'm sure
25 he'll be joining. I don't know, he hasn't let me know

1 that he can't attend.

2 All right. We will, I'm getting big
3 feedback, can everyone hear me okay?

4 MEMBER KIRCHNER: I think Ron just came
5 on. His mic was on, Matt.

6 MEMBER BALLINGER: Here.

7 CHAIRMAN SUNSERI: Ron?

8 MEMBER BALLINGER: I'm here.

9 CHAIRMAN SUNSERI: Okay, great. Great.
10 All right. The roadmap for the remainder of the day
11 is we're going to have a session on Regulatory Basis
12 10 CFR Parts 50/52 and other business.

13 And then time permitting we will continue
14 with the report preparation of the letter report we
15 read in just before the lunch break. So with no
16 further, well, let me ask. Members, any questions
17 about the agenda? Okay.

18 No further comments then, I'll turn it
19 over to Member Bley for introduction of this session.

20 MEMBER BLEY: Thank you, Mr. Chairman.
21 This is a full committee information briefing by the
22 Staff on the rulemaking to align Parts 50 and 52.
23 It's being held in lieu of a Subcommittee meeting.

24 We have had two previous briefings,
25 meetings on this topic. Way back in 2014 Joe Williams

1 gave us a very preliminary indication of where things
2 were headed. And then in 2019 we had Jim O'Driscoll,
3 who is here today, and Carolyn Haass of NRR.

4 At that last briefing, at least it
5 appeared to me, that identifying the guidance that
6 requires the revision, and the revision of that
7 guidance, would be a really major task. But we're
8 going to get to that some point today.

9 At the time of this meeting, wherein the
10 middle of the public comment period on the regulatory
11 basis, we don't always, or even often, write letters
12 at this stage of the rulemaking. But we can hear from
13 the members on their thoughts in this area later.

14 Certainly, it's an opportunity for
15 individual members to make public comments as
16 stakeholders. We did receive the extensive regulatory
17 basis document, and we'll be hearing about that today.

18 At this time I will turn over the meeting
19 to Anna Bradford, who is director of the NRR Division
20 of New and Renewed Licenses. Anna, it's yours now.

21 MS. BRADFORD: Great, thank you. Can you
22 please confirm you can hear me?

23 MEMBER BLEY: Perfectly.

24 MS. BRADFORD: Great. Wonderful. So, as
25 you mentioned, my name is Anna Bradford. I'm the

1 director for the division of new and renewed licenses
2 in NRR. And my division has the technical lead for
3 the content for what we informally call the Part 50/52
4 lessons learned rulemaking.

5 We've been planning for and working on
6 this overall part 50/52 effort for several years now.
7 And as you mentioned, we previously briefed the ACRS
8 on our efforts.

9 And today's presentation to ACRS will
10 focus on the status of the rulemaking activities. And
11 it's intended to facilitate your understanding of the
12 content of the regulatory basis document, which is
13 currently out for public comment.

14 And we know that the Committee has been
15 very involved with a lot of the implementation of Part
16 52, between your reviews of design certifications,
17 early site permits and combined licenses. And so we
18 thought that you're likely to have thoughts on Part 52
19 and what could be improved or changed.

20 So we'll consider the input that we
21 receive on the regulatory basis document from the
22 public, and from ACRS, for developing the proposed
23 rule itself, which is the next step, as you'll hear.

24 And the Staff understands that any opinion
25 shared by ACRS members at this meeting are not

1 official positions of the Committee and that any
2 comments made by Members are analogous to comments
3 made by members of the public. And the Staff are not
4 --

5 MEMBER BLEY: Anna?

6 MS. BRADFORD: Sure.

7 MEMBER BLEY: I'm sorry?

8 MS. BRADFORD: Yes. I'm sorry, I thought
9 you said something.

10 MEMBER BLEY: Is it safe to assume that
11 the Staff is still aware of comments we've made on the
12 Part 52 process in our previous letters?

13 MS. BRADFORD: Absolutely. Do you mean
14 ones related to the design certifications and combined
15 licenses, those previous reviews?

16 MEMBER BLEY: I do.

17 MS. BRADFORD: Yes. And so we're not
18 requesting a letter from the ACRS at this time.

19 So, we'll formally present the proposed
20 rule package to the ACRS after its developed. And
21 we'll subsequently send the proposed rule to the
22 Commission in 2022. And the proposed rule will
23 obviously also go out for public comment.

24 So I look forward to the discussion today
25 and your questions and comments. And with that, I

1 will turn it back over to the project managers to give
2 you more details. Thank you.

3 VICE CHAIRMAN REMPE: Anna, this is Joy,
4 could I ask you a question?

5 MS. BRADFORD: Certainly.

6 VICE CHAIRMAN REMPE: I appreciate you
7 guys coming and talking to us again early in this
8 stage. Remind me exactly how much of the regulatory
9 basis document might appear in the final rule?

10 MR. O'DRISCOLL: I can get into that --

11 MS. BRADFORD: Okay.

12 MR. O'DRISCOLL: -- when we go through it,
13 if that's okay, Joy?

14 VICE CHAIRMAN REMPE: That would be fine.
15 I just am curious. Again, I know that it's up for
16 public comments for a lot of it will change, but what
17 portions of it might appear in the actual, is it
18 called a regulatory basis that's incorporated at a
19 high level in the final rule?

20 Because there is some part of this text
21 that would appear.

22 MR. O'DRISCOLL: Yes. Yes, I'm going to
23 go through the process. And I'll try to explain how
24 much of the scope that when we scoped it out landed
25 into the regulatory basis.

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1 And we're operating, all these items that
2 are scoped in, we are working towards rulemaking that
3 would carry through the final rule. So, to answer
4 your question I'll kind of give you a flavor of what
5 would probably be in that final rule if we didn't get
6 any significant changes from future interactions with
7 the public, et cetera.

8 VICE CHAIRMAN REMPE: Thank you.

9 MR. O'DRISCOLL: Great.

10 MEMBER BLEY: Anna, one more question.
11 You suggested you probably wouldn't come back to us
12 until you had rule language in 2022.

13 On another current rulemaking, another
14 part of 10 CFR, the staff has really asked us to meet
15 with them very regularly to avoid surprises at the
16 end. Have you thought about that at all and are you
17 comfortable with waiting till you have the draft
18 rulemaking in place to hearing from us?

19 MS. BRADFORD: I mean, that's a good
20 question. I do think that the contents of certain
21 rules would affect how often we think would be useful
22 to interact with the ACRS.

23 I could see that a very complicated
24 technical rule with significant policy issues that it
25 would be advantageous to come more frequently. We're

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1 here. I think of this more as kind of a bunch of
2 process changes I'll say.

3 But I would appreciate your all's feedback
4 on that. If after today, and after you've had a
5 chance to look at the reg basis you think more
6 frequent interactions would be helpful, I think we
7 would be open to that discussion.

8 MEMBER BLEY: Okay, thank you. I'm just
9 a little nervous with seeing you come back and say,
10 here, it's all done and we say, oh my God, this part
11 of it is really in trouble.

12 (Laughter.)

13 MEMBER BLEY: So, if we could, well, let's
14 talk about it at the end of the meeting. But if there
15 is some way to keep us up to date on what's going on
16 and if there should be any really substantive things
17 related to safety working their way into this, I think
18 that it would be a good idea for us to get together
19 again.

20 But we'll know more after today's
21 briefing. So please go ahead.

22 MR. MOORE: Chairman Bley, this is Scott
23 Moore. May I ask a question, please?

24 MEMBER BLEY: Absolutely, Scott.

25 MR. MOORE: Sure. Anna, this is Scott.

1 Part 53, to follow on Chairman Bley's comment, Part 53
2 is going through an iterative rule process where
3 they're putting out proposed rule language in parts
4 and then putting out proposed rule language again to
5 the public and asking for comments.

6 Is this rule going to do the same or is it
7 just going to go to a proposed rule stage?

8 MS. BRADFORD: Right now we're just going
9 to go to the proposed rule stage.

10 MR. MOORE: Okay, thank you.

11 MEMBER BLEY: Thanks, Scott. Anna, go
12 ahead.

13 MS. BRADFORD: Okay. I think I'm actually
14 turning it over to Joe O'Driscoll.

15 MR. O'DRISCOLL: Hi, everybody. Sorry to,
16 I kind of jumped (telephonic interference). My name
17 is Joe O'Driscoll. I'm the lead rulemaking project
18 manager on this effort.

19 And again, I'm just going to reiterate
20 what was just said. The purpose of today's meeting is
21 to provide the ACRS an update on the Staff's effort.

22 Since the last ACRS meeting, the NRC Staff
23 held on this topic, which took place on September
24 20th, 2019. The summary of the meeting can be found
25 in ADAMS under accession number ML192948009.

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1 So, this meeting is going to provide an
2 opportunity to discuss the specific items in the
3 rulemaking as described in the regulatory basis, which
4 was published on the 29th of January of this year.
5 And which is currently out for public comment.

6 The detail of the discussion will be a
7 high level. Because the rule scope is so broad, we
8 may not have the specific subject matter experts
9 available on the phone to address your question if it
10 gets too technical.

11 However, you'll always have the option to
12 submit your question formally. We can always get back
13 to you so don't worry about that.

14 We will also discuss the estimates for
15 cost and savings for the activity, as we know them
16 now. We'll discuss, we'll conduct a question and
17 answer session on the topics of ACRS's interests. And
18 finally, we'll provide you an update of the next step
19 for the project.

20 So like Anna said, we hope this
21 interaction will help you understand the content of
22 the regulatory basis that's out for comment and the
23 status of the rulemaking.

24 And just a couple of things. Like our
25 previous public meetings, although we will take

1 information, your perspectives and questions we hear
2 today in developing the proposed rule, we don't intent
3 to formally respond to comments you provide at this
4 meeting.

5 I'll discuss, as I discussed, we'll
6 respond to written comments about the subject that we
7 received during the public comment period.

8 I'll briefly remind you of the ways that
9 comments can be provided. That is detailed in the
10 federal register notice for this activity.

11 Also, a couple of things. Please note
12 that the acronyms used in the slides is at the end of
13 the presentation. I'll try to say the full term
14 first, once at least, just to keep folks following
15 along.

16 Also note that a list of the ADAMS
17 accession numbers of all the documents referenced in
18 the NRC staff presentation can be found at the end of
19 the Staff's slide presentation.

20 And then another reminder, please be
21 careful not to discuss any safeguard security related
22 classified or proprietary information during this
23 meeting. Although we intend to have an open dialogue,
24 please note that the NRC Staff will not make any
25 regulatory commitments during this meeting.

1 Next slide. Okay. Next slide. We're on
2 Slide 5. Okay.

3 As I said, I'm Jim O'Driscoll, the lead
4 rulemaking project manager of this activity. I'm in
5 the Office of Nuclear Material Safety and Safeguards
6 in the Division of Rulemaking, Environmental and
7 Financial Support, known as REFS.

8 So, also joining me today is Mr. Allen
9 Fetter from the NRC's Office of Nuclear Reactor
10 Regulation. We have several NRC Staff on the call as
11 well.

12 Next slide. So we're on Slide 6. The
13 purpose of the rulemaking. So the Staff's engaged in
14 a rulemaking to better align portions of the
15 regulations in 10 CFR, Parts 50 and 52 in four areas,
16 as described in the regulatory basis.

17 The Staff will also address items derived
18 from lessons learned from previous new reactor
19 licensing activities described in the regulatory
20 basis. This whole activity implements the Commission
21 direction in SRM-SECY-150002.

22 And our goal is to better align Parts 50
23 and 52 licensing processes. Such that equivalent
24 designs submitted for NRC review under each process
25 are assessed against consistent technical standards

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1 that yield outcomes with equivalent demonstrations of
2 adequate safety, security and environmental
3 protection.

4 So in SECY-150002 issued on January 8th,
5 2015, the Staff made several recommendations to the
6 Commission regarding policy and regulatory updates to
7 ensure consistency in new reactor licensing reviews.
8 The Staff also made recommendations to address Staff
9 identified lessons learned obtained through the
10 licensing reviews completed up to July 2019.

11 These changes are intended to improve
12 clarity and reduce unnecessary burden on the
13 applicants and staff. As well as this, the Staff has
14 addressed, or intends to address, editorial and
15 administrative changes.

16 Next slide. Sorry, there's a question?

17 MEMBER BLEY: Yes, Jim?

18 VICE CHAIRMAN REMPE: Jim?

19 MR. O'DRISCOLL: Yes.

20 MEMBER BLEY: Dennis Bley.

21 MR. O'DRISCOLL: Yes.

22 MEMBER BLEY: We're asking the folks who
23 are doing the rulemaking on Part 53 how they're trying
24 to coordinate, or at least be aware of what's going on
25 over here, so that we don't have to have another

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1 rulemaking to align Part 53 with 50/52. It's sometime
2 in the future.

3 Can you say anything about that from your
4 side of this?

5 MR. O'DRISCOLL: Yes. So Bob Bell, he's
6 the lead rulemaking project manager on Part 53. He's
7 in my branch and we talk all the time about each
8 other's projects.

9 We're trying to keep the strings separate.
10 The regulatory areas that we're focusing on straight.
11 And when they do cross, sometimes they'll cross
12 necessarily. We intend to coordinate to make sure
13 that what we do on this rule doesn't unintentionally
14 force Part 53's hand, or causes problems with what's
15 going on over there.

16 So, I know they're just starting out with
17 a lot of rule language. They're still formulating the
18 regulatory structure.

19 So we intend to continue this
20 relationship. So that's sort of how we're handling
21 things.

22 MEMBER BLEY: Okay, thank you.

23 MS. BERRIOS: May I add --

24 MEMBER BLEY: We are considered about that
25 one. Sure, go ahead.

1 MS. BERRIOS: Hi. This is Ilka Berrios,
2 I'm the branch chief for the rulemaking branch.

3 As Jim said, we're working together and
4 we're keeping communication between the part 53 rule,
5 the physical security for advance reactors, the EPSMR,
6 the Part 50/52. Everyone is in the same branch. We
7 are keeping communication to be sure we're not
8 changing something in one rule that is affecting
9 another rule.

10 MEMBER BLEY: Ilka, thank you. It's good
11 to hear your voice again. Welcome back.

12 (Laughter.)

13 MS. BERRIOS: Thank you. Good to hear
14 you, Dennis.

15 VICE CHAIRMAN REMPE: Could I introduce a
16 follow-on question that I started to bring up awhile
17 back in the September 2019 meeting.

18 I really think a diagram that shows what
19 will eventually be part 50/52 and 53, so three
20 diagrams, would be really helpful. From what I've
21 seen, the big change, maybe there's more, the big
22 changes are that maybe multiple SDAs might be
23 referenced now in the processes that you're
24 mentioning. And you're going to be requiring a PRA as
25 an input for Part 50.

1 And just to kind of give folks a high
2 level capture of what's the input and what's required.
3 And I know I brought this up back in September 2019.
4 It was suggested I go back and look at revision and
5 strategy for the advance reactors, and it kind of lays
6 that out.

7 But I think that a better diagram might be
8 helpful. Just one member's thought.

9 MR. O'DRISCOLL: Great. Yes, so we're
10 going to keep Quynh in the loop on some of these
11 things to make sure that you're kept up to speed. We
12 appreciate that. We made a note of that.

13 VICE CHAIRMAN REMPE: I could even go a
14 bit further and say that Harold Ray authored an
15 article that's going to be appearing in the
16 Encyclopedia of Nuclear Energy. And that article
17 actually shows what his vision is of the processes are
18 for Parts 50 and 52. And that might be a good
19 starting point.

20 MR. O'DRISCOLL: Okay. If we can, you
21 know, I'll ask Quynh for that reference. That would
22 be very helpful.

23 VICE CHAIRMAN REMPE: I'd be happy to
24 provide --

25 MR. O'DRISCOLL: All right. Joy, you cut

1 off there.

2 VICE CHAIRMAN REMPE: I was too fast with
3 my trigger on the mute. But yes, I'll give the
4 reference to Quynh.

5 MR. O'DRISCOLL: Okay. All right. Any
6 other questions on Slide 6.

7 All right, so let's move on to Slide 7.
8 So, this is Slide 7. It shows our typical rulemaking
9 process.

10 So rulemaking, as you know, is how we
11 develop our regulations. With the publication of the
12 regulatory basis for comment, we have completed the
13 task in the second box. That's the regulatory basis
14 box there.

15 So we're in the 75 day public comment
16 period. And we held a Category 3 public meeting on
17 Tuesday. Where we basically kind of went through it,
18 just like we're doing right now. We asked for
19 questions, et cetera.

20 Anyway. The written comments we received
21 during this comment period will go into the docket for
22 the rule. In the proposed rule we will include a
23 summary of the stakeholder interactions, comments and
24 key messages that we received from the public on the
25 regulatory basis.

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1 The next two steps are the public --

2 MEMBER BLEY: Hey, Jim?

3 MR. O'DRISCOLL: Oh, yes.

4 MEMBER BLEY: Yes. When did this go out
5 for public comment, and have you begun to receive any?

6 MR. O'DRISCOLL: January 29th it went out.
7 It was made public. We have not received any comments
8 yet. So that's sort of where we are.

9 MEMBER BLEY: Okay, thanks.

10 MR. O'DRISCOLL: Certainly. So the next
11 two major steps are the publication of the proposed
12 rule and the publication of the final rule.

13 And we'll continue to provide
14 opportunities for the ACRS to comment on this process.
15 Before publication of the proposed rule in the federal
16 register, you will again have the opportunity to
17 review the proposed rule and provide written comments
18 to the NRC Staff.

19 We expect to hold an ACRS meeting for that
20 purpose. We will also hold a public meeting during
21 that public comment period. Any questions on this
22 slide?

23 If we can go to Slide 8. All right. So
24 here is some milestones for the activity. So although
25 the Staff received direction to commence rulemaking on

1 this regulatory issue in 2015, the Commission directed
2 the Staff to prioritize the project in accordance with
3 Project Aim.

4 And as you recall, the purpose of Project
5 Aim was to ensure the Staff continues its focus on
6 those tasks. Seeing it's essential for our mission as
7 seen in the next few years.

8 To that end, the rulemaking project was
9 deliberately budgeted to start in Fiscal Year 2019.
10 So the Staff commenced work in October of 2018. The
11 Staff's first task was to clearly define the scope of
12 the regulatory basis for rulemaking.

13 MEMBER BLEY: I'm sorry to interrupt.

14 MR. O'DRISCOLL: Sure.

15 MEMBER BLEY: We just had a briefing this
16 morning on the Be riskSMART program. And is Project
17 Aim still active or is it now somehow linked to the Be
18 riskSMART program or --

19 MR. O'DRISCOLL: I think --

20 MEMBER BLEY: -- can you tell me anything?

21 MR. O'DRISCOLL: I'm not sure, but put it
22 this way, I believe it's been superseded by more
23 current programs. So what Project Aim was, if you
24 recall, was a --

25 MEMBER BLEY: No, we remember.

1 MR. O'DRISCOLL: -- a snapshot, yes, we
2 tried to snapshot what we thought the future would be
3 and right size what we were doing at that time, at the
4 time.

5 MEMBER BLEY: Okay, thanks. I didn't
6 realize it was a kind of one and done thing. But go
7 ahead.

8 MR. O'DRISCOLL: Okay. All right. So, we
9 started work in October of 2018. The Staff's first
10 task was to clearly define the scope of the regulatory
11 basis for the rulemaking.

12 From the Staff's outreach efforts inside
13 and outside the NRC, the Staff collected a large
14 number of items considered for inclusion. On October,
15 excuse me, on January 15th, 2019, the Staff held a
16 Category 3 public meeting to request feedback from
17 external stakeholders on what should be included in
18 the scope.

19 So NEI, the Nuclear Energy Institute,
20 arranged for a panel of industry representatives to
21 attend. So using input from Staff and the
22 stakeholders, the Staff aligned on the scope for the
23 regulatory basis on July 11th, 2019.

24 So in late August of that year, oh, is
25 there a question?

1 MEMBER BLEY: Yes, Jim.

2 MR. O'DRISCOLL: Okay.

3 MEMBER BLEY: From the public meeting, or
4 any other interactions you've had, do you see public
5 support for where you're headed with this or do you
6 see problem areas that might come up?

7 MR. O'DRISCOLL: So, thus far we've seen
8 general, very positive support for what we're doing,
9 however, we're getting particular ideas and wish
10 lists. But the general aim for this rule is highly
11 supported. They, that's certainly a common theme in
12 the responses. This is a good thing we're doing.

13 MEMBER BLEY: Okay, good.

14 MR. O'DRISCOLL: All right. So, in late
15 August of that year, this is a couple, a month later,
16 the Staff issued an information paper, SECY-19084,
17 which provided information to the Commission and the
18 public on the status and scope of the regulatory
19 basis.

20 So in late September, the Staff briefed
21 members of the ACRS Subcommittee on regulatory
22 policies and practices. The Staff received views and
23 comments from the ACRS as individual members.

24 So we talked to them, essentially as
25 individual members, just like we're doing today. And

1 there was no letter, ACRS letter, issued on the topic.
2 And the slides and transcript for that meeting are
3 available in ADAMS. Accession Number ML-19294A009.

4 Next slide. So, in November 21, 21st of
5 that year, we held a public meeting. In that meeting,
6 NEI and other industry representatives asked questions
7 and provided comments on the scope of the rule of the
8 activity, or the reg basis, as it was described in the
9 SECY. SECY-19084. The slides and the transcript for
10 that meeting are available in ADAMS at ML-19344C768.

11 In February of last year the senior
12 technical project manager in NRR, Allen, received the
13 first drafts of the regulatory basis inputs from the
14 technical writers.

15 In April of last year the NRC held another
16 public meeting where we discussed several, specific
17 issues that were of interest to the public.

18 As we previously stated, the slides and
19 summary of that meeting can be found in ADAMS under
20 accession number ML-20141L609.

21 So, in January of this year, the NRC
22 published regulatory basis for public comment. So
23 currently we're in the public comment period where the
24 NRC is soliciting comments on the document for
25 consideration when developing the proposed rule.

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1 Earlier this week, on March 2nd, the Staff
2 held a public meeting to provide the public an update
3 on the rulemaking. And to answer any questions the
4 public had on the regulatory basis out for comment.

5 And also the solicited public
6 participation in the comment process. And so again,
7 the comment period will end on April 14th. Any
8 questions on that?

9 Next slide. So here is some next steps.
10 So for next steps, after the public comment period
11 ends in April, the Staff will carefully evaluate the
12 comments received while drafting the proposed rule.
13 We expect a complete and technical development of the
14 proposed rule by October.

15 After this, the Staff must perform several
16 tasks in order to finish the proposed rule. First,
17 we'll need to develop the regulatory analysis.

18 We also need to hold management and ACRS
19 briefings. And finally, we will need to obtain
20 management approval. This is expected to be completed
21 by May of next year.

22 So under the current schedule, in March
23 2024 the Staff will forward the final rule to the
24 Commission for approval. We continue to look at
25 process improvements in REFS here to improve that

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1 schedule. Any questions on that?

2 DR. CORRADINI: I have a question. This
3 is Corradini, I'm a consultant for the Committee.

4 I was under the impression Part 53 had a
5 schedule, they were looking to finish their proposed
6 rule in 2024 also, is that correct?

7 MR. O'DRISCOLL: I don't know the answer
8 to that question. Ilka, if you're on the line, do you
9 have the answer to that?

10 DR. CORRADINI: The reason I'm asking the
11 question such that, in that way, is the question I
12 think that Dennis came to you about relative
13 coordination between these seemed to be either aligned
14 on a similar, at least proposed schedule. That's why
15 I was curious.

16 MS. BERRIOS: What was the question again?

17 MR. WIDMAYER: Hey, Mike Corradini, this
18 is Derek. You're correct. 2024 is when they're
19 trying to finish Part 53.

20 DR. CORRADINI: And so my question is, if
21 Part 53 is to be finished at the same time as the call
22 with lessons learned and regularization of 50/52,
23 crosstalk is important all the through that time.
24 It's not as if one is going to happen later so that
25 you can look at it.

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1 So I'm just curious again, back with
2 Dennis' question about crosstalk between the various
3 developments since they seem to be coming in at the
4 same time period.

5 MR. O'DRISCOLL: So, we said earlier, and
6 it's really the same answer, Bob Bell, he's the lead
7 PM on the Part 53 rule, and myself, we're all both in
8 Ilka's branch. We communicate regularly when we have
9 issues to run by each other.

10 So, Bob is aware of my rule, he's aware of
11 the regulatory basis. And there is a couple of
12 things, I can't think of off the top of my head, but
13 we've occasionally speak and talk about what's going
14 on in each other's rules.

15 But I understand also at this time that
16 there is, you know, I think these interactions are
17 going to speed up because right now Part 53, they're
18 trying to essentially come up with the regulatory
19 structure, and they're doing workshops.

20 So I expect there's going to be more and
21 more interaction as we go forward. And we're
22 definitely talking.

23 MS. BRADFORD: Jim, this is Anna. Do you
24 mind if I add to that?

25 MR. O'DRISCOLL: Sure.

1 MS. BRADFORD: This is Anna Bradford from
2 NRR again. And Jim mentioned that the rulemaking PMS
3 are in close coordination. I would just also say that
4 the technical staff and technical management in NRR
5 are also in close coordination on these two issues.

6 So, I mentioned that my division has the
7 lead for this rulemaking. It's the DANU division that
8 has the lead for Part 53.

9 Both of our divisions report to Rob
10 Taylor. So Rob Taylor has oversight of everything
11 that's going on within all of these rules. And he's
12 very aware that we need to be coordinating and looking
13 for conflicts or synergies or anything like that.

14 So in addition to the management
15 coordination, a lot of the tech staff are, if not the
16 same tech staff person working on each rule, are in
17 the same branch and are talking to each other. So I
18 think we have multiple methods for communication.

19 But I agree with the idea that that is
20 very important and we need to make sure that it's
21 happening on both of these rules.

22 DR. CORRADINI: Okay, thank you.

23 MS. BERRIOS: Yes, this is Ilka. I would
24 like to add, and as I said before, we are also working
25 closely with the EPSMR rule. Like everything, we are

1 all communicating with each other on all those rules
2 that are happening simultaneously. That's all, Jim.

3 MR. O'DRISCOLL: Any other questions on
4 Slide 10?

5 Okay, next slide. We're on Slide 11. So,
6 what's the purpose of our regulatory basis?

7 The NRC requires a regulatory basis for
8 most its rulemakings in order to ensure sound and
9 informed decision making throughout the regulatory,
10 excuse me, the rulemaking process. The regulatory
11 basis documents, the justification of why rulemaking
12 is the best way to resolve the regulatory issue, or
13 issues.

14 The regulatory basis also describes the
15 technical, legal and/or policy information that would
16 support the content of the rule. The regulatory basis
17 out for comment includes a preliminary cost benefit
18 analysis of the proposed changes.

19 Next slide. So, this is a little bit of
20 what's in there. So, to try to give you the snapshot
21 of the scope of the regulatory basis.

22 So there's 50 items in scope in the
23 regulatory basis. This is down from about 50, well,
24 from the 54 items that we had earlier in the
25 development when we issued the SECY-190084. Basically

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1 that was, at the time of our last meeting.

2 The regulatory basis has a detailed
3 discussion of how the staff evaluated each item that
4 was communicated in the SECY and how we got to the
5 point where we are now in the regulatory basis. So
6 among the 50 items the Staff evaluated and discussed
7 115 alternatives.

8 These alternatives are primarily no
9 action, a rulemaking and guidance only alternative for
10 each item. However, for several items there are
11 additional alternatives to analyze. Depending on the
12 issue. Most of these are multiple, different
13 rulemaking options.

14 So, of the 50 scope items, the Staff
15 recommends rulemaking on 43 of them. So, you had
16 asked earlier about, what's the final rule going to
17 look like, so right now many items are "screening in"
18 to the proposed rule.

19 And going back to the bit on guidance, of
20 those 43 items, 23 of them also require some kind of
21 guidance update. Or new guidance document to be
22 developed and issued for comment with the proposed
23 rule.

24 In the regulatory basis, you know, reading
25 it, the Staff specifically identified 17 different

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1 guidance documents that could be affected. So this
2 rule also spans a large number of CFR parts, besides
3 Part 50 and 52, in order to make the conforming
4 changes. These parts include, but may not be limited
5 to, Parts 2, 21, 26, 51, 55, 70 and 73.

6 Next slide. Any questions on Slide 12
7 there before we go to Slide 13? Okay, next slide.

8 Okay. So the scope includes four items
9 meant to align Parts 50 and 52. These are discussed
10 in Appendices A through D, of the regulatory basis.

11 Next slide. So the scope also includes 46
12 lessons learned items. These are broken up in general
13 areas of operator licensing, physical security,
14 fitness for duty, emergency planning, Part 52
15 licensing process, environmental topics, applicability
16 of other processes to the Part 52 process and
17 miscellaneous topics.

18 So, now I'll go and briefly summarize the
19 Staff's recommendation on each of these items. Is
20 there any question so far?

21 VICE CHAIRMAN REMPE: Yes. Okay, so the
22 regulatory basis document is 437 pages, so perhaps I
23 missed it. But one of the points I thought we
24 emphasized in the September 2019 meeting was related
25 to the accumulative changes made during the actual

1 construction in Part 52.

2 And as I recall, there was some concern as
3 the licensee was going through and addressing items.
4 And it was with reference, I believe, to the Vogtle
5 Plant experience. That there had been changes during
6 the process.

7 And with that one I know there is a
8 separate ongoing activity. But just as we think about
9 how you, as you go forward and align the Part 50 and
10 52 processes, there is always, when you have a
11 construction permit and an operating license there's
12 a final review of all of these changes.

13 And is the Staff going to be looking at
14 anything, do you remember this concern expressed
15 during the September 21 --

16 MR. O'DRISCOLL: Yes.

17 VICE CHAIRMAN REMPE: -- meeting and how
18 was that addressed? And did I just miss it and it
19 discussed in the regulatory basis document?

20 MR. O'DRISCOLL: So, Joy, this is related
21 to changes during construction and some of the changes
22 we're going to be doing. And so, what's really where
23 we're at is that we are recommending changes that will
24 facilitate those types of changes to be made with a
25 more efficient way during construction, but we're

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1 still working that out.

2 We're still trying to figure out exactly
3 what controls, et cetera, we're going to need to have
4 on that such that we don't, I guess really the concern
5 is to negate any, undue some findings we made when we
6 initially gave the license out.

7 So --

8 VICE CHAIRMAN REMPE: Right. I did see
9 something about a way to make it more efficient, where
10 the licensee would have more flexibility.

11 I guess the concern was, we always talk
12 about the cumulative effect of regulation. The
13 cumulative effect of such changes is what I would have
14 characterized the concern.

15 MR. O'DRISCOLL: Yes. So there is a, I
16 will tell you, there is not a specific discussion on
17 that particular idea in the reg basis, to my
18 recollection.

19 VICE CHAIRMAN REMPE: Okay. So it was a
20 comment raised during our meeting. And as you're
21 tallying up, and I saw a lot in the document about
22 comments made by ACRS, as well as something said about
23 ACRS Staff, which I didn't follow.

24 But anyway, as you're going through and
25 tallying it, I think that one might be one that I

1 would be interested in seeing discussed. But again,
2 I'm just one member.

3 MR. O'DRISCOLL: Okay. That's perfect.
4 I have made a note of that.

5 Any other questions on Slide 14? Okay,
6 let's go to Slide 15.

7 So, we're on Slide 15 everybody. Starting
8 with the issue of severe accidents in Part 50, which
9 is covered by Appendix A of the regulatory basis, the
10 Staff has identified that the Part 50 process does not
11 adequately address the NRC's severe accident policy
12 statement.

13 We are recommending rulemaking to revise
14 Part 50 to include Part 52 light requirements to
15 address severe accidents. We identified Section 50.34
16 as the affected section of the regulations, along with
17 the standard review plan, Chapter 19, which deals with
18 these requirements.

19 Next slide. We are now on Slide 16. We
20 have several issues that relate to the probabilistic
21 risk assessment, the probabilistic risk assessment, or
22 PRA, requirements that we are addressing.

23 These are related to requiring the use of
24 PRA and design making the risk informed process for
25 safety related structures, systems and components more

1 accessible and changing the timing of the PRA
2 upgrades. The Staff is recommending rulemaking with
3 guidance changes to address these three items.

4 The regulatory changes include Sections
5 50.34 and 50.71 and 50.69. And we'll also revise
6 several regulatory guides to PRA.

7 Those regulatory guides are regulatory
8 guide 1.174, which is the approach to using PRA
9 decision, informed, excuse me, probabilistic risk
10 assessment and risk informed decisions on plant
11 specific changes to the licensing basis.

12 Regulatory Guide 1.200, which is an
13 approach to determining the technical adequacy of PRA
14 results for risk informed activities. Reg Guide
15 1.201, which is guidelines for categorizing structure
16 systems and components in nuclear power plants
17 according to their safety significance.

18 Regulatory Guide 1.205, which is risk
19 informed performance based fire protection for
20 existing light water nuclear power plants. And
21 Regulatory Guide 1.206, which is the regulatory guide
22 on the applications for nuclear power plants.

23 MEMBER BROWN: Can I ask a question?

24 MR. O'DRISCOLL: Sure.

25 MEMBER BROWN: Yes, I may have asked this

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1 in one of the previous meetings a year ago or so, but
2 now I've forgotten the answer.

3 (Laughter.)

4 MEMBER BROWN: All these reevaluations,
5 the requirement for PRAs and all this other type of
6 stuff that's coming into this rulemaking, or advised
7 updating, does back fitting get addressed as part of
8 this rulemaking once it gets approved by the
9 Commission?

10 In other words, is everybody required to
11 use this?

12 And I may have asked this a year ago but
13 I just don't remember.

14 MR. O'DRISCOLL: I can briefly talk about
15 that. And I think we also have an attorney on the
16 line. I think Howard Benowitz is on the line.

17 But basically, we have a back fitting
18 discussion in the regulatory basis for every item. So
19 all 50 items has got an evaluation about back fitting
20 as we see it from how it's been developed so far.

21 And then in the proposed rule we're going
22 to have a section on back fitting. And it's going to,
23 basically we're going to evaluate if any of the items
24 do or not constitute finality issues or back fitting
25 issues.

1 MEMBER BROWN: So, is there a general set
2 of criteria that apply across all of the specific 43
3 changes, I guess it's 43 changes --

4 MR. O'DRISCOLL: Yes.

5 MEMBER BROWN: -- for evaluating?

6 MR. O'DRISCOLL: Right. So --

7 MEMBER BROWN: In other words, do you
8 assess them all and then yes and no, yes and no?

9 I mean --

10 MR. O'DRISCOLL: Yes. That's exactly what
11 --

12 MEMBER BROWN: -- it's not in any of the
13 slides here. I just don't --

14 MR. O'DRISCOLL: Right. So I'll just, let
15 me just talk a little bit about that. So right now
16 there aren't any identified back fits. And yes, we've
17 done a yes and no, yes and no type analysis on each
18 one of the items.

19 And for criteria we use NUREG-BR0058 as
20 one of the guides, guidance documents on back fitting.
21 It basically uses the current guidance we have.

22 MR. BENOWITZ: That's actually the
23 regulatory analysis document --

24 MR. O'DRISCOLL: Ah, Howard.

25 MR. BENOWITZ: -- so we did not use that.

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1 MR. O'DRISCOLL: Okay, Howard, do you want
2 to chime in?

3 MR. BENOWITZ: Happy to.

4 (Laughter.)

5 MR. BENOWITZ: But, Jim, you did a fine
6 job, I really don't have much to add. I just wanted
7 to clarify that last part. That was a regulatory
8 analysis NUREG.

9 And just like Jim said, we looked at each
10 of the changes, the recommendations, alternatives too.
11 Not just, for each of the items there are alternatives
12 for each item and so we looked at each one. And in
13 the regulatory basis document there is a section, back
14 fitting or issue finality. So we looked at each one
15 of them to make sure that in order to assess to
16 whether or not there would be a, potentially down the
17 road if there became a final rule, there would be any
18 back fitting or issue finality concerns.

19 And at this point, as Jim said, we have
20 not identified any. And if as the rule progresses, in
21 the proposed rule stage, in the final rule stage, as
22 these recommendations from the regulatory basis become
23 proposed requirements and then final rule
24 requirements, we will, if anything changes in that
25 aspect we will identified that and discuss them in the

1 proposed rule documentation, the federal register
2 notice and in the final rule federal register notice
3 as well.

4 MEMBER BROWN: In that assessment have
5 their, you haven't identified any up to this point,
6 correct?

7 MR. BENOWITZ: Correct.

8 MEMBER BROWN: Okay. But in the process
9 of identified that you know there is no back fitting
10 requirement to be imposed, were there compromises made
11 in terms of what you wanted to do in order to avoid
12 back fit considerations?

13 MR. BENOWITZ: Hmm. Their potentially
14 might be one or two, but I wouldn't call it a
15 compromise though, it's just how it's applied.

16 And I don't think we actually, it was
17 discussed but we didn't have to. I mean, there is no,
18 let me back up.

19 Essentially, there is one way to avoid
20 back fitting and that is to say, well, we're not going
21 to apply it to the current, you know, if we want to
22 change a requirement that a current licensee,
23 operating licensee, if you want to change something
24 that they're required to do that it probably meets the
25 definition of back fitting.

1 And if you say, well, we're not going to
2 apply it to them we're just going to make it something
3 that future applicants would have to comply, you know,
4 but not any current licensees.

5 But that's not something, I don't think we
6 did that with any of these. Now going forward, if
7 something were to change, that is an approach we can
8 take. But as of now, we have not identified anything
9 like that.

10 MEMBER BROWN: Yes. I was just wondering
11 whether there were anything people really wanted to do
12 but then you decided hold it, that would really put us
13 into the back fit world, which would be pretty much,
14 that that would be argued very strongly, I think, by
15 the existing fleet.

16 So that's why I was asking if you kind of
17 backed off on the requirement. But what you're saying
18 is, what you're going to do is you would apply it as
19 a forward fit on anything new, but not necessarily on
20 past existing operators.

21 MR. BENOWITZ: I would not use the term
22 forward fit as the Commission has --

23 MEMBER BROWN: Bad words.

24 MR. BENOWITZ: -- a specific, there's a
25 specific definition now.

1 MEMBER BROWN: Oh yes.

2 MR. BENOWITZ: But I understand the
3 concept of what you're saying --

4 MEMBER BROWN: Your new plants --

5 MR. BENOWITZ: -- I would agree with.

6 MEMBER BROWN: -- I was talking about.
7 New plants --

8 MR. BENOWITZ: Right.

9 MEMBER BROWN: -- I was talking about.

10 MR. BENOWITZ: Right. And recall of
11 course, in the back fitting issue finality world, when
12 we're talking about applicants, especially new ones
13 coming in, we typically, you don't have back fits for
14 new applicants.

15 But in some cases there are some issue
16 finality. Or there could be some back fitting, in
17 very few cases, like a COL applicant that has a
18 already approved design cert. There is some issue
19 finality attached to that design cert.

20 And so these are things that we looked at
21 for each of these items. These are some of the
22 considerations that we made.

23 MEMBER BROWN: And this may be, you may
24 have said this before and I didn't catch it, have
25 there been any elimination of requirements?

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1 MR. BENOWITZ: Oh.

2 MEMBER BROWN: A review of this, hey, this
3 was overboard in the past and we don't need to do it
4 anymore?

5 MR. O'DRISCOLL: We can get into that.
6 I'll discuss, very briefly, what the Staff is
7 recommending for each item. And I think that comes
8 out in the presentation.

9 MEMBER BROWN: Okay. All right, I'll
10 wait. Thank you.

11 MR. O'DRISCOLL: Sure.

12 VICE CHAIRMAN REMPE: So, before you leave
13 this slide, I'm interested in the updates to Reg Guide
14 1.174 because I, it talks about a graded approach for
15 what's needed for a PRA at various stages. And I
16 think that this is a good place where there ought to
17 be a lot of coordination between Part 50 and Part 53
18 requirements for a PRA and what would be expected by
19 the Staff at various stages.

20 Are you going along that line or how much
21 of an upgrade are you doing to this reg guide?

22 MR. O'DRISCOLL: Well, we don't have the
23 PRA expert on the line with us, but he called me
24 before this meeting and I told him that I would
25 feedback any questions. But I can tell you that the

1 same individual, I'm pretty confident, is working on
2 both rules on this issue.

3 So I would, like we said before, expect an
4 integrated approach solution that's going to work with
5 both rulemakings.

6 VICE CHAIRMAN REMPE: So that's good. But
7 yes, I still want to hear about the update to this reg
8 guide when it happens but I think from what I've read,
9 and what we've heard as we've been reviewing these
10 topics, that that's going to be guidance that will be
11 important to future applicants.

12 MR. O'DRISCOLL: Okay. I made a note that
13 that's of interest to the ACRS.

14 And if there is anything we can, you know,
15 again, like we said before, there is any additional
16 needed discussions we can also, we can accommodate
17 that when the time is right for it. When we start
18 writing it or making changes to it.

19 VICE CHAIRMAN REMPE: Okay. And again,
20 I'm just one member but it's something that caught my
21 eye.

22 MR. O'DRISCOLL: Okay. All right. Any
23 other questions on Slide 16?

24 All right, we'll go to Slide 17. So
25 Appendix C. We're on Slide 17. The Staff is

1 recommending rulemaking with guidance changes to align
2 Parts 50 and 52 with respect to the submission of the
3 Three Mile Island related information.

4 The regulations in 50.34 will be
5 effective, along with the standard review plan. In
6 addition, we have a specific request for comment,
7 question, in the federal register notice of this
8 regulatory basis that relates to what impacts of the,
9 impacts of the Three Mile Island requirement on non-
10 light water reactor applicants should be considered in
11 the scope of the proposed rule.

12 So again, this is going back to what
13 you're saying is, there is some tentacles here between
14 52 and 53 and so we're trying to get the appropriate
15 information from the public and into consideration as
16 we revise the regulation.

17 Next slide. Any questions on Appendix C?

18 DR. CORRADINI: This is Corradini. Can
19 you give an example on what might not be applicable
20 for an advance reactor?

21 MR. O'DRISCOLL: Sure. Well, I mean, Part
22 34, 50.34(f), if you read it, it's very, actually,
23 it's not only technology specific, some of these
24 items, but their actually vendor specific
25 recommendations.

1 So there is things that are pretty
2 clearly, you know, can be decided on if they apply or
3 not.

4 I don't want to go into too much detail
5 but let's take reactor pressure vessel vents. I think
6 that's an item that's on there.

7 Hydrogen combustion issues. That problem
8 will vary across technologies. They may not be as
9 important for other technologies.

10 So again, just to keep everybody clear,
11 this rule is, the rule I'm working on here, this Part
12 50 and 52 alignment in lessons learned, is we're
13 looking primarily backwards to fix the problems we've
14 discovered during the previous licensing reviews.
15 That's the main focus of what we're trying to do here.

16 But in while doing that we want to, we
17 don't want to carry things forward that may or may not
18 be needed for the future. Does that help?

19 DR. CORRADINI: Yes, that helps. That
20 helps. I was looking more for, well, that helps for
21 the moment. Thank you.

22 MEMBER KIRCHNER: Jim, this is Walt
23 Kirchner. Just a follow-up with Mike's question.

24 Since you picked the example, it's the
25 same one I was going to use. The vessel vent

1 requirements.

2 How are you going to approach this in this
3 rulemaking, are you going to divide up the list of TMI
4 requirements into these applied LWRs and don't apply
5 to advance reactors since advance reactors can come in
6 through the loophole of 52.41(b)(ii).

7 MR. O'DRISCOLL: Yes, that gets a little
8 bit beyond my can at this point. I think it's being
9 looked at.

10 Again, this is another situation where the
11 individual is the same individual that's working on
12 both rules, I believe, for this problem. And this
13 came up during the review of this reg basis during the
14 concurrence period to ensure that we only carry
15 forward only those requirements that, again, make
16 sense for future reactors. And not worry about things
17 that are, vendors that are not producing, creating
18 reactors anymore.

19 But I can't really answer exactly the nuts
20 and bolts of how that's being done at this point.

21 DR. CORRADINI: This is Corradini. Let me
22 go back to Walt's question a different way.

23 If I have a light water reactor, is the
24 way you're writing this preclude them from applying to
25 Part 53 such that they would then have to have to

1 certain requirements that just wouldn't exist in the
2 rule? Do you understand my question?

3 MR. O'DRISCOLL: Not quite. You're saying
4 LWR using Part 53?

5 DR. CORRADINI: I have a, well, I'll pick
6 an example. I have the Holtec small modular reactor,
7 which is a water reactor. It's part of the advance
8 reactor development program.

9 MR. O'DRISCOLL: Yes.

10 DR. CORRADINI: They're going to go
11 forward with a design. Are they precluded from Part
12 53 or are they an advance reactor that are included in
13 Part 53 and therefore you have to have a consistent
14 set of requirements?

15 MR. O'DRISCOLL: So I understand --

16 MS. BRADFORD: This is Anna Bradford.
17 Jim, do you mind if I answer that one?

18 MR. O'DRISCOLL: Go ahead. Please.

19 MS. BRADFORD: This is Anna Bradford from
20 NRR again. All of, I think of all of these licensing
21 approaches, rather it's Part 50, 52 or 53 as choices
22 that applicants can use. And nobody is precluded from
23 using any of them.

24 Some might be better fits for a non-light
25 or a light, but Holtec could certainly use Part 53 if

1 they wanted to.

2 DR. CORRADINI: All right, thank you.
3 That's what I was expecting the answer, I just wanted
4 to check. Thank you.

5 MR. O'DRISCOLL: All right.

6 MEMBER KIRCHNER: But then the problem I
7 see, to follow-up on Mike, just for this particular
8 exercise, Anna and Jim, is under 50 and 52, the LWRs
9 have to use Appendix B. And I'm not seeing that in
10 53. To date. In other words, NQA 1.

11 And that would turn out to be a major
12 inconsistency in my opinion in reconciling the three.

13 MS. BRADFORD: Yes. I just put caution
14 that we're still at the very beginning stages of both
15 of these rules. We're at the reg basis stage. I
16 think Part 53 is at an even earlier stage.

17 So there is still things that need to be
18 worked out. But in terms of things to keep an eye on,
19 I think that's a good point.

20 MEMBER KIRCHNER: I would just add another
21 caution then, Anna, and that is, to me definitions are
22 important. And definitions in 50 and 52 are pretty
23 decisive in establishing things like classification of
24 system structures and components. I said that wrong,
25 structure, systems and components.

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1 What we've seen so far in the framework
2 for 53 would not be consistent with that.

3 MS. BRADFORD: That's true.

4 MEMBER KIRCHNER: I notice there is not a
5 53 discussion today. But an example, in my mind, of
6 the potential at a very fundamental level of having
7 inconsistencies as we go forward.

8 MS. BRADFORD: Understood.

9 MR. O'DRISCOLL: All right. Any other
10 questions on Appendix C?

11 Okay, we'll go to the next slide, Slide
12 18. So we're on Slide 18. The Staff recommends
13 section 50.34 changed to clarify the specific fire
14 protection information that needs to be submitted with
15 a Part 50 application. So we don't anticipate any
16 guidance changes for this item.

17 Any questions on that? Next slide,
18 Appendix E. So this is on operator licensing. We're
19 on Slide 19.

20 The Staff recommends rulemaking and
21 guidance to address an inadequacy in the regulations
22 with respect to operator training for operators of
23 plants that are undergoing construction. Which we're
24 calling COL plants.

25 Like the criteria for simulation

1 facilities is another item. And the requirements for
2 plant walkthrough and continuing training is another
3 item.

4 So, several sections of Part 55 would be
5 amended. A new guidance document would have to be
6 created.

7 Any questions on this area? This is,
8 again, a lessons learned. In regard to the lessons
9 learned items.

10 All right, going on to the next slide.
11 We're at Appendix F. This one is on the physical
12 security part of it. We're on Slide 20.

13 So the interim physical security, the
14 Staff is recommending rulemaking to reduce what we
15 believe is an unnecessary regulatory burden related to
16 the physical protection of unirradiated fuel at sites.
17 We are proposing to amend several sections of Part 70
18 and 73 to update the guidance.

19 And any questions on that? All right.
20 I'll move on to the next slide. Fitness for duty
21 requirements. Slide 21.

22 The Staff here is recommending rulemaking
23 and guidance to address some lessons learned related
24 to construction site access for contract employees.
25 Fitness for duty related lessons learned from reactor

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1 plant construction, medical review officer procedures
2 and other technical corrections.

3 We are proposing changes in several
4 sections of Part 26 and regulatory guide changes. Any
5 questions on that?

6 Next slide. Appendix G is on emergency
7 planning, so we're on Slide 22.

8 And the Staff is proposing a variety of
9 rulemaking and guidance changes to address several
10 issues related to emergency planning. So these issues
11 are, the initial emergency classification and action
12 level scheme, the emergency plan change process,
13 emergency preparedness exercises, significant
14 impediments to development of emergency plans and
15 requirements for offsite contacts, arrangements and
16 certifications.

17 So, for those items the Staff is
18 recommending guidance for that first item. Rulemaking
19 for items, the second and the fifth item, rulemaking
20 and guidance for Items 3 and 4.

21 The regulations affected include several
22 sections of Part 50 and 52 and several sections of
23 Appendix E to Part 50. A new guidance document would
24 have to be created.

25 In addition, we have specific requests for

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1 comment, question, in the FRN for this regulatory
2 basis that relates to what is the appropriate distance
3 within which to perform the citing analysis. Is there
4 any questions on that?

5 MEMBER BROWN: Yes, Charlie Brown again.

6 MR. O'DRISCOLL: Okay.

7 MEMBER BROWN: Refresh me on how you went
8 through the list of key issues. You mentioned that
9 some of these right now you say are -- my
10 understanding based on our previous work we've done,
11 at least that I've been with, those have been largely
12 guidance issues. Now you're going to turn them into
13 rules now?

14 MR. O'DRISCOLL: It's a mixture of rule
15 changes and guidance changes. And it depends on which
16 items we're talking about. This has one of those
17 appendices in the reg bases that has a bit of a
18 potpourri of disparate but related things. And we
19 analyzed each one of these items on its own terms.
20 And we have a recommendation for it.

21 And it's a discussion on each one those
22 items I mentioned, those five items, a complete
23 discussion with a recommendation on it. It describes
24 exactly what, well, up to a point, you know, what the
25 staff desires to do or to develop from this point.

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1 MEMBER BROWN: But rules for some stuff
2 just become extremely binding and inflexible. I guess
3 that's where my question was coming from. I mean, I
4 just read through this list of five, and it just seems
5 to me applying rules to those as opposed to guidance,
6 regardless, I would have pictured no action.

7 If I was on your team, I would have picked
8 no action for all of these. They should be fluid,
9 there should be variableness, they should be
10 evaluated, and they should be presented. But turning
11 them into rules which are cast in concrete seems to me
12 extremely overdone when we apply it to emergency
13 planning which can certainly vary as situations around
14 the entire neighborhoods change.

15 The emergency planning for some of the
16 initial plants built 60 years ago, or 50 years, yes,
17 60 years ago in the case of shipping port, you
18 wouldn't even look at doing things the same way they
19 did them back then.

20 MS. BRADFORD: I think, I'm sorry, this is
21 Ann. I just want to say, you know, some of these,
22 they are already rules. They're already requirements.
23 We're just tweaking them or adjusting them based on
24 lessons learned. So I don't want to leave the
25 impression that we're taking things that were not

1 requirements and now making them requirements.
2 Because that's not always the case.

3 MR. O'DRISCOLL: Very good point, yes.

4 MEMBER BROWN: Requirements equals rule,
5 right?

6 MS. BRADFORD: Yes.

7 MEMBER BROWN: I got the flavor in here
8 when you did your presentation, that some of these
9 were being changed. You were going to be making
10 rulemakings. And I interpreted that they weren't.
11 But then you say all these were not rules.

12 MR. O'DRISCOLL: Well, some of --

13 VICE CHAIRMAN REMPE: Some may be rules
14 right now.

15 MS. BRADFORD: Yes.

16 MR. O'DRISCOLL: A good many of these are
17 already rules. When we say rulemaking, it means we're
18 going to have to change the language of the existing
19 rule to add or take out something or to change
20 wording. There's a few that are new, but for the most
21 part, I would think the majority of these items are
22 changes to existing rules that are already in place as
23 rules.

24 MEMBER BROWN: Is there any consideration
25 given to stuff like this to make them not rules,

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1 because the nature of the beast would --

2 MR. O'DRISCOLL: Right.

3 MEMBER BROWN: -- allow them to be
4 included as guidance that you can just evaluate as you
5 go?

6 MR. O'DRISCOLL: So the whole project,
7 when we kicked it off way back in 2019, we asked the
8 staff several, you know, things to look at when
9 they're looking at lessons learned. And among those
10 things, other than identifying, you know, errors in
11 the regulations or things that need to be fixed, but
12 what are the things that aren't adding any value?

13 And if those aren't adding any value, then
14 that's a candidate for us to change to maybe turn it
15 into, you know, to turn it into something that's less
16 burdensome if there's no corresponding safety benefit.
17 So those type of questions were asked of the staff
18 when we developed the regulatory scope of this way
19 back, well, not way back, but in 2019.

20 MEMBER BROWN: Did the industry have any
21 comment on de-ruling some of --

22 MR. O'DRISCOLL: Oh, yes, they did.

23 MEMBER BROWN: I can imagine.

24 MR. O'DRISCOLL: Ha, ha, ha. They did.

25 MEMBER BROWN: Were you open?

1 MR. O'DRISCOLL: Of course. Yes, we were
2 open. And we took their comments into account, and we
3 continued to work with the industry to refine the
4 rule. But I can't really, I guess, give you an
5 example of, I mean, one or another that we changed
6 based on input. I don't know that off the top of my
7 head. But we have been interacting with the public
8 all along on this activity.

9 MEMBER BROWN: Okay, thank you.

10 MR. O'DRISCOLL: Sure. All right, any
11 other questions on Appendix G?

12 All right, we can move on to Appendix H.
13 So this is quite a large appendix. We're addressing
14 several different areas that relate to lessons learned
15 from the Part 52 licensing process. These areas are
16 design certification renewal and regulatory basis
17 Appendix Section H1.

18 We looked at the Part 52 change process
19 discussed in Section H2 of the regulatory basis,
20 design scopes and standardization in Section H3,
21 standard design approval in Section H4, and the
22 content of applications discussed in Section H5. So
23 these actually have some items underneath them I'll
24 discuss in the next slides.

25 Next slide? So we're on Slide 24. So for

1 these items, we're making the following
2 recommendations. So we're going to do rulemaking,
3 again, this is an example of an existing rule that
4 we're changing. We're doing rulemaking to remove the
5 current 15-year duration of design certifications.

6 We're doing rulemaking and guidance to
7 clarify aspects of the change process. We're doing
8 rulemaking and guidance to clarify the term
9 essentially complete design and to streamline some
10 requirements related to design information.

11 We're doing rulemaking to clarify
12 requirements when filing an application that
13 references multiple standard design approvals.
14 Finally, we're doing rulemaking and guidance to
15 clarify the content of the applications.

16 So in addition, we've had three specific
17 requests for comment questions in the Federal Register
18 notice that relate to whether to eliminate or change
19 the duration requirements for manufacturing licenses,
20 whether to change the duration requirements of
21 standard design approvals, and whether to remove the
22 expired design certification rules from the Part 52
23 appendices?

24 Any questions on that?

25 MEMBER KIRCHNER: Jim, yes, this is Walt

1 Kirchner again. You mentioned a topic that I had
2 raised in September 20th in 2019 in our subcommittee
3 meeting.

4 And it's this matter of essentially
5 complete. So I have my notes in front of me from that
6 meeting. I think the response from you, or perhaps
7 Anna, was that in practice it's not needed for a
8 safety determination.

9 But from a practical standpoint, I mean,
10 when 52 was written, it was primarily with the idea in
11 mind that these next generation reactors that would be
12 evolutionary change to the LWRs already designed and
13 licensed. And then in the scope of b2, 41b2, you open
14 the door for other designs that differ significantly
15 or use simplified inherent passive and other
16 innovative means to accomplish their safety functions.

17 But the issue that I had then, and I still
18 have now, and I have reasons that I won't go into in
19 a public meeting, were concerned is that if someone's
20 after something like a design certification, then a
21 fairly mature, let me use different words, design
22 really is necessary, I think, for the staff to reach
23 that kind of determination.

24 Allowing other designs to come in under 52
25 that are less mature, have less operational or no

1 operational experience, and then reaching to find,
2 make a safety determination, is quite a stretch in
3 this member's opinion. So can you give us the essence
4 of what you're going to do in terms of redefining
5 essentially complete.

6 MR. O'DRISCOLL: Yes, I can only reference
7 the reg basis at this point, because we haven't come
8 up with the definition of rule language yet. But,
9 you know, let me see if I can -- we basically worry
10 about we want that information that has basically a
11 safety nexus that's going to be part of the
12 definition. So I'm just trying to find the right
13 words here, but I can't.

14 But just to answer your question, we have
15 yet to write that definition. We have yet to come to
16 precisely what we want to say in the definition
17 section or in the guidance on that. We are working on
18 that. We're trying to get these technical issues
19 worked out to have a good technical, you know, draft
20 of this in the near term. But right now, I don't have
21 that definition.

22 MEMBER KIRCHNER: Well again, this is not
23 a question, it's more an observation. It would seem
24 to me, as I mentioned back in September 2019, that if
25 you start with a new definition for essentially

1 complete, that's more safety oriented. Let me say it
2 that way.

3 For advanced LWR designs, I would be
4 interested to -- at least I, for one, would look at
5 what parallelism would be implied for an advanced
6 reactor design, now I'm talking about non-LWRs, such
7 that the safety features, et cetera, that are
8 referenced coming in under 41b2 have been demonstrated
9 sufficiently so that one could make your safety
10 determination.

11 That's more an observation than a
12 question. So you don't have to respond in real time.

13 MR. O'DRISCOLL: Okay, thank you. Ha, ha.

14 MEMBER BLEY: Jim?

15 MR. O'DRISCOLL: Yes?

16 MEMBER BLEY: This all made sense to me at
17 one time when I read it. Now I'm looking at the first
18 one, rulemaking to remove the 15-year duration of
19 design certs and renewal requirements. If you do
20 this, does that mean 40 years from now somebody could
21 build a plant under Appendix Q or whatever it is in
22 Part 52 --

23 MR. O'DRISCOLL: Well right now, yes,
24 right now the staff is recommending the complete
25 removal of any time limit on a design certification.

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1 But we're asking for input on that. We're asking a
2 specific question in the FRN on that. Essentially, if
3 not nothing then what would be the right number? I
4 believe that's in the FRN, if I remember correctly.

5 (Simultaneous speaking.)

6 MR. O'DRISCOLL: But right now we are
7 recommending, the staff is recommending removal of the
8 time duration. So you would not need to renew a
9 design.

10 MEMBER BLEY: So the implications to this,
11 I guess, are that 50 years from now somebody could
12 just go build that thing, ha, ha --

13 MR. O'DRISCOLL: Yes.

14 MEMBER BLEY: -- without have revisit any
15 of the reviews, even if the technology is obsolete in
16 many different areas.

17 MR. O'DRISCOLL: Yes.

18 MS. BRADFORD: I think Dr. Bley is --

19 MEMBER BLEY: Is there a lot of support
20 for this one? I'm sorry, go ahead.

21 MS. BRADFORD: Sorry, Dr. Bley, this is
22 Anna Bradford. I would just say this topic engendered
23 a lot of discussion internally, because there were
24 some thoughts about just how would this work process-
25 wise, and what does it mean in terms of, you know,

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1 someone coming in 40 years from now and wanting to
2 reference a design certification that, you know, is
3 that old and hasn't been, quote, unquote, updated
4 since then?

5 You asked if there was a lot of interest.
6 I would say that the industry is interested in this as
7 well. If you remember, the API000, about two years
8 ago, requested an exemption from renewing, sorry,
9 Westinghouse requested an exemption from renewing the
10 API000, because their 15 years was about to be up, and
11 it just, honestly, it wasn't long enough for them to
12 have incorporated all their construction experience
13 and decide what they wanted to do.

14 So we went back and looked, and there
15 wasn't a real solid technical reason for the 15 years,
16 for the DCs expiring every 15 years. In terms of
17 could someone come in and reference an older design,
18 if this makes it into the final rule, which at this
19 point we don't know, I think the thought is, you
20 know, if it's safe today, so if we approve something
21 today in 2020, it's safe enough today, unless they can
22 pass a backfit rule which we have on the books and can
23 force changes to be made if it's important to safety,
24 then it's probably also safe enough 40 years from now.

25 Now, economically would you want to build

1 it, or just marketing-wise is it a good idea to build
2 that one that's 40 years old, I mean, that's a whole
3 separate decision. And I think -

4 (Simultaneous speaking.)

5 MS. BRADFORD: Go ahead.

6 MEMBER BLEY: Let me talk about this a
7 second with you. Because, you know, when we came in
8 to build a couple of AP1000s, they actually had to
9 revisit their design, because what the people who
10 wanted to build it found was there were a lot of gaps
11 and holes.

12 The design cert really wasn't complete in
13 a lot of areas, or there were things they really
14 needed to change. And four other cases where one of
15 these is on the books but nobody's ever built it,
16 which is several of them, just feels a little funny.
17 We'll have to think about it some. I'll have to think
18 about it.

19 MS. BRADFORD: Yes. Well, honestly, we
20 would appreciate your comments on this issue.
21 Because, like I said, it did engender a lot of
22 discussion, and there's a lot of aspects to it. So we
23 welcome comments on that.

24 DR. CORRADINI: So, Anna, this is
25 Corradini. Going forward with Dr. Bley's question,

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1 you said that within the staff there was a lot of
2 discussion, that people were discussing why there
3 ought not to be some sort of time limit. What was the
4 reason that there should be no time limit? The last
5 discussion you had which is if it's safe now, it'll be
6 safe in perpetuity?

7 MS. BRADFORD: I think part of it came
8 from, you know, we're finishing up the ABWR design
9 certification renewal. And there might have been a
10 few, you know, I'll call them small gains from that
11 process. But I'm not sure. I'm not sure the gains
12 were worth the level of effort that both we and the
13 Applicant put into it. So it became an idea, you
14 know, for the resources and time that we're putting
15 into this renewal, are we getting a big safety
16 benefit? And I'm not sure the answer to that is yes.
17 So that's where the --

18 (Simultaneous speaking.)

19 DR. CORRADINI: I'm sorry, I didn't mean
20 to interrupt you.

21 MS. BRADFORD: No, please, go ahead.

22 DR. CORRADINI: I was going to say, would
23 it be at 40 years? I mean, Dennis picked 40 years.
24 I thought that was an intriguing number for me,
25 because that's essentially a reactor licensing time

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1 window. So 40 years strikes me as approaching in
2 perpetuity compared to 15. No time limit strikes me
3 as very odd. I was going to bring it up. Dennis is
4 much quicker than I am to the case on this.

5 (Simultaneous speaking.)

6 MEMBER BLEY: Although Part 52 has been
7 here for, what, 40 years now, we've only got one plant
8 that's being built under it. And we don't have much
9 experience. It's uncomfortable, I'll say that.

10 MEMBER RICCARDELLA: Well, Mike, this is
11 Pete. But we're only talking about a design cert,
12 aren't we? I mean, anyone who wants to build the
13 plant's going to have to go through a COL. And that's
14 --

15 MEMBER BLEY: Yes. But you pass through
16 every item in the COL, Pete, if you don't want to
17 change the design.

18 MEMBER RICCARDELLA: I'm sorry, repeat
19 that, Dennis, I didn't hear it.

20 MEMBER BLEY: Yes. If you remember from
21 some of the COLs we've done, unless the COL wants to
22 change something in the certified design, you don't do
23 any review. You don't do anything. They just say we
24 accept it as is. And NRC says we accept it as it is.

25 DR. CORRADINI: So it's accepted by

1 reference -

2 MEMBER BLEY: Exactly.

3 DR. CORRADINI: -- or whatever the proper
4 terminology is.

5 MEMBER BLEY: I think that's the right
6 one, Mike. I couldn't even come up with that.

7 MEMBER DIMITRIJEVIC: I would like to add
8 my opinion on this subject. This is Vesna
9 Dimitrijevic. I think the main, you know, I don't
10 really see problem. That's my personal opinion about,
11 you know, not limiting duration of design
12 certification.

13 What I see is a bigger problem in that
14 what control we have between design certification to
15 the COL and then to the, you know, the plant before
16 the full load. And even Dennis just mentioned that he
17 didn't see controlling COL. We just issue design
18 certification where we said that we're going to check
19 this in COL, this in COL, this in COL.

20 But we don't really have a clear control
21 what happened between design certification. We don't
22 have a clear picture of control between design
23 certification and the COL, and then, you know, as
24 built as to be operated plant. So maybe the
25 definition of those control from the safety aspects is

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1 important in here when discussing duration of the DC.

2 MEMBER RICCARDELLA: You know, Mike, I
3 inherited the ABWR update or renewal of the design
4 cert. And I can concur with what the staff said. It
5 was, the changes were so trivial, and to spend a lot
6 of effort on that was just a waste of their time and
7 ACRS time, I think.

8 DR. CORRADINI: But I guess, Pete, I can't
9 disagree with you at 15 years. But if 15 years became
10 45 years I --

11 MEMBER RICCARDELLA: Yes.

12 DR. CORRADINI: -- somehow in my mind I
13 would expect there's going to be differences. I'll
14 use the word lessons learned in the design that you
15 might want to incorporate. Because the expectation of
16 safety is going to go up as time marches on. It's
17 just going to go up.

18 MEMBER RICCARDELLA: Yes.

19 MS. BRADFORD: I think, this is Anna
20 Bradford again. And I think that's one thing we have
21 to honestly be a little bit careful about. Are we
22 going to ratchet, I'll call it, our safety
23 requirements for newer reactors?

24 I mean, we haven't given non-light water
25 reactors, you know, a different number for accidents

1 and things like that they need to reach. We've said
2 they need to have the same level of safety. So I'm
3 not, now there might be technological changes that
4 would make building a 40-year old design
5 certification, you know, economically silly or maybe
6 not even feasible, because certain parts aren't
7 available any more. But that's not really a safety
8 decision.

9 So, like, I personally don't know of any
10 errors in, for example, the ones that are expired on
11 the books right now. If someone wanted to come in and
12 reference the AP600, or the System 80+, I mean, we
13 decided that those were fine. Right now, we have no
14 reason to think that they're not fine. And I don't
15 think we would go back and second guess that decision.

16 I understand, it's a leap to think, well,
17 you know, 15 years to never, it seems like maybe a
18 bridge too far. But then when you think to actually
19 step through the process you wonder, well, what number
20 is appropriate? Maybe it's no number.

21 MEMBER RICCARDELLA: I think maybe Vesna
22 was on the right track, there should be some sort of
23 an overall check at the COL stage that has to be done
24 to just make sure that everything in the design cert
25 is still satisfactory.

1 MEMBER DIMITRIJEVIC: Well, this is what
2 also was mentioned, that we have actually entered --
3 the part of the design certification is the PRA and a
4 lot of conclusions made on the PRA results, you know,
5 like design changes that the inputs to ISAC, you
6 know, could be exemptions, the normal impacts to
7 human factors and things like that.

8 But as it's currently now, when the PRA
9 gets certified, the COL applicant doesn't have to do
10 anything about that, can just reference that. But all
11 the changes which happen between design certification
12 and COLA should be in some way accounted also going
13 through construction, completing construction of the
14 new design, things like that. So it should be some
15 way the regulator can track what has changed and how
16 does this imply on the conclusions from design
17 certification.

18 MEMBER KIRCHNER: Vesna, this is Walt.
19 Wouldn't that fuel load, the PRA have to be updated,
20 and then that would be a mechanism to, track isn't the
21 right word, but at least identify things that you
22 mentioned, like the actual construction as built.

23 MEMBER DIMITRIJEVIC: Yes.

24 MEMBER KIRCHNER: And then -

25 MEMBER DIMITRIJEVIC: That's true, Walt,

1 but then it's not requirement for the fuel load PRA to
2 be reviewed or any conclusions to be tracked.
3 Basically, the only PRAs are currently in the process
4 is in design certification which has been reviewed.
5 The PRA will go through all of these phases and will
6 be updated, then will be updated even when operation
7 started. But there is no review requirement in this
8 process.

9 MEMBER KIRCHNER: So maybe if we ask the
10 staff, would this be something that would be, quote,
11 unquote, inspected at the fuel load?

12 MEMBER BLEY: Walt, I'm going to call this
13 off. I got it started but --

14 MEMBER KIRCHNER: I'm sorry. Okay.

15 MEMBER BLEY: Ha, ha. We want to let the
16 staff get through their presentations. And we're
17 getting into implementations that will certainly come
18 up later. But, you know, this might be an area where
19 we want to give some thought to sending a full
20 committee comment.

21 Jim, please, go ahead to the presentation.

22 MR. O'DRISCOLL: Okay. So are there any
23 other questions on this slide, 24?

24 Move on to Slide 25, so environmental
25 topics. So we did find two issues here. The first is

1 the staff considered changes that would ease the
2 process for the submittal of environmental reports in
3 a Part 50 construction permit application.

4 The second topic relates to fixing the
5 regulations to enable an applicant to incorporate a
6 prior environmental assessment in a Part 50
7 construction permit process.

8 So the staff recommended no action for the
9 first item. Because there was not a clear crossing to
10 the action. For the second item the staff recommends
11 rulemaking to amend Section 51, excuse me, Section
12 51.50 to allow a construction permit applicant to
13 reference a prior environmental report. And we don't
14 anticipate the need for any guidance changes on this
15 item.

16 Any questions on that?

17 All right, next slide. So Appendix J is
18 topics related to the applicability of other processes
19 to the Part 52 process. So here we're addressing
20 three issues. The first is really a correction to
21 clarify the rules around an ITAC hearing.

22 The second is a change that would reduce
23 burden on certain COL applicants and holders for the
24 submittal of FSAR updates, the Final Safety Analysis
25 Report updates.

1 And the third clarifies inconsistency
2 relating to back fitting and issue finality. So on
3 these, the staff recommends rulemaking for the first
4 and the second items, and rulemaking with guidance
5 changes to address the third item.

6 The regulatory changes would affect
7 Sections 2.4, Section 50.71, and Section 51.09. And
8 the guidance updates would affect Management Directive
9 8.4 and NUREG-1409.

10 Any questions on this?

11 Go to the next slide then.

12 MEMBER BLEY: Jim?

13 MR. O'DRISCOLL: Yes?

14 MEMBER BLEY: This is Dennis. I'm
15 thinking between now and a half hour from now we're
16 going to want to take a break. You have about ten
17 slides on current scope with a lot of detail. Is your
18 intent to go through those in any detail?

19 MR. O'DRISCOLL: No. I'm giving you an
20 overview. This is as much detail as I'm getting into
21 or I intended to get into because of the, you know,
22 the breadth of the scope we have to cover here.

23 MEMBER BLEY: Okay. And you have a bunch
24 of supporting slides. They're not really planned as
25 part of the --

1 MR. O'DRISCOLL: Oh, yes, yes, yes. I'm
2 sorry. Yes, all that stuff is, the supporting slides,
3 I think, start on, I don't know, Slide 20. I don't
4 know what it is, Slide 30.

5 MEMBER BLEY: Thirty-four.

6 MR. O'DRISCOLL: Thirty-four, yes, that's
7 all for your reference. Basically, I'll just talk
8 about what's in there. Just so you know, the first
9 couple are, I believe, references. And then we have
10 a couple on what administrative corrections we found
11 and fixed during the activities so far. And then the
12 rest of it is basically an overview in a little bit
13 more detail of what we're doing, what the scope items
14 are. So there's more information there.

15 MEMBER BLEY: Okay. Well, given that, I
16 think we're going to finish a little early. So I'm
17 going to call a break right now.

18 MR. O'DRISCOLL: Okay.

19 MEMBER BLEY: Let's take a 20 minute break
20 and return then at 20 minutes after, what is it back
21 there, it'll be 3 o'clock, 20 after 3:00.

22 PARTICIPANT: 20 after 3:00.

23 MEMBER BLEY: we're in recess now for 20
24 minutes.

25 (Whereupon, the above-entitled matter

1 went off the record at 2:59 p.m. and resumed at
2 3:20 p.m.)

3 MEMBER BLEY: Okay, we are now back in
4 session. Jim O'Driscoll, if you're ready, please
5 continue on.

6 MR. O'DRISCOLL: Sure, thank you. I think
7 we were on Slide 26, just finishing that up and going
8 to Slide 27.

9 MEMBER BLEY: Yes.

10 MR. O'DRISCOLL: Okay. So Slide 27 is on
11 Appendix K which is our miscellaneous topics area.
12 And in this area, we're addressing ten separate
13 topics. We're recommending rulemaking with no
14 guidance changes needed for eight of the items.

15 For the two items, the items related to
16 the change process for plant-specific technical
17 specification bases, and the use of ASME Boiling
18 Pressure Vessel Code Section 11, in the Part 52
19 process, the staff is recommending no action.

20 So any questions on all of this?

21 DR. CORRADINI: Yes. This is Corradini.
22 Can you explain completion of power ascension testing
23 and what -

24 MR. O'DRISCOLL: Sure. So we have
25 petitioned for rulemaking recently. I think it's PRM

1 51.70 where we basically agreed with the petitioner
2 that rulemaking was needed to basically change the
3 rules where we collect fees on new reactors or when
4 that should start.

5 So in that rule, we changed the point at
6 which we collect fees from the 51.03G finding to a new
7 point where we call it the beginning of commercial
8 operation which has been agreed to be the point at
9 which power ascension testing is completed.

10 So we currently don't have a requirement
11 for notification of the NRC when that point is
12 reached. The applicant need not, you know, there's
13 nothing triggering a letter or communication between
14 the applicant and us. So we need to change the
15 regulation in order to facilitate that other rule
16 change. Does that make sense?

17 DR. CORRADINI: So it's more about when
18 fees kick in versus anything about the power ascension
19 testing.

20 MR. O'DRISCOLL: Yes, exactly. This is
21 about fee collection.

22 DR. CORRADINI: Okay, fine. All right.
23 That helps me, thank you. Sorry.

24 MR. O'DRISCOLL: Sure. Any other
25 questions on this?

1 All right, next slide. So a little bit
2 about the cost and savings on this. As part of the
3 development of regulatory basis, the staff considered
4 the potential cost and savings for both the industry
5 and the NRC. These estimates are primarily, excuse
6 me, are preliminary and are subject to change as we
7 further develop the regulatory solutions.

8 In the proposed rule, we intend to make
9 available a separate draft cost estimate document that
10 will have more details. So we evaluated the proposed
11 changes against the regulatory baseline which is
12 essentially what we're currently doing. And we
13 analyzed the savings, you know, for the next ten
14 years where it was applicable.

15 So we came up with a total net savings
16 that could be anywhere from \$18 million to about \$30
17 million for this rule, depending on -- that's with the
18 industry and the NRC combined. And that's depending
19 on the, and that variation depends on the discount
20 rate we used on the estimate.

21 So we also did a corresponding sensitivity
22 study on this which basically concluded that it was a
23 very, very, very high chance of obtaining some cost
24 savings for proceeding with this activity. So of
25 course, in addition to that, the rulemaking also

1 achieves the non-quantifiable benefits such as public
2 confidence.

3 The biggest items that avert the cost are
4 items related to the security requirements for storage
5 of unirradiated fuel, the elimination of the need for
6 the DC renewals, the clarification of the scope of
7 Tier 1 information, the elimination of information
8 requirements related to conformance with the standard
9 review plan, and enabling a construction permit
10 applicant to reference a review and environmental
11 assessment.

12 So in addition to that, there were several
13 areas where the changes increased the costs. So these
14 major ones are the requirements for evaluation of
15 severe accidents earlier in the Part 50 application
16 process. The items are related to the PRA changes,
17 the application of the Three Mile Island requirements
18 for Part 50 applicants, and also the requirements for
19 operators' licensing requirements for the coal plant.

20 Next slide. So that's the review of the
21 regulatory basis. And right now, we'd like to take
22 your comments and try to answer them as best we can.

23 MEMBER BLEY: All right. I think you've
24 mostly gotten them along the way, but thanks very
25 much, Jim, for the presentation.

1 Members, questions, comments at this time?

2 VICE CHAIRMAN REMPE: So this is Joy. And
3 I guess I had a couple of comments just to throw out
4 on the table. I was just thinking about your comment
5 about the completion of power ascension testing. And
6 of course, with an established, experienced, LWR
7 industry, that might work.

8 But I'm just thinking about what happened
9 with Fort St. Vrain and Fermi Unit 1. And there were
10 a lot of hiccups even after they completed or they got
11 to where they were starting commercial operation.
12 That might be something that some folks might want to
13 be worried about.

14 But anyway, the other thing is, and I
15 brought it up earlier, about the cumulative effects of
16 changes during construction. And I think Vesna's
17 comment about having the PRA and updating might be a
18 good combined subject that I do hope you bring up.
19 Because I think that is probably the way one would
20 address it. But of course that's just my initial
21 reaction.

22 MR. O'DRISCOLL: Okay. I'm sorry --
23 (Simultaneous speaking.)

24 MEMBER BLEY: Anyone else have some
25 comments?

1 MEMBER KIRCHNER: Dennis, if I may.

2 MEMBER BLEY: Sure, Paul.

3 MEMBER KIRCHNER: Yes. Thank you, Dennis.
4 Jim, could you just go over Tier 1 and Tier 2 in terms
5 of what that terminology means?

6 MR. O'DRISCOLL: Okay. So it's a leading
7 question.

8 MEMBER KIRCHNER: Yes, I know.

9 MR. O'DRISCOLL: And I'll have a follow-up
10 question after it. So we had an item in the
11 regulatory basis where we are going to better define
12 these terms. Because right now the way the current
13 structure, we structure our Part 52, these terms are
14 defined in the appendices.

15 So essentially, each applicant could
16 propose their own scheme where we could end up with a
17 different scheme for what is in Tier 1, Tier 2, and
18 Tier 2 star amongst the different, you know,
19 applications. Because all the stuff is in the
20 appendices portion.

21 So what we were proposing is come up with
22 a uniform definition of these items and put it into
23 the Part 52 itself as opposed to the appendices. So,
24 you know, that clarifies things, it makes it a little
25 bit more standard across all the applicants.

1 So what do these terms mean? Well, you
2 know, essentially Tier 1 is information that is
3 approved and certified, quote, unquote. Tier 2 star
4 is reviewed information. I'm sorry, Tier 2 is
5 reviewed information that staff used to come to their
6 regulatory finding and becomes part of a licensing
7 basis. And Tier 2 star, it's a bit of a tricky
8 definition, but basically, because there are several
9 different flavors of what Tier 2 star is.

10 But essentially it's information that
11 would be normally, it could be one or two, but anyway,
12 it needs to be -- you need to go to the NRC in order
13 to, you know, before you can change that information.
14 I'm not sure if that --

15 MEMBER KIRCHNER: That helps. It was a
16 leading question. So I'll follow it up with my
17 second. You know, I don't understand why the FSAR is
18 not in Tier 1. That's my first observation. That
19 always, I struggled with that.

20 And secondly, if the FSAR is not in Tier
21 1 then, for example, if you're using 50.59, you have
22 to have that FSAR for any subsequent changes and such.
23 So I'm just --

24 MR. O'DRISCOLL: So can I help you with
25 that?

1 MEMBER KIRCHNER: Go ahead.

2 MR. O'DRISCOLL: I think what's important
3 is that, you know, the licensing basis, you know,
4 50.59 works with the licensing basis. So what's in
5 Tier 2 is in the applicant's licensing basis. So in
6 other words, that information needs to be reviewed.

7 If you're going to do a change under 50.59
8 in a new reactor plant that was licensed under Part
9 52, you have to review Tier 2 information, you know,
10 that's part of the licensing basis, in order to
11 determine whether you need to, you know, if it
12 screens out or screens in, if you have to notify the
13 NRC.

14 So in that sense, that information isn't
15 throw away information. It's important, and Tier 2
16 information becomes part of the licensing basis. Tier
17 2 star, it's obvious, Tier 1, has to do with the
18 concept of finality so the one design, one review. So
19 in other words, what is the minimum information that
20 you really need to remain fixed such that somebody can
21 reference the design, and you would have a reasonable
22 assurance that you're not going to have any variation
23 that would undermine your finding on that information.
24 Does that make sense?

25 MS. BRADFORD: Hey, Jim, do you mind if I

1 weigh in here? This is Anna Bradford.

2 MR. O'DRISCOLL: Sure.

3 MS. BRADFORD: So in my mind, when I think
4 of Tier 1, Tier 2, and Tier 2 star, one of the most
5 important things is the change process that controls
6 it. Like you touched on 50.59. Remember, 50.59
7 itself does not apply under Part 52. Part 52 has a
8 50.59-like process within Part 52 itself.

9 And you asked, you know, the thought
10 process of why isn't the FSAR Tier 1. So the things
11 that are in Tier 1, you have to get an exemption, and
12 you have to get NRC approval before you change it.
13 But operating plants, they don't have to get an
14 exemption and NRC approval every time they change
15 something.

16 They could use 50.59 in their change
17 control processes. So I think it would be an over,
18 you know, an overcontrolling situation if everything
19 in their FSAR was in Tier 1 and then needed an
20 exemption to change it. It would be very difficult to
21 operate that way.

22 MEMBER KIRCHNER: Okay, I understand that.
23 So just one quick side observation, Anna and Jim, that
24 what we, in the material presented on 10 CFR 53,
25 they're talking about Tier 1 and Tier 2 safety kind of

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1 requirements. And I think that opens the door for
2 some potential confusion, just an observation.

3 MR. O'DRISCOLL: Okay.

4 MEMBER BLEY: Other members? All right,
5 Thomas, could we open the public line? I'd like to
6 ask for comments.

7 PARTICIPANT: The bridge line is open for
8 public comment.

9 MEMBER BLEY: Thanks, Thomas. If anyone
10 is on the bridge line and would like to make a
11 comment, please speak up. Give us your name, and
12 provide your comment.

13 PARTICIPANT: Hello. We cannot hear.

14 MEMBER BLEY: Is that someone who wants to
15 make a comment? I'm not sure what's going on, but we
16 don't have anyone. Thomas, let's close the bridge
17 line again. Members -

18 PARTICIPANT: We can't hear the meeting
19 any longer.

20 MEMBER BLEY: Thomas, I don't know what's
21 going on. But if somebody can check on the bridge
22 line and see if there is someone who wants to comment.

23 MR. BURKHART: Hey, Dennis?

24 MEMBER BLEY: Yes?

25 MR. BURKHART: This is Larry. I think I

1 recognized that was Tom Bergman's voice. I think he's
2 having difficulty hearing --

3 PARTICIPANT: He cannot hear the meeting.

4 MR. BURKHART: Yes.

5 MEMBER BLEY: All right. Is there
6 anything we can do about it or should I just go ahead?

7 MR. BURKHART: Tom, I think we, Thomas,
8 can you let us know the status?

9 MR. BERGMAN: Well, the bridge line is
10 still open.

11 MEMBER BLEY: All right. If someone is
12 out there --

13 MR. BERGMAN: You could mute it.

14 MEMBER BLEY: -- and wanted to make a
15 comment, please contact our staff and Quynh Nguyen and
16 talk to him about getting the comment to us.

17 At this time, I'd like to ask the members,
18 you know, I only heard one thing kind of created some
19 confusion among the members. And is there any reason
20 the members would like to prepare a letter at this
21 time? If so, we could do it in April.

22 Doesn't sound like it. I don't think so
23 either. Anna, we said at the beginning we'd come
24 back. I don't really have anything I can point to to
25 say there's a time before you have to draft language.

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1 But you ought to come back.

2 But I would say if along the way you --
3 and Clint will be watching what's going on, I think --
4 if there's anything that sounds like it could be a
5 significant issue, and you'd like to make sure we
6 weigh in on it before you publish the language, we'd
7 be happy to do that. But I don't think we'd call for
8 another meeting at this time. Anything else from the
9 members before we end the meeting?

10 Anna and Jim, we really appreciate the
11 discussion and the presentation. It was very helpful.

12 MR. O'DRISCOLL: Sure. I actually have
13 another slide, ha, ha, ha, before we close out.
14 Because I want to recap what you guys said, what I
15 understand on our end.

16 MEMBER BLEY: Is this Jim?

17 MR. O'DRISCOLL: Yes, this is Jim.

18 MEMBER BLEY: Okay.

19 MR. O'DRISCOLL: I'm sorry about that.

20 MEMBER BLEY: Yes, I can see it now at the
21 bottom. Okay.

22 MR. O'DRISCOLL: Okay. So I just wanted
23 to say that we'll do a recap in a second, you know,
24 what I understand you're most interested in, but we're
25 going to consider these comments received. We're

1 going to commence drafting the proposed rule, we're
2 going to submit the proposal to the Commission. And
3 of course we're going to plan for additional public
4 meetings during the proposed rule phase. And then,
5 of course, we're going to consider your feedback.

6 So there's a couple of items I thought we
7 would want to note that I think Dr. Rempe mentioned
8 the process, basically the concern was to ensure that
9 the Part 52.50 alignment rulemaking is aligned with
10 Part 53 rulemaking, make sure that those process
11 boxes, et cetera, basically there's no gaps, you
12 know, that basically they work together. That's my
13 understanding, to make sure that that's something that
14 is of interest to the ACRS or at least to Dr. Rempe.

15 Dr. Rempe also mentioned the cumulative
16 effects issue, basically what would happen if you have
17 too many changes, and what does that do to your
18 findings? So I think there was some discussion on
19 possibly looking at the Appendix B, the PRA changes
20 we're making to try to capture that discussion or to
21 make that, you know, to put thoughts in that area.

22 And then I think the only other item I had
23 here is you mentioned a desire to engage, you know,
24 as early as appropriate when there is something, you
25 know, substantive as far as rule language goes. So

1 I've taken note of that. And I'll work with Alan and
2 my branch chief. But we've got to determine if
3 there's a logical point for that interaction.

4 And those are the items I caught that were
5 of interest, you know, that were important, I think.
6 Does that work?

7 MEMBER BLEY: That works for me. And if
8 any other members want to say something you may. I
9 also would point out, we did get a summary document
10 that you've produced on the relevant guidance that
11 would be applicable to this rule change.

12 Last meeting we had, you talked about the
13 extent of the work that would be, whenever you get the
14 rule language in place, I'm still assuming, and you
15 could correct me if I'm wrong, that you're going to
16 meet the intent of having the guidance in place before
17 the final rule is issued. Is that still the intent?

18 MR. O'DRISCOLL: That's correct. So just
19 to briefly clarify that, the intent of the staff in
20 this project is to have both the FRN and the rule
21 language done, and the corresponding draft guidance
22 ready at the same time. So at the proposed rule
23 phase, when these documents go out for comment, the
24 whole picture would be there, the FRN with the rule
25 language plus the draft guides.

1 MEMBER BLEY: Okay. So we'll get a chance
2 to review those at the same time we review the rule.

3 MR. O'DRISCOLL: That's correct.

4 MEMBER BLEY: That sounds good. Anything
5 else from the members before we close the meeting?

6 Well, we won't close the whole meeting,
7 but at this time, I turn it back over to the Chairman.

8 CHAIRMAN SUNSERI: Thank you, Dennis. And
9 since we have a little bit of time here, I'd like to
10 go back to Thomas and see if we can reopen the public
11 line and get that comment from the person who was
12 trying to comment.

13 Thomas, can you go back to the public line
14 and see if we can open it?

15 PARTICIPANT: Hello, can you hear me?

16 CHAIRMAN SUNSERI: Yes, we can.

17 PARTICIPANT: Okay, it's breaking up on my
18 end. I'm not sure. When the line was open before, we
19 couldn't hear anything that was going on at the
20 meeting.

21 CHAIRMAN SUNSERI: Okay. So we're just
22 wrapping up the meeting, right now and it's offering
23 comments to the public. So you can --

24 PARTICIPANT: So you can't make comments
25 without acknowledgment that I'm connected and people

1 can hear me.

2 CHAIRMAN SUNSERI: We can hear you.

3 MR. MOORE: This is Scott Moore, and I'm
4 on the public line. Whoever's talking, the room can
5 hear you now. So you can go ahead and make a comment.

6 PARTICIPANT: Okay, thank you very much,
7 Scott.

8 MR. TSCHILTZ: This is Mike Tschiltz, I'm
9 a consultant to the Nuclear Energy Institute. And I'm
10 working on the monthly review of the Part 50.52
11 lessons learned for the draft regulatory basis
12 document.

13 And, you know, as the staff indicated
14 earlier on in the meeting, there's a number of
15 beneficial changes that were included in the draft reg
16 basis, many of which were identified by the industry
17 through experiences with licensing and constructing
18 plants under Part 52.

19 The one area that I would like to
20 characterize a little different is I think there's a
21 number of recommended changes that the industry came
22 forward with that the NRC has decided not to include
23 in the proposed rulemaking, at least in the draft reg
24 basis for the proposed rulemaking.

25 And I recognize that the process is for

1 the public to comment on those areas, and we intend to
2 do so. I think many of the ones that have been left
3 out by the staff are ones that are critical for people
4 who are trying to decide whether to go forward with a
5 Part 52D or Part 52 COL or DC and COL. So there are
6 several changes that are crucial.

7 One of them is the ability to make changes
8 during construction without prior approval. And the
9 staff has included an option in there for making
10 changes to Tier 2 information. But the industry
11 believes it needs to go forward further than that.
12 And there's no safety basis for not allowing changes
13 to Tier 1 and to Tier 2 star information. And the
14 industry is basically not intending to use Tier 2 star
15 going forward.

16 So those comments will be forthcoming.
17 But I would just like to say that there's been a
18 number of areas that we've been advocating over a
19 number of years for changes that aren't included in
20 the draft regulatory basis. So that concludes my
21 comments.

22 CHAIRMAN SUNSERI: Thank you. Any
23 additional comments from members of the public?

24 MR. BERGMAN: I have a comment if I may.

25 CHAIRMAN SUNSERI: Go ahead. Please go

1 ahead with your comment.

2 MR. BERGMAN: Yes, this is Tom Bergman
3 with NuScale Power. Just two comments. And as Mike
4 noted, we'll comment extensively on the rule. But
5 since it was a bit of a lengthy discussion today, I
6 thought about Anna's discussion of how extending or
7 eliminating the timeframe on design certification that
8 the Agency can maintain an acceptable level of safety
9 was good.

10 I would say that that same logic extends
11 to Sub-part E for standard design approvals and Sub-
12 part F for manufacturing licenses, both of which have
13 a 15-year term. And in the case of an SDA it cannot
14 currently be renewed. So we would advocate for
15 conforming changes to those sub-parts.

16 The second discussion was on marking FSAR
17 with the tiered information, and there was a proposal,
18 why not the whole FSAR in Tier 1? And I go back to
19 the original rule in 1989. In fact, that was the
20 concept.

21 And it was quickly realized to be
22 completely unworkable given the volume of information
23 in an FSAR and as the tiered structure was created.
24 And the tiering is relevant only to certification. So
25 if you were to incorporate the entire FSAR into Tier

1 1, you might as well delete Sub-part E from the rule.
2 Nobody would use Sub-part E anymore.

3 The Tier 1 isn't certified design
4 information. I question the need for Tier 2 star.
5 Neither KHNP nor NuScale had any Tier 2 star
6 information. And I'm wondering if that's a step back.

7 But in the regulatory basis document, it
8 also mentions extending the tiering to Sub-part C, and
9 E, and F which makes no sense since they aren't
10 certified. I mean, the COL incorporates the certified
11 design in those cases, but neither an SDA nor a
12 manufacturing license have any certified design
13 information. Therefore, Tier 1 and Tier 2 star are
14 just conceptually incorrect.

15 And even in the COL or DCA, the
16 administrative burden of marking up the FSAR, it isn't
17 clear what's gained. Tier 2 star was already marked
18 in FSAR, but again, if you don't have any Tier 2 star,
19 you don't have it.

20 But most applicants have put Tier 1 in a
21 different part of the application than the FSAR. And
22 it isn't clear why that process isn't sufficient. So
23 anytime we're looking at things that add
24 administrative burden, I would just question. But I
25 did want to make the point that please don't put the

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1 FSAR in Tier 1 or extend that concept to other sub-
2 parts. That's all I've got.

3 CHAIRMAN SUNSERI: Thank you for the
4 comment. Any other members of the public care to make
5 a comment?

6 MR. MOORE: Thank you for the comment.
7 Any other members of the public have a comment?

8 CHAIRMAN SUNSERI: Okay, so I think we can
9 now close this line. Thank you, Scott, for bridging
10 the communications for us. Thomas, you can close the
11 line.

12 MR. MOORE: So for the members on the
13 line, the two public members, the committee heard all
14 of your comments. We just couldn't hear for a moment
15 what was going on amongst the members. They're
16 closing the line in the room right now. Well, there's
17 not a room, it's a virtual room.

18 CHAIRMAN SUNSERI: All right. So that
19 concludes this session.

20 MR. MOORE: Thank you very much, have
21 a good day.

22 CHAIRMAN SUNSERI: Thomas, you can now
23 close that line, and it concludes the regulatory basis
24 discussion. It is ten minutes to 4:00 p.m. and we
25 have some time. I would suggest we take a ten minute

1 break and resume at 4 o'clock with the report
2 preparation on the control of access letter. So we
3 will recess until 4:00, and pick that letter up then.
4 Thank you.

5 (Whereupon, the above-entitled matter
6 went off the record at 3:48 p.m.)
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ACRS Meeting:

**Status of Rulemaking to Align
Licensing Processes and
Incorporate Lessons Learned
from New Reactor Licensing**

March 4, 2021

Today's Meeting

- Provide an update on the effort since the last ACRS meeting on this rulemaking (meeting transcript and slides: ADAMS Accession No. ML19294A009)
- Walk through the major topics addressed in the regulatory basis and identify specific regulatory issues on which input is sought
- Discuss the estimates of costs and savings
- Provide an update on next steps and the rulemaking schedule
- Receive ACRS members' perspectives from their review of ESP, DC, and COL applications and the implementation of the 10 CFR Part 52 process

OPENING REMARKS

**Anna Bradford – Director
NRR Division of New and
Renewed Licenses**

NRC STAFF PRESENTATION

NRC Staff Presenters



Jim O'Driscoll,
NMSS
Rulemaking Project
Manager

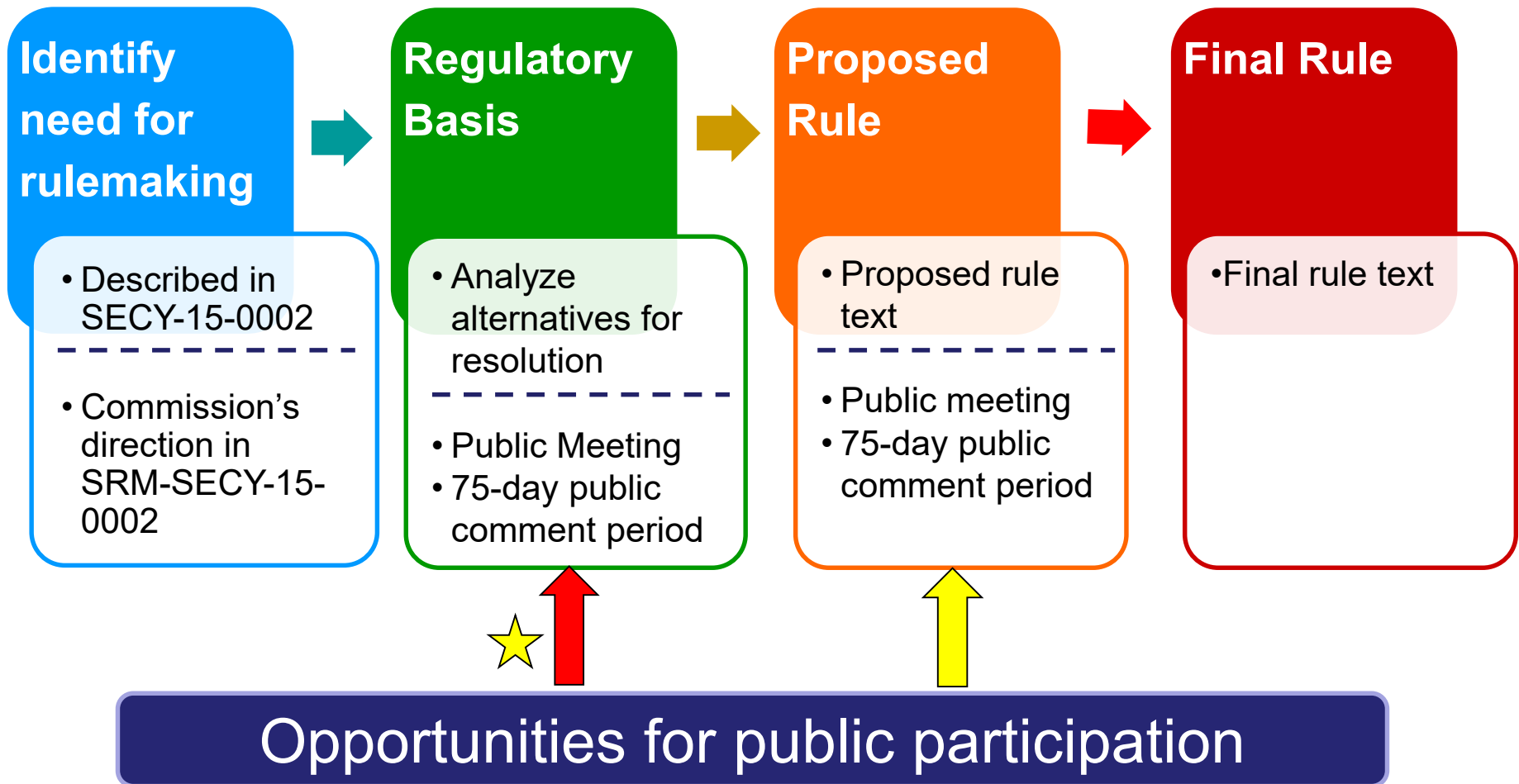


Allen Fetter, NRR
Senior Project
Manager

Purpose of the Rulemaking

- Implement Commission direction in SRM-SECY-15-0002, “Proposed Updates of Licensing Policies, Rules and Guidance for Future New Reactor Applications” to:
 - Align Parts 50 and 52 reactor licensing processes
 - Improve clarity
 - Incorporate lessons learned in recent licensing proceedings
 - Reduce unnecessary burden on applicants and staff

Rulemaking Process



Staff's Milestones of Rulemaking Activities

October 1, 2018

Started scoping and outreach

January 15, 2019

Held public meeting

July 11, 2019

Internal alignment on scope of RB

August 27, 2019

Issuance of Commission Information
Paper SECY-19-0084

September 20, 2019

Held ACRS meeting

Staff's Milestones of Rulemaking Activities (cont'd)

November 21, 2019

Held public meeting

February 2020

First draft of RB inputs completed

April 29, 2020

Held public meeting

January 2021

Published RB and FRN

March 2021

Held public meeting

Ongoing

Evaluate comments on RB

Next Steps

April 2021

RB public comment period ends, staff commence drafting the proposed rule

October 2021

Complete technical development of the proposed rule

May 2022

Forward the proposed rule to the Commission for approval

March 2024

Forward the final rule to the Commission for approval

Regulatory Basis

- A regulatory basis (RB) provides a sound foundation for informed decision-making throughout the rulemaking process
 - The RB describes the technical, legal, and policy issues and the staff's consideration of options to resolve the issues
 - A cost-benefit analysis of options is developed as part of the RB

Scope of the Regulatory Basis

- Number of items in scope: 50
- Number of alternatives evaluated: 115
- Items with rulemaking recommendation: 43
 - Number of items with rulemaking and guidance development or revision: 23
 - Number of guidance documents affected: 17
- Number of CFR Parts potentially affected by rulemaking: 9

Alignment of Parts 50 and 52

- The RB addresses four areas in which the NRC's policies and direction for new reactors have translated into requirements and guidance for Part 52 applicants only:
 - Application of Severe Accident Policy Statement
 - Probabilistic Risk Assessment Requirements
 - Three Mile Island Requirements
 - Fire Protection Design Features and Plans

Lessons Learned from Recent Experience

- The RB also covers topics for which the NRC's recent experience with new reactor licensing has resulted in lessons learned

Operator
Licensing

Physical
Security

Fitness
For Duty

Emergency
Planning

Part 52
Licensing
Process

Environmental
Topics

Applicability of
Other Processes
to the 10 CFR
Part 52 Process

Miscellaneous
Topics

Appendix A:

Applying the Severe Accident Policy Statement to New Part 50 License Applications

- Key issue: Part 50 does not address the NRC's Severe Accident Policy Statement
- Alternatives considered: No Action, Rulemaking, Guidance Only
- Staff recommendation: Rulemaking to revise Part 50 to include Part 52-like requirements about the prevention and mitigation of severe accidents, with updates to related guidance
 - Regulatory scope: 10 CFR 50.34
 - Guidance: Standard Review Plan (SRP) Chapter 19

Appendix B:

Probabilistic Risk Assessment (PRA) Requirements

- Key issues: (1) Application to Part 50 of Part 52 requirements for use of PRA in design; (2) availability of risk-informed process for safety-related structures, systems, and components (SSCs); and (3) timing of certain PRA upgrades
- Alternatives considered: No Action, Rulemaking and Guidance
- Staff recommendations: Rulemaking and guidance to (1) extend Part 52 PRA design requirements to Part 50; (2) broaden access to risk-informed classification of SSCs; and (3) permit deferral of some PRA upgrades
 - Regulatory scope: (1) 10 CFR 50.34 and 50.71; (2) 10 CFR 50.69; and (3) 10 CFR 50.71
 - Guidance: Regulatory Guides (RG) 1.174, 1.200, 1.201, 1.205, and 1.206

Appendix C:

Three Mile Island (TMI) Requirements

- Key issue: Inconsistency between Parts 50 and 52 regarding the submission of TMI-related information
- Alternatives considered: No Action, Rulemaking and Guidance
- Staff recommendation: Rulemaking and guidance to align the regulations related to TMI requirements
 - Regulatory scope: 10 CFR 50.34
 - Guidance: SRP Chapters 6.2.5 and 13.3

Appendix D:

Description of Fire Protection Design Features and Fire Protection Plans

- Key issue: Requirements for specific fire protection information to be submitted in applications are limited to Part 52
- Alternatives considered: No Action, Rulemaking
- Staff recommendation: Rulemaking to extend the Part 52 fire protection requirements to Part 50
 - Regulatory scope: 10 CFR 50.34

Appendix E:

Operator Licensing

- Key issues: Inadequacy of regulations for operators of cold plants about (1) criteria for simulation facilities; (2) plant walkthrough; and (3) continuing training
- Alternatives considered: No Action, Rulemaking and Guidance, Guidance Only
- Staff recommendations: Rulemaking and guidance to govern operator licensing at cold plants
 - Regulatory scope: (1) 10 CFR 55.4 and 55.46; (2) 10 CFR 55.45; and (3) 10 CFR 55.31
 - Guidance: New guidance

Appendix F:

Physical Security Requirements

- Key issue: Potential unnecessary burden on industry related to unirradiated fuel
- Alternatives considered: No Action, Rulemaking and Guidance
- Staff recommendation: Rulemaking and guidance to clarify what requirements apply to unirradiated fuel
 - Regulatory scope: 10 CFR 70.22, 73.55, 73.56, and 73.67
 - Guidance: RG 1.206

Appendix F:

Fitness-For-Duty (FFD) Requirements

- Key issues: Construction site access issues, risk insights learned from reactor plant construction, Medical Review Officer procedures, and technical corrections
- Alternatives considered: No Action, Rulemaking and Guidance
- Staff recommendation: Rulemaking and guidance to improve the consistency and clarity of the FFD regulations
 - Regulatory scope: 10 CFR 26.5, 26.401, 26.405, and 26.419
 - Guidance: RG 5.84 and DG-5040

Appendix G:

Emergency Planning (EP)

- Key issues: (1) Initial emergency classification and action level scheme; (2) emergency plan change process; (3) emergency preparedness exercises; (4) significant impediments to development of emergency plans; and (5) offsite contacts, arrangements, and certifications
- Alternatives considered: No Action, Rulemaking, Rulemaking and Guidance, Guidance Only
- Staff recommendations: (1) Guidance only; (2) rulemaking; (3) rulemaking and guidance; (4) rulemaking and guidance; and (5) rulemaking
 - Regulatory scope: (1) 10 CFR 52.17 and 52.79, Sec. IV.B of App. E to Part 50; (2) 10 CFR 50.54; (3) Sec. IV.F.2.a of App. E to Part 50; (4) 10 CFR 52.18; and (5) 10 CFR 52.17
 - Guidance: New guidance

Appendix H:

Part 52 Licensing Process

- Appendix H addresses five areas in which NRC experience with Part 52 new reactor licensing has resulted in lessons learned:
 - Design Certification (DC) Renewal (H.1)
 - Change Process (H.2)
 - Design Scope and Standardization (H.3)
 - Standard Design Approval (SDA) (H.4)
 - Content of Applications (H.5)

Appendix H:

Part 52 Licensing Process

- Some staff recommendations in Appendix H:
 - Rulemaking to remove the 15-year duration of DCs and associated renewal requirements (H.1)
 - Rulemaking and guidance to clarify and simplify certain change processes (no action recommended in other cases) (H.2)
 - Rulemaking and guidance to define and clarify design terms and to streamline design requirements (H.3)
 - Rulemaking to facilitate filing of applications that reference more than one SDA (H.4)
 - Rulemaking and guidance to simplify, align, and clarify the content of applications (H.5)

- Key issues: (1) environmental report submittal process for a construction permit application; and (2) incorporation by reference (IBR) of prior environmental assessment for combined license (COL) but not for construction permit
- Alternatives considered: No Action, Rulemaking, Guidance Only
- Staff recommendations: (1) No action; and (2) rulemaking to allow IBR for construction permit
 - Regulatory scope: (1) N/A; and (2) 10 CFR 51.50

Appendix J:

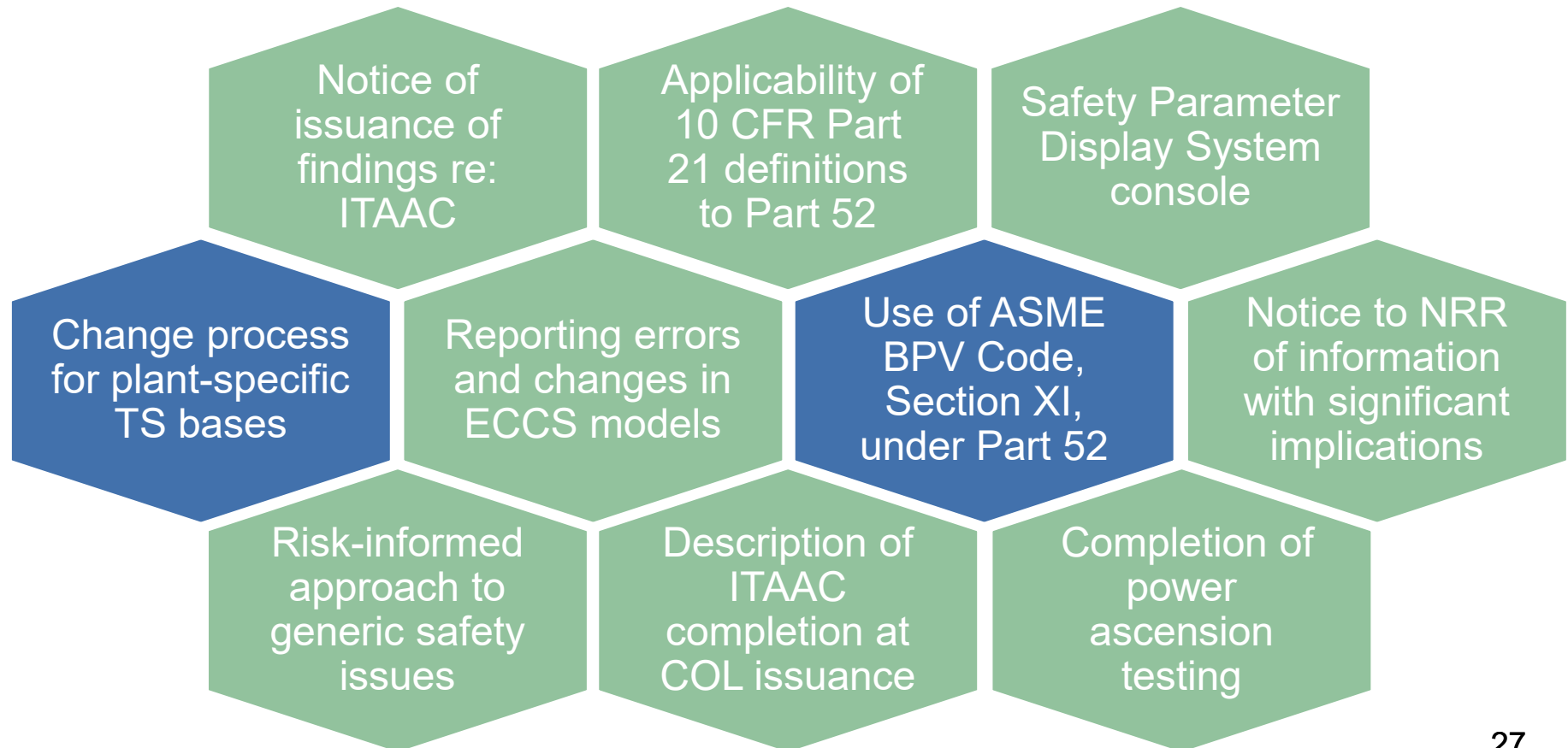
Applicability of Other Processes to the 10 CFR Part 52 Process

- Key issues: (1) “contested proceeding” under 10 CFR 2.4 excludes ITAAC hearing; (2) undue burden on certain COL applicants and holders from annual FSAR updates; and (3) inconsistencies in requirements for backfitting and issue finality
- Alternatives considered: No Action, Rulemaking, Rulemaking and Guidance, Guidance Only
- Staff recommendations: Rulemaking to (1) align definition of “contested proceeding”; and (2) alleviate regulatory burden on certain COL applicants and holders; and rulemaking and guidance to (3) remove inconsistent issue finality provisions
 - Regulatory scope: (1) 10 CFR 2.4; (2) 10 CFR 50.71; and (3) 10 CFR 50.109
 - Guidance: MD 8.4 and NUREG-1409

Appendix K:

Miscellaneous Topics

- Appendix K addresses lessons learned for several topics covered across Title 10



Estimates of Costs and Savings

- Total net averted costs to industry and the NRC of between \$18.0 million and \$29.7 million
- To account for sensitivity to plant-specific conditions, the NRC staff performed an uncertainty analysis, which found that the chance of net averted costs is greater than 99%
- Rulemaking would yield nonquantifiable benefits as well (regulatory efficiency, public confidence)

Questions



Recap and Next Steps

- Consider comments received on the regulatory basis
- Commence drafting the proposed rule
- Submit the proposed rule to the Commission
- Plan for additional public meeting(s) during the proposed rule phase
- Staff will consider your feedback from this meeting

Rulemaking Schedule



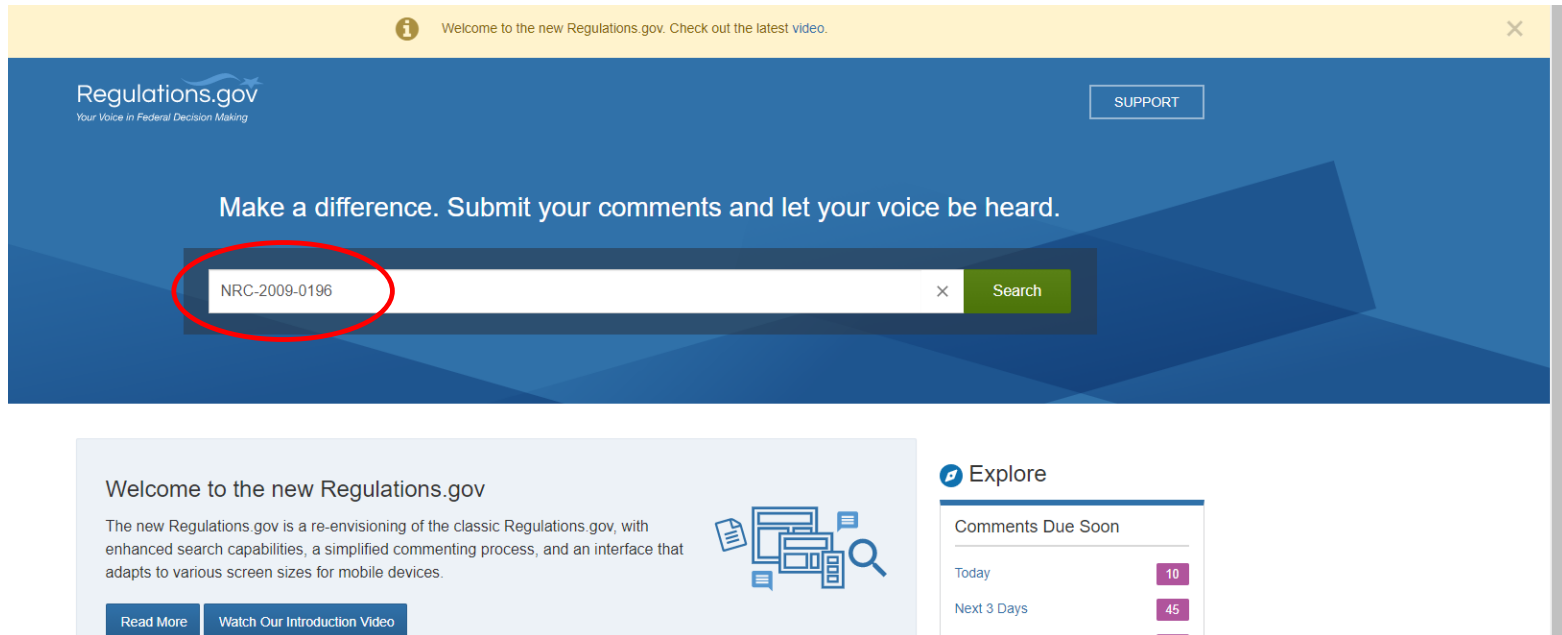
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- The meeting summary will be posted soon
- Search regulations.gov on the docket ID NRC-2009-0196
- Press the “comment” button and leave your comment

SUPPORTING INFORMATION

References

Document Title	ADAMS Accession Number/FR Citation
86 FR 7513 – Regulatory Basis-Alignment of Licensing Processes and Lessons Learned From New Reactor Licensing	86 FR 7513
04/29/2020 - Public Meeting to Discuss the Status of Rulemaking to Align Licensing Processes and Apply Lessons Learned from New Reactor Licensing [NRC-2009-0196; RIN 3150-AI66]	ML20141L609
85 FR 9328 - Revision of Fee Schedules; Fee Recovery for Fiscal Year 2020	85 FR 9328
2/14/20 - Letter to Petitioner M. Lorton on Behalf of Algignis, Inc.; Results of PRM Sufficiency Review; Petition for Rulemaking for 10 CFR Part 52, Licenses, Certifications, and Approvals for Nuclear Power Plants (Pkg)	ML20008D640
11/18/2019 - 84 FR 63565 - Miscellaneous Corrections	84 FR 63565
11/21/2019 - Category 3 Public Meeting Summary RE: Regulatory Basis: Rulemaking to Align Licensing Processes and Apply Lessons Learned from New Reactor Licensing (NRC-2009-0196)	ML19344C768
Transcript of the Advisory Committee on Reactor Safeguards Regulatory Policies & Practices-Part 50 52 Meeting - September 20, 2019	ML19294A009
SECY-19-0084, “Status of Rulemaking to Align Licensing Processes and Lessons Learned from New Reactor Licensing (RIN 3150-AI66)”	ML19161A169
SECY-19-0034, “Improving Design Certification Content”	ML19080A034

References (cont'd)

Document Title	ADAMS Accession Number/FR Citation
"Summary of January 15, 2019 Public Meeting to Discuss the Proposed Rulemaking to Align the Regulations in Parts 50 and 52 to Address Updates to the Licensing Processes and Lessons Learned for Future New Reactor Applications"	ML19023A046
SECY-15-0002, "Proposed Updates of Licensing Policies, Rules and Guidance for Future New Reactor Applications"	ML13277A420
SRM-SECY-15-002, "Staff Requirements-SECY-15-002-Proposed Updates of Licensing Policies, Rules and Guidance for Future New Reactor Applications"	ML15266A023
"Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants"	60 FR 32138
SECY-89-013, "Design Requirements Related to the Evolutionary Advanced Light Water Reactors," dated January 19, 1989	ML003707947
SECY-90-016, "Evolutionary Light Water Reactor (LWR) Certification Issues and Their Relationship to Current Regulatory Requirements," dated January 12, 1990	ML003707849
SECY-93-087, "Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor (ALWR) Designs," dated April 2, 1993	ML003708021
Bipartisan Policy Center Report Recommendations on the New Reactor Licensing Process	ML13059A240

References (cont'd)

Document Title	ADAMS Accession Number/FR Citation
NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," with updates through 2007	https://www.nrc.gov/reading-rm/doccollections/nuregs/staff/sr0800/
Regulatory Guide 1.174, Revision 3, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," dated 2018	ML17317A256
Regulatory Guide 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," dated 2009	ML090410014
Regulatory Guide 1.201, Revision 0, "Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance," dated 2006	ML061090627
Regulatory Guide 1.189 Revision 3, "Fire Protection for Nuclear Power Plants." dated 2018	ML17340A875
Regulatory Guide 1.206, Revision 1, "Applications for Nuclear Power Plants." dated 2018	ML18131A181
Bipartisan Policy Center Report Recommendations on the New Reactor Licensing Process	ML13059A240
Regulatory Guide 5.84, Revision 0, "Fitness-for-Duty for New Nuclear Power Plant Construction Sites," dated July 2015	ML15083A412
Draft Regulatory Guide 5040, "Urine Specimen Collection and Test Result Review Under 10 CFR Part 26, 'Fitness-for-Duty Programs,' dated September 16, 2019	84 FR 48750
NRC Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests. DT-19-15," dated 2019.	ML18093B087
NRC NUREG-1409, Revision 1, "Backfitting Guidelines., Draft Report for Comment," dated 2020	ML18109A498

Administrative Corrections

10 CFR	Description
§ 2.627	The references to § 2.617 in § 2.629(b) and § 52.83(b) should be to § 2.627.
Part 52 Appendices	Both the ABWR and System 80+ design certification final rules (Part 52, Appendices A and B, respectively) initially correctly referred to “ANSI/AISC N-690.” Both the AP600 and AP1000 design cert final rules (Appendices C and D, respectively) incorrectly stated ANSI/AISC-690 (omitting the “N”). 64 Fed. Reg. 72,002, 72,018; 71 Fed. Reg. 4,464, 4,481. Unfortunately, the NRC changed the ABWR and System 80+ references to match the AP600 and AP1000 references in the 2007 Part 52 rulemaking. Correct the reference in Appendices A-D by adding the “N” back into ANSI/AISC N-690.
Part 52 Appendix D Section VI.B.6	Part 52, Appendix D, Section VI.B.6 reads “except as provided in paragraph VIII.B.5.f . . .” but the reference is incorrect. It should be “except as provided in paragraph VIII.B.5.g . . .” (rather than VIII.B.5.f).
Part 52 Appendix E Section VI.B.6	Part 52, Appendix E, Section VI.B.6 reads “except as provided in paragraph VIII.B.5.f . . .” but the reference is incorrect. It should be “except as provided in paragraph VIII.B.5.g . . .” (rather than VIII.B.5.f).
Part 50 Appendix J	Under Option B, Subsection IV. Recordkeeping, refers to § § 50.72 (b)(1)(ii) and § 50.72 (b)(2)(i). There is no § 50.72 (b)(1)(ii), only § 50.72 (b)(1). 10 CFR Part 50, Appendix J references 10 CFR Part 52 and 10 CFR 50.54(o) imposes Appendix J as a requirement.
§ 21.3, “Basic component”	Revise definition by deleting text in brackets as follows: “(2) When applied to standard design certifications [under subpart C of part 52 of this chapter] and standard design approvals under part 52 of this chapter, . . .”
§ 52.43(b)	Correct the following text in 10 CFR 52.43(b) which was not updated when SDAs were renamed to state: “Subpart E of this part governs the NRC staff review and approval of a final standard design.”
§ 52.79(c)(2)	Correct as follows: “all terms and conditions that have been included in the final standard design approval will be satisfied. . . .”

Administrative Corrections

10 CFR	Description
52.39(a)(1)	Reference to 52.27 needs to be changed to 52.26. When the NRC issued the 2007 Part 52 final rule (72 FR 49352; August 28, 2007), § 52.27 was the “Duration of permit” section. However, when the NRC issued the “Limited Work Authorization for Nuclear Power Plants” final rule a few weeks later (72 FR 57416; October 9, 2007), § 52.27 was redesignated as § 52.26, the current § 52.27 was added, but the reference to § 52.27 in § 52.39(a)(1) was not changed to § 52.26.”
52.98(d)	Lessons Learned-Miscellaneous lessons learned-clarify the reference to ML and subpart F-there is unnecessary wording in the paragraph that is confusing. During BC review and concurrence, this item was deemed an administrative correction ,and was descoped from the rulemaking and placed in the Fall 2020 administrative corrections rule scope.

Current Scope



Items in Scope of the Proposed Rule

Tuesday, February 23, 2021

1:11:16 PM

Section in 10 CFR	Item ID	Brief Summary	Full Summary
50.34(f)	C-1	Alignment- TMI Requirements	This paragraph describes contents of applications to address additional Three Mile Island (TMI) related requirements. The staff is considering revising this paragraph to include the same exceptions given for 10 CFR Part 52 applications. The purpose of the staff considering this change is to achieve alignment between the Part 50 and 52 licensing processes.
50.34(a)	D-1	Alignment- Description of Fire Protection Design Features and Plans	This paragraph specifies the minimum information that must be contained in a preliminary safety analysis report for a construction permit. The staff is considering revising this paragraph to require construction permit and operating license applications include a description and analyses of fire protection design features and describe fire protection plans. The reason the staff is considering this change is to achieve alignment between the Part 50 and 52 licensing processes.
Part 52 Appendix A-E, Section VIII.5.B.a and VIII.5.B.b	H.2-4	Lessons Learned-Part 52 Licensing Process: Change Process: align Section VIII.5.B.a and VIII.5.B.b to current change process for design info.	The requirements in the referenced sections of each design certification appendix refer to the change process for Tier 2 information. The staff is considering modifying each Part 52 design certification appendix to adopt the "...prior to implementing a proposed change..." provision in 50.59(c)(2) in lieu of the "...proposed departure..." provision in Section VIII.5.B of each existing design certification appendix. The reason for this change is to align the change processes for design information included for plants that are licensed under Parts 50 and 52.
50.100	H.5-3	Lessons Learned-Part 52 Licensing Process: Contents of Applications: Requirements for timely completion of construction	A provision in this paragraph specifies that combined licenses are subject to the timely completion of construction requirements of 10 CFR 50.55(b). The staff is proposing to modify the provision in 50.100 for combined licenses because the 2007 revision to 50.33(h) removed the requirement for a COL applicant to specify the earliest and latest date for completion of construction. The purpose of the change is to correct the drafting error from the 2007 update.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
52.6(b)	K-10	Lessons Learned-Miscellaneous lessons learned-Notification to the Director of NRR	The paragraph provides requirements for completeness and accuracy of information from a Part 52 applicant or licensee. The staff is considering modifying the recipients of this notification that are referenced in this paragraph to include either the Executive Director for Operations or the NRR Office Director. The reason for the change is that this requirement also applies to design certifications and standard design approvals which do not have regional involvement.
52.79(d), Part 52 Appendix A-E, Section IV	H.3-5	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: Relocation of Requirements from DC Appendices Section IV to 52.79(d)	10 CFR 52.79(d) provides requirements for combined licenses that reference a standard design certification. Section IV for each Part 52 design certification appendix provides additional requirements and restrictions to combined license applicants who reference the specific appendix. The staff is considering revising 52.79(d) to cover how applicants could include or incorporate by reference generic design control document information and delete Section IV. The reason for the change is for clarification and consolidation of references.
2.4	J-1	Lessons Learned-Applicability of other processes-Amend Part 2 definition of contested proceeding	This section provides definitions for 10 CFR Part 2, "Agency Rules of Practice and Procedures." The staff is considering amending the definition of a contested proceeding. The reason for the change is that the current definition does not include a hearing related to inspections, tests, analysis and acceptance criteria under 10 CFR 52.103.
2.106(b)(2)(ii)	K-2	Lessons Learned-Miscellaneous lessons learned-Notice of issuance of ITAAC finding in Part 2	The requirements of this paragraph direct the Director of NRO to provide a notice of issuance of the finding regarding inspections, tests, analyses, and acceptance criteria. The staff is considering revising the language in this paragraph to more exactly reflect the 10 CFR 52.103(g) finding as described in 10 CFR Part 52.
21.3	K-4	Lessons Learned-Miscellaneous lessons learned-Clarify definitions in part 21	Although the definition of license in 10 CFR 50.2 clearly covers an ESP, COL, or manufacturing license under 10 CFR Part 52, the staff proposes to add "or part 52" to the definitions of "Critical characteristics," "Dedicating entity," and "Dedication," in 10 CFR 21.3 to be consistent with the definitions of "Basic component," "Defect," and "Substantial safety hazard" in 21.3. This change would specify that the definitions are applicable "to nuclear power plants licensed pursuant to 10 CFR part 50" or part 52 of this chapter.

Current Scope (cont'd)

Section in 10 CFR Item ID Brief Summary

Full Summary

55.31	E-1	Lessons Learned- Operator Licensing-Continuing Training for Operator License Applicants	The staff is considering adding a new requirement for holders of a CP or combined license to maintain operator license applicants' knowledge between the time of the NRC examination through establishment of the requalification program. This was raised as an issue after the first AP1000 operator license examinations because there is no regulatory requirement for applicants who defer completion of experience requirements between completion of the licensing examination and completion of the licensing process to demonstrate applicant knowledge retention.
55.45(b)	E-4	Lessons Learned- Operator Licensing-clarify requirements for plant walkthrough portion of operator test	<p>This paragraph describes the requirements for administering the operator test in a plant walkthrough and in either a Commission approved simulator, a plant-reference simulator, or the actual plant. The staff is considering allowing combined license holders the option of developing plant walkthrough test items (i.e., job performance measurements (JPMs) used for the in-plant portion of the operating exam) using an alternative method for cold plants (Note: cold licensing of operators provides the method for operations personnel to acquire the knowledge and experience required for licensed operator duties during the unique conditions of new plant construction and initial operation.)</p> <p>This was an issue found during AP1000 plant construction because the regulations require in-plant walkthroughs during operator licensing examinations and an exemption to this requirement was granted to allow an alternative method which did not require applicants to enter the actual plant during JPMs.</p>
55.46	E-3	Lessons Learned- Operator Licensing- Establish new classification of Simulator: Commission Approved Simulator	This paragraph includes requirements for plant simulation facilities. The staff is considering a revision to the regulations governing simulation facilities so that if a simulation facility at a cold plant meets the criteria to be used for operator training and exams, then it can be used for those purposes regardless of whether it meets the literal definition of a PRS. The purpose of this change is to prevent new reactor licensees from having to submit a request in accordance with the requirements of 55.46(b) for Commission approval of a simulation facility as was done for the AP1000.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
55.46(c)(2)(i)	E-2	Lessons Learned- Operator Licensing- Clarify use of Commission Approved Simulator to satisfy manipulate controls requirements	This paragraph requires that evidence is provided that the operator license applicant has manipulated either plant controls or the controls of a plant referenced simulator. The staff is considering revising these requirements for facilities constructing new reactors to use a suitable alternative to "models relating to nuclear and thermal-hydraulic characteristics that replicate the most recent core load," such as models that replicate the intended first core load. Based on AP1000 experience, it is not possible to complete the required control manipulations on the plant until after fuel load or on a PRS that replicates the most recent core load until after fuel load.
Part 50	A-1	Alignment-Apply Severe Accident Policy to part 50 Applications	In the staff requirements memorandum to SECY-15-0002, the Commission approved the staff's recommendation to confirm that the Commission's guidance given in the "Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants" and other Commission direction provided in response to SECY-89-013, SECY-90-016, and SECY-93-087, apply to new 10 CFR Part 50 power reactor applications in a manner consistent with 10 CFR Part 52 design and license applications. The staff will consider whether specific regulations in 10 CFR Part 50 should be modified to implement this Commission direction. For example, revise Part 50 to require construction permit and operating license applications include a description of design features for prevention and mitigation of severe accidents.
50.34	B-1	Alignment-PRA Requirements- Submit PRA results as part of CP application	The requirements of this paragraph specify the technical information for contents of Part 50 licensing applications. The staff is considering a revision to this paragraph to require the develop a plant-specific probabilistic risk assessment (PRA), submit appropriate information describing that analysis as part of the construction permit and operating license application submittals, and maintain and upgrade the PRA throughout the duration of the operating license for new power reactor applications. This purpose of this change would be to align the Part 50 licensing process with the PRA requirements included in 10 CFR Part 52.
52.79(d), Part 52 Appendix A-E, Section IV.A.2.d	H.3-4	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: revise Section IV.A.2(d) of Appendices A through D to Part 52 to clarify "site characteristics"	10 CFR 52.79(d) provides requirements for combined licenses that reference a standard design certification. Section IV.A.2.d for each Part 52 design certification appendix provides requirements to combined license applicants who reference the specific appendix. The staff is considering revising 52.79(d) to accurately reflect the terms "site parameters" and "site characteristics" as they relate to the information required to be included in a combined license application.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
Part 52 Appendix A-E, Section IX	H.3-6	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: DC Appendix Section IX ITAAC	This paragraph provides requirements to combined license applicants who reference the specific appendix regarding inspections, tests, analysis and acceptance criteria. The staff is considering modifying the language in all the corresponding design certification rule appendices, except for Appendix E, to delete the requirements and hold the section in reserve. The reason for proposing this change is to be consistent with the language in Part 52, Appendix E, Section VI.B.7, which concluded that these requirements were duplicative to the requirements in other portions of Part 52.
50.46(a)(3)	K-8	Lessons Learned-Miscellaneous lessons learned-requirement for reporting of errors in ECCS models	The requirements of this section include a provision that certain applicants or holder of certain licensees or approvals shall estimate the effect of any change to or error in an acceptable evaluation model or in the application of such a model to determine if the change or error is significant. The staff is considering a change to this provision such that holders of a design certification, standard design approval, and a manufacturing license are not required to report errors in emergency core cooling system models until a combined license, construction permit, or operating license applicant references use of the applicable ECCS model.
50.109	J-4	Lessons Learned-Applicability of other processes-References to Issue Finality in 50.109	Certain provisions in this section address design approvals and manufacturing licenses. The staff is considering revising this section to clarify that design approvals and manufacturing licenses [and early site permits] are covered by 10 CFR 52.145 and 52.171, "finality" sections, respectively. This change would eliminate any confusion regarding the appropriate criteria for imposing new requirements to design approvals and manufacturing licenses.
Part 50, App. E, IV.B	G-2	Lessons Learned-Emergency Preparedness-Approval of EAL and Classification Schemes	The referenced section establishes the requirements for the content of emergency plans with respect to the initial emergency action levels and classification scheme, and subsequent changes. The staff is considering modifications to the requirements to clarify when NRC approval of an initial set of emergency action levels and classification scheme, and subsequent changes is applicable. The reason for the proposed change is to align Part 52 with Part 50 requirements

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
Part 50, App. E, IV.F.2.a.ii	G-3	Lessons Learned-Emergency Preparedness-Emergency Preparedness Exercises-5 percent EP ITAAC	The referenced paragraph establishes the requirements for the content of emergency plans with respect to provisions for the conduct of emergency preparedness exercises. The staff is considering modifying the regulation to remove an inconsistency with respect to the 5% power emergency planning ITAAC and the language in 10 CFR Part 50, Appendix E, IV.F.2.a.ii and a.iii. The staff is considering this change in order to clarify under what conditions the provisions of 10 CFR 50.54(gg) apply.
52.97(a)(2)	K-14	Lessons Learned-Miscellaneous lessons learned-ITAAC completion at COL issuance	This paragraph allows for the closeout of ITAAC included in a DC or ESP that are referenced in a COL application. The staff is proposing a minor revision to clarify the wording for ITAAC closeout to be consistent with the language in 10 CFR 52.103(g) that the ITAAC "are met."
51.50(a)	I-2	Lessons Learned-Environmental Review: Amend to allow CP to include an environmental report with CP application	This paragraph requires applicants of a construction permit to include an environmental report with the application. The staff is considering revising this paragraph to allow environmental reviews for construction permits to reference a completed environmental assessment from a certified design. The reason for considering this change is a clarification of current requirements.
52.47(a)(21), 52.79(a)(20)	K-12	Lessons Learned-Miscellaneous lessons learned-Discontinue GI Priority Ranking Model	The requirements of these paragraphs specify an applicant shall include in their application resolution of applicable unresolved safety issues and medium and high priority generic safety issues. The staff is proposing to revise both paragraphs to reflect that the NRC has discontinued the use of the priority ranking model for Generic Issues and has instead implemented a screening process using the risk criteria in RG 1.174 (MD 6.4-1999).
50.71	K-16	Require report to NRC at completion of power ascension testing	The staff is considering revising the regulations to indicate that the start of a COL's 40 year timeframe would begin on the date that of the conclusion of power reactor startup testing. The change to the regulations would include a new requirement to require a notification be submitted by the COL Licensee upon successful completion of power ascension testing. This change would make conforming changes to Part 50 and 50 to reflect the closure of a petition for rulemaking related to 10 CFR Part 171 (see SRM-SECY-19-0081). In that SRM, the Commission approved rulemaking to amend Part 171 to require that licensing fees start to be incurred on the date that power ascension testing is completed.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
50.71(e)(3)(iii)	J-3	Lessons Learned-Applicability of other processes-Maintenance of records for COL holders	The requirements of this paragraph specify that applicants for a combined license shall periodically update the final safety analysis report originally submitted as part of the application. The staff is considering several changes including: 1) modifying this paragraph to clarify the applicability of these requirements to combined license holders who are not actively pursuing construction and for applications that have been submitted to the Commission but the applicant has requested that their review be suspended but not withdrawn; 2) the requirement for combined license applicants having to submit annual final safety analysis report updates to allow flexibility in the timing of submittals; 3) inconsistency in reporting frequencies between 50.59 and 50.71(e); and 4) insure that any FSAR changes that impact specific ITAAC are docketed no later than the ITAAC closure notification (ICN) for the associated ITAAC (including by submission with the ICN as an acceptable option). The reason for the change is that the regulations do not specifically address combined license holders or the status of suspended applications.
50.69(b)	B-2	Lessons learned- Amend 10 CFR 50.69, Risk-informed characterization of SSCs to apply to COL holders	This paragraph specifies applicability requirements for using the provisions for risk-informed categorization and treatment of structures, systems, and components. The staff is considering revising this provision to allow COL holders to use these alternative requirements.
52.59	H.1-1	Lessons Learned-Part 52 Licensing Process: Design Certification Renewal and Design Certification Expiration Date	This section of the regulations provides requirements for renewing approved design certification rules. The staff is considering whether the requirements to renew a certified design should be modified or eliminated. The reason the staff is considering the modification or elimination of these requirements is the experience gained from the evaluation of the application concerning the Advanced Boiling Water Reactor design certification renewal. Note that a modification or elimination of the requirements in 10 CFR 52.59 would have an impact on the requirements of 10 CFR 52.55 which specify the duration of a design certification rule.
Part 52 Appendix A-E, Sections IV.A.2.a and VIII.A	H.2-3	Lessons Learned-Part 52 Licensing Process: Change Process: Make Tier 1 conforming changes and format changes	These paragraphs require COL applicants referencing a DCD to include as part of its application to include a plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD and establish the change process for Tier 1 information. The staff is considering relaxing these requirements to eliminate the need for unnecessary exemption requests related to format inconsistencies between a COL and the referenced DCD and to provide a more

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
52.41(c)(1) and (2)	H.3-2	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: Clarify Phrase "Essentially Complete Design"	These paragraphs specify that an application for a certification of a nuclear power plant design, either evolutionary or that differs significantly from light water reactor designs must provide an essentially complete nuclear power reactor design except for site specific elements. The staff is considering further clarifying the phrase "essentially complete design." The reason that the staff is considering a change is to reflect that the meaning of this phrase, consistent with previous Commission policy, is to have sufficient design information to resolve all technical issues using a graded approach that provides more information in an application based on safety significance, or, strike "essentially complete" and replace with "sufficiently complete" design to allow staff to evaluate compliance with the applicable regulations and to confirm that proposed ITAAC will demonstrate that compliance.
52.63(a)(1)(vii)	H.3-3	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: Modify Restrictions on Changes to a DC or COL referencing a DC for reasons of Standardization	Three specific requirements in this section are related to considering changes to the certified design based on standardization. The staff is considering whether these provisions should be modified. The reason the staff is considering these changes is that the certification of a design as a rule provides a high level of standardization and lessons learned in the AP1000 evaluation of licensing amendments showed that this test was an increased burden and not beneficial to the maintenance of standardization.
Part 52.39(e)	H.2-1	Lessons Learned-Part 52 Licensing Process: Change Process: for ESP SSARs and LWA SSARs	This paragraph states that the holder of an early site permit (ESP) may not make changes to the ESP, including the site safety analysis report, without Commission approval (license amendment). The staff is considering establishing a 50.59- like change process for ESPs and LWAs. This would allow certain changes to be made without NRC approval
52.133(a) 52.43(b), 52.145(a)	H.4-1	Lessons Learned-Part 52 Licensing Process: Standard Design Approval: Referencing more than one SDA in applications	This paragraph states that an applicant for a construction permit or combined license may reference a standard design approval. The staff is considering clarifying that that one or more standard design approvals may be referenced in design certifications, as well as construction permit and combined license applications. The reason for considering the change is that these provisions are not explicitly included in the current regulations.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
50.34(h) and 52.47(a)(9)	H.5-1	Lessons Learned-Part 52 Licensing Process: Contents of Applications: submit evaluation on conformance to SRP	These paragraphs require an applicant to evaluate their application against the standard review plan revision in effect 6 months before the docket date of the application and specify how differences between the application and the acceptance criteria included in the standard review plan provide an acceptable method for complying with the regulations. The staff is considering whether this requirement should be modified. The reason the staff is considering a modification is to improve the efficiency and effectiveness (including safety focus) of the licensing process for the applicant as well as the agency.
Part 52 Appendix A-E, Section VIII	H.2-5	Lessons Learned-Part 52 Licensing Process: Change Process: Include 50.59(c) provisions in part 52 change process	Section VIII of each 10 CFR Part 52 design certification appendix provides requirements for changes and departures from the information within the scope of the certified design. The staff is considering modifications to Section VIII to include applicability provisions like those found in 10 CFR 50.59(c). The reason that the staff is considering the change is that the current requirements in this section do not apply to changes to the facility or procedures as compared with the more specific criteria in 10 CFR 50.59(c).
50.54(q)	G-1	Lessons Learned-Emergency Preparedness-Emergency Plan Change Process	The referenced section requires that 10 CFR Part 52 licensees follow and maintain the effectiveness of an emergency plan. The staff is considering clarifying that the regulation pertaining to the emergency plan change process provided by 10 CFR 50.54(q) applies to licensees during construction. In addition, 10 CFR 50.54(q)(2) will be added to the 50.54 introductory paragraph of provisions that aren't required until after the 10 CFR 52.103(g) finding is made.
52.17(b)(4)	G-7	Lessons Learned-Emergency Preparedness-remove requirement to provide description of Federal, state and local contacts in SSAR	The referenced paragraph establish the requirements for technical content of Part 52 early site permit license applications with respect to the site safety analysis report. The staff is considering modifying the requirement that the site safety analysis report include a description of contacts and arrangements made with Federal, State, and local governmental agencies with emergency planning responsibilities. The staff is considering this change because it is premature to request such detailed information, and there is no corresponding safety benefit

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
Part 50, App E, IV.F.2.a.iii	G-4	Lessons Learned-Emergency Preparedness-Emergency Preparedness Exercises-Subsequent exercises at similar facilities	The referenced paragraph establishes the requirements for the content of emergency plans with respect to provisions for the conduct of emergency preparedness exercises. The staff is considering modifying the regulation to clarify when subsequent full participation exercises for each subsequent Part 52 reactor (at the same site) using the same technology, emergency response organization (ERO), or similar facilities is required. The staff is considering this change because subsequent exercises for each subsequent reactor may not be needed for the same technology, ERO, or similar facilities.
73.55(a)(4)	F-5	Lessons Learned- Security-Eliminate need to establish protected area prior to operation to protect unirradiated fuel	This paragraph establishes the implementation requirement for physical protection of licensed activities in nuclear power reactors against radiological sabotage. The staff is considering changing the applicability of 73.55(a)(4) to "before fuel load" instead of "before fuel is allowed onsite". The staff is considering this change because the current language may impose an unnecessary burden to a COL holder because the possession and storage of unirradiated fuel is no different in radiological hazards or risks from a license issued under 10 CFR Part 70.
26.4(f)	F-1	Lessons Learned- Security-Allow escorted access to contractors in construction area	This paragraph establishes the applicability of fitness for duty program for individual who are constructing or directing construction of safety or security related structures, system and components. The staff is considering modifying 10 CFR 26.4(f) to allow escorted access to visitors performing safety or security related work activities in a construction area, similar to operational plant provisions in 10 CFR 73.55(g)(7). The staff is considering this change to reduce unnecessary burden on combined license holders undergoing construction and to align 10 CFR Part 26 with the approach used in 10 CFR Part 73.55.
50.34(f)(2)(iv)	K-5	Lessons Learned-Miscellaneous lessons learned- Requirement for a SPDS console	This paragraph requires applicants to have a plant safety parameter display console that will display to operators the minimum set of parameters defining the safety status of the plant. The staff is considering revising this paragraph to require a plant safety parameter module (SPDS). This change will eliminate the need for exemptions given that an integrated SPDS rather than a stand-alone console, reflects state-of-the-art control room design practices for new reactors.
50.71(h)	B-3	Alignment- Maintain and Update the plant-specific PRA	This paragraph requires COL holders to develop a level 1 and a level 2 probabilistic risk assessment (PRA) that includes initiating events and modes endorsed by the NRC one year prior to initial fuel loading.. The staff is considering revising this paragraph to increase one year to four years. This change would align this requirement with the timeframe that consensus standards are updated.

Current Scope (cont'd)

Section in 10 CFR	Item ID	Brief Summary	Full Summary
52.17(b)(1)	G-6	Lessons Learned-Emergency Preparedness-Impediments to Emergency Plans-align with criteria in 100.21 site characteristics that impede emergency plans	This paragraph establishes requirements for contents of applications for early site permits pertaining to site characteristics that could pose a significant impediment to the development of emergency plans. The staff is considering revising this requirement to align with the siting criteria in 10 CFR 100.21 (g).
52.17 (b)(1), 52.18 and 100.20(a)	G-5	Lessons Learned-Emergency Preparedness-Impediments to Emergency Plans-FEMA consultation	The regulations in 10 CFR 52.18 state that a determination on the siting criteria of 10 CFR 52.17(2)(b)(1) will be made by the Commission in consultation with the Federal Emergency Management Agency (FEMA). However, this is not a requirement of 52.17(b)(1) nor is it required by public law. Additionally, this review process would be inconsistent with a license review involving the siting criteria under 10 CFR 100.20(a) which would not require outside consultation. Therefore, the staff is considering revising these requirements to address inconsistencies between 52.17(b)(1), 52.18, and 100.20(a) as to when FEMA consultation is required.
PART 52, Subpart B	H.2-2	Lessons Learned-Part 52 Licensing Process: Change Process: Move 50.59 like change process from part 52 appendices to part 52 subpart B	The current requirements to change the information within the scope of a certified design are contained within each design certification appendix in Part 52. The staff is considering the need to maintain the 50.59-like process in the individual Appendices vs. moving it into Subpart B of Part 52. The reason the staff is considering the change is to simplify the change process in Part 52 and more closely align the Part 52 change process with the change process in Part 50.
52.1 and 52.47(a)	H.3-1	Lessons Learned-Part 52 Licensing Process: Design Scope and Standardization: Add Definitions of Tier 1, Tier 2, and Tier 2* consistent with SECY 19-0034	The staff is proposing to modify the requirements in these paragraphs for applications received after the date of this rulemaking to add definitions for Tier 1 and Tier 2 (and Tier 2* as applicant's choice for Tier 1) consistent with the definitions provided in SECY 19-0034. In addition, the staff is proposing to revise 10 CFR 52.47 to require that the applicant's final safety analysis report identify Tier 1, Tier 2, and Tier 2* information.

Abbreviations

ACRS	Advisory Committee on Reactor Safeguards	ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
ADAMS	Agencywide Documents Access and Management System	NPV	Net Present Value
ASME	American Society of Mechanical Engineers	NRC	Nuclear Regulatory Commission
		NRR	Office of Nuclear Reactor Regulations
BPV	Boiler and Pressure Vessel	OL	Operating License
CFR	Code of Federal Regulations	PRA	Probabilistic Risk Assessment
COL	Combined License	RB	Regulatory Basis
CP	Construction Permit	SAMDA	Severe Accident Mitigation Design Alternative
DC	Design Certification	SDA	Standard Design Approval
DCD	Design Control Document	SOC	Statement of Considerations
ECCS	Emergency Core Cooling System	SRM	Staff Requirements Memorandum
EP	Emergency Planning	SRP	Standard Review Plan
FFD	Fitness For Duty	SSC	Structure, System, and Component
FRN	Federal Register Notice	TMI	Three Mile Island
FSAR	Final Safety Analysis Report	TS	Technical Specifications
IBR	Incorporation By Reference		

THE FUTURE IS NOW

Be riskSMART

Evolving to a Community of Practice

Presentation to ACRS

March 4, 2021

TEAM'S PURPOSE

- Provide a common high-level framework applicable to all disciplines (technical, legal, corporate)
- Address obstacles to using risk information in decision-making
- Do not reinvent the wheel but increase consistency, awareness, and usability of existing risk-informed approaches, e.g., probabilistic risk assessment and enterprise risk management
- Do not revisit existing criteria; note that one of the framework's steps facilitates the explicit consideration of the appropriateness of decision criteria

REMOVING OBSTACLES

Inconsistent management support and expectations (A)

Potential policy flexibilities not reflected in guidance (S)

*Reluctance to adapt processes (T)

Lack of guidance (T)

*Applied too late in process (S)

*Limited consideration of benefits (S)

*Presence of uncertainties (M and S)

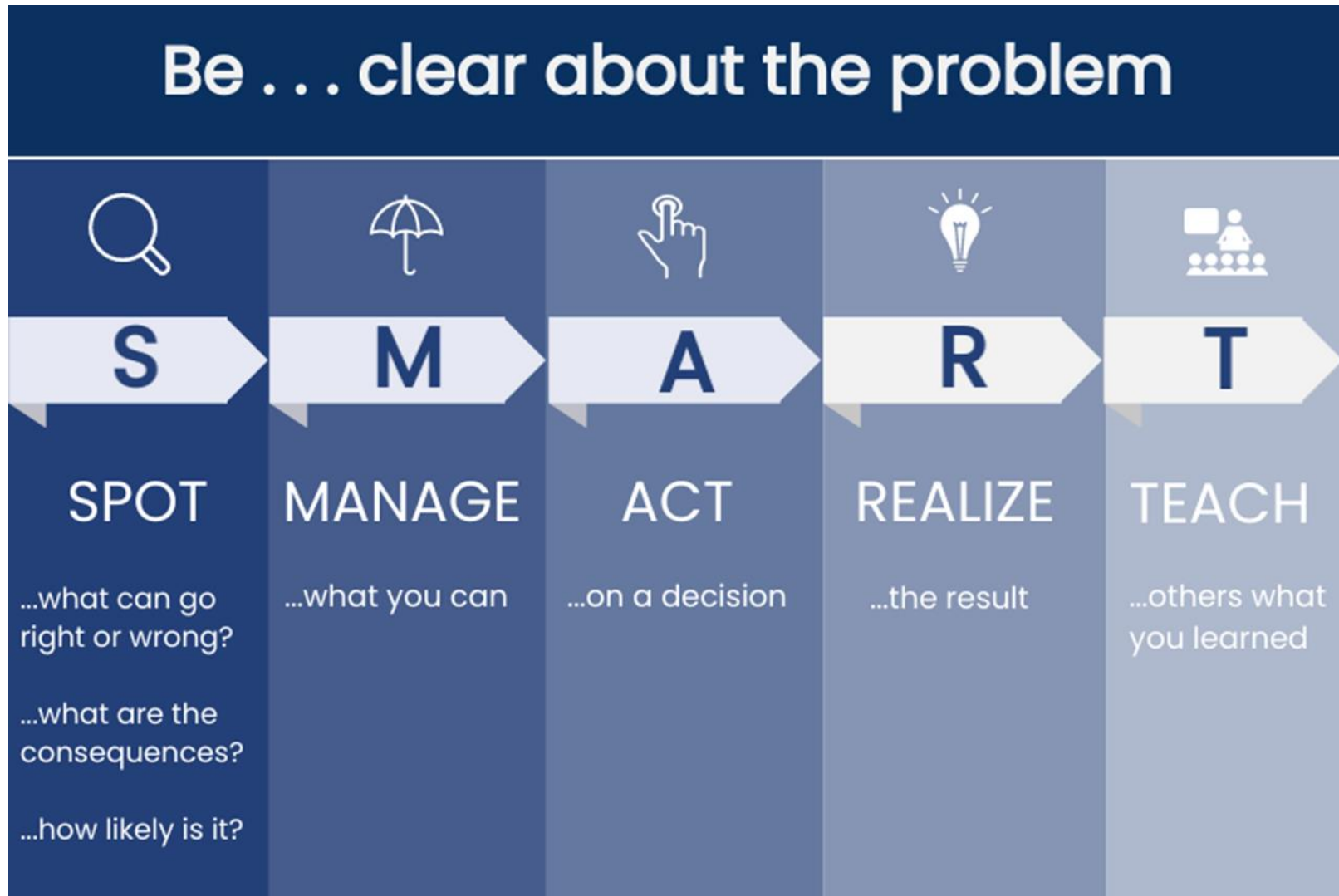
Siloed organizations (SMART)

*Treatment of low likelihood events (S)

*Where regulations provide flexibility, overly rigid interpretation of regulations (S)

Limited awareness of guidance (T)

FRAMEWORK

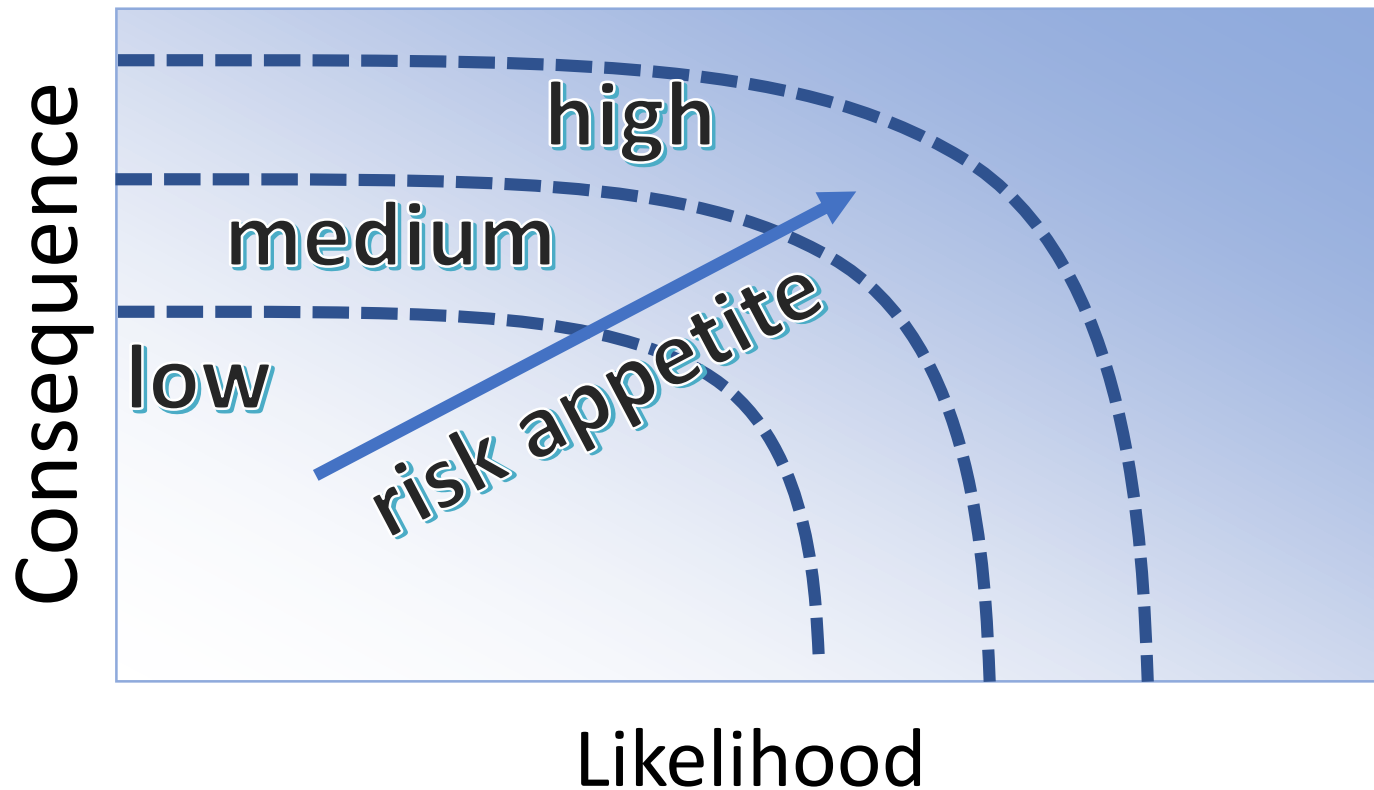


* Note: Step 1, Be ... clear about the problem, includes “What is required?”

Act

...on the decision

After hearing everyone and evaluating the information, document what you “spotted” and “managed,” and make a decision.



INCREASING CONSISTENCY

NRC Uses Its MATERIAL SAFETY



NRC Uses Its OGC LEGAL ADVICE



NRC Uses Its SECURITY, PREPAREDNESS, & RESPONSE



NRC Uses Its REACTOR SAFETY Guidance and Tools to Be riskSMART



Key Principles of
Risk-Informed
Decisionmaking

Regulations Met					
Defense-in-Depth Consistency					
Maintenance of Safety Margins					
Risk Analysis					
Performance Monitoring					
Standard Review Plan (NUREG-0800)	S	M	A		
Regulatory Guide 1.174*	S	M	A	R	
Licensing Modernization Project (LMP)	S	M	A	R	
Enhanced Safety Focused Review (ESFRA)	S	M	A		
Reactor Oversight Process	S	M	A	R	
Backfit Process (MD 8.4, NUREG-1409)	S	M	A		
Process for Emergent Issues (LIC-504)	S	M	A		
Notice of Enforcement Discretion	S	M	A		

* Includes related risk-informed licensing guidance (e.g., RG 1.177, 1.201)

NRC Uses Its RESEARCH



NRC Uses Its CORPORATE SUPPORT Guidance and Tools to Be riskSMART



Overarching
Principles

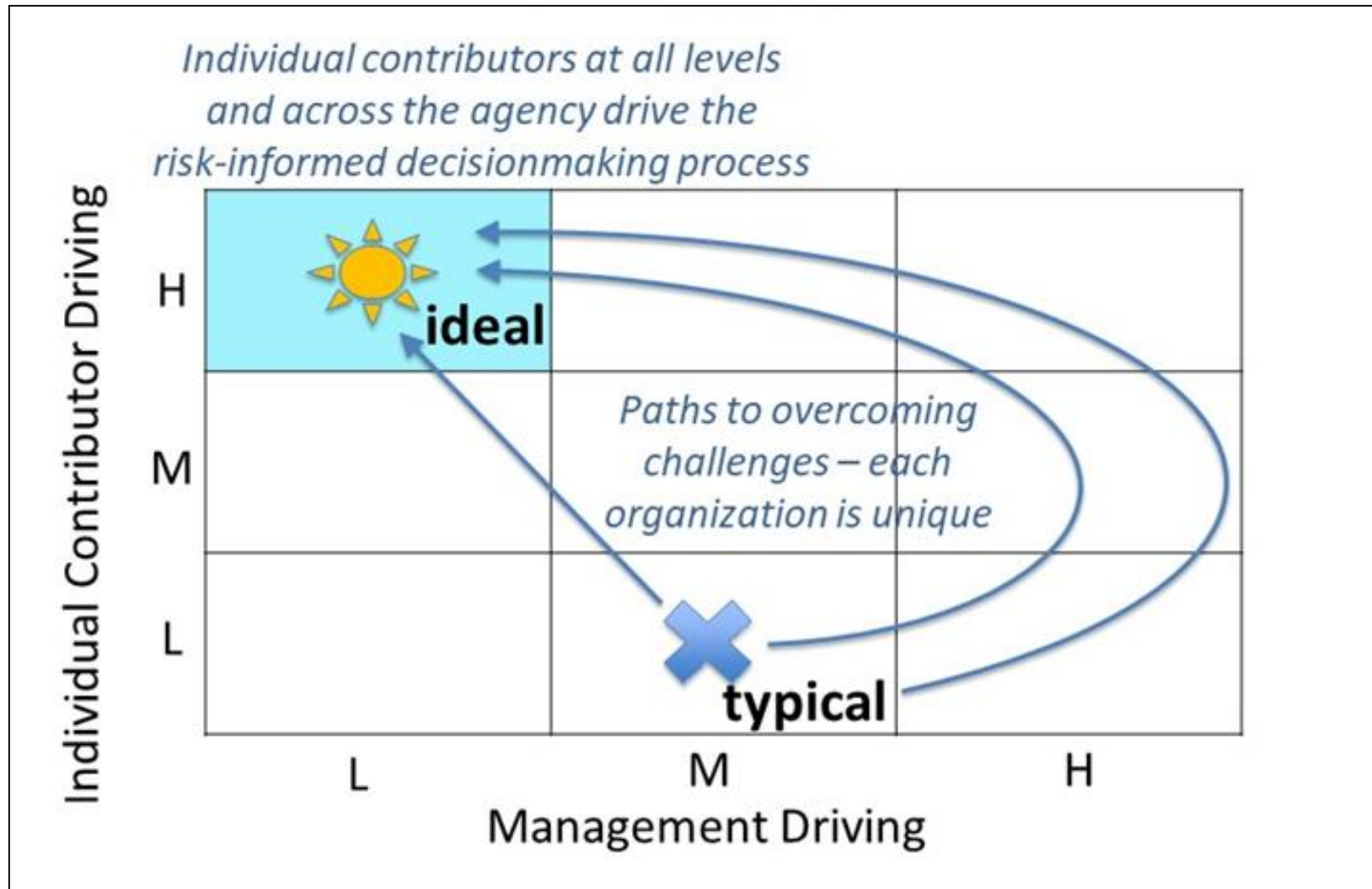
Compliance, Stewardship, Fairness,
Creating and Maintaining Value, Improvement
Accountability, Transparency

Guidance
or
Processes

Enterprise Risk Management (OMB A-123, MD 4.4, OED Procedure 0960)	S	M	A		
NIST Risk Mgmt. Framework (SP 800-37, Rev. 2)	S	M			
GAO Fraud Risk Mgmt. Framework (GAO-19-34)	S	M			
Guidance (DHS, EEOC, GAO, GSA, NIST, OMB, OPM, Treas), Professional Associations	S	M			T
Separation of Duties, Control Activities, Reconciliations (GAO-14-704G)				R	T
Information Systems		M	A	R	T
SECY Paper Process and Commission Briefings	S	M	A	R	
Committees (HCC, IPEC, PSAT, SAT, SSG)			A		
Gov Dashboards, Reports (Congress, OMB)				R	
Audit, Assessment, and BPI Reports; Interagency Working Groups; KM and Training Materials	S				T

* Examples from
corporate support
product lines

HOW DO WE JUDGE SUCCESS?



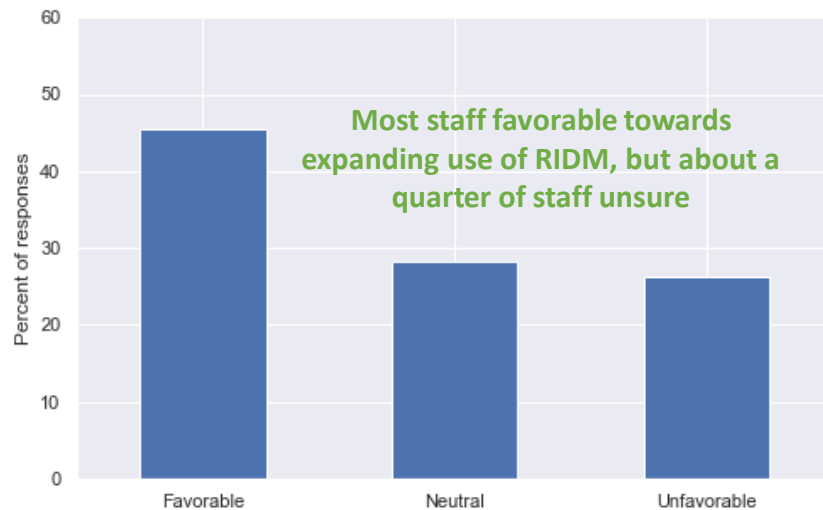
TRAJECTORY OF PERSPECTIVES

2018 NRR RIDM Survey

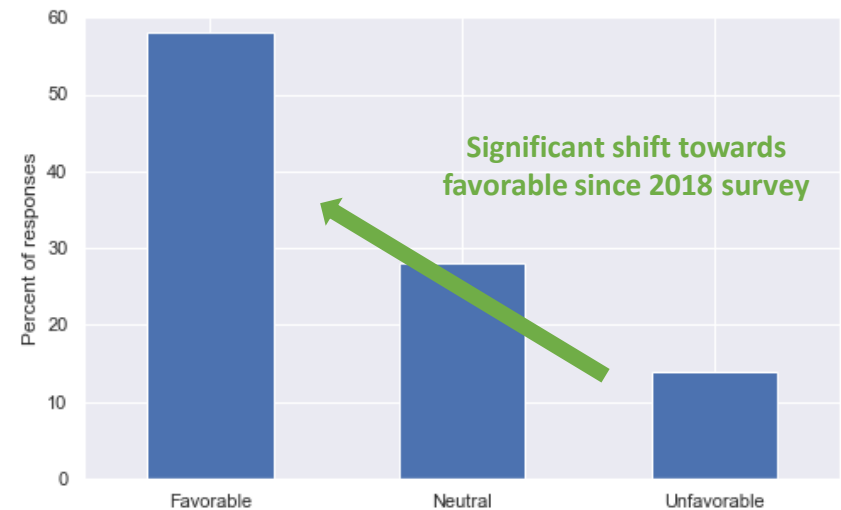


2020 OIG SCCS

It would be appropriate for the agency to expand the use of risk or risk insights

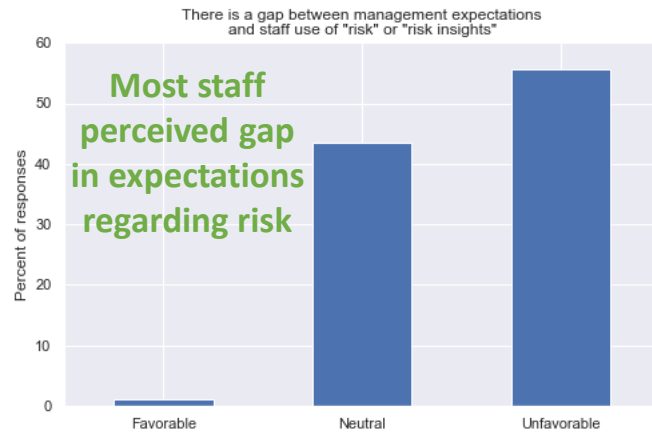


The risk-informed initiative effectively supports NRC's mission

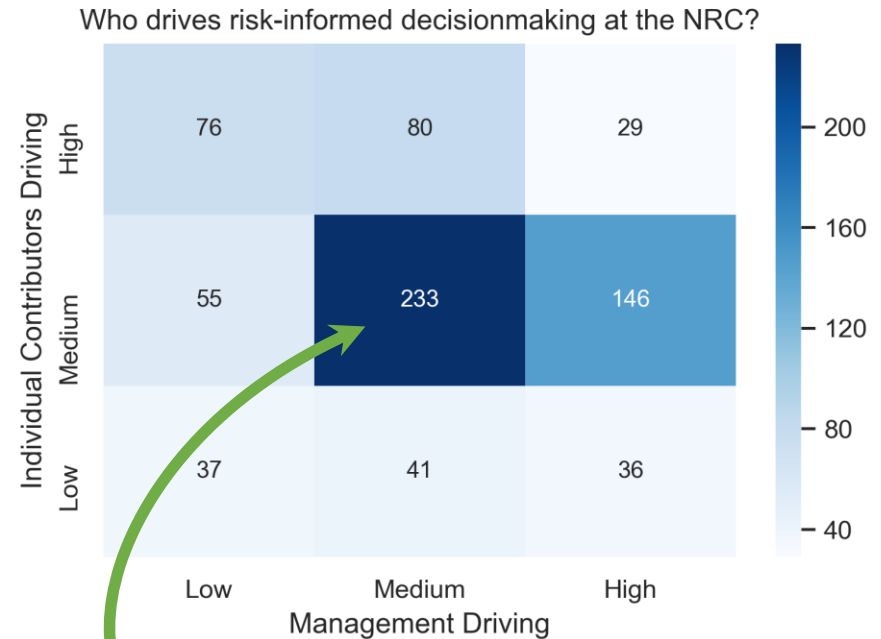


USING STAFF FEEDBACK

2018 NRR RIDM Survey



2020 Be riskSMART Diagnostic Survey



Staff engaged, though some may still perceive gap

Be riskSMART meets staff where they are!

CASE STUDIES

Reactor Safety

- Subsequent License Renewal
- Refueling Outage Inspection

Material Safety

- Onsite ISFSI Inspection with COVID-19

Security, Preparedness and Response

- Security Bounding Time

Legal

- Legal Review Timing

Corporate

- Forward Funding

Research

- Regulatory Readiness for Emergent Technical Issues

Subsequent License Renewal

Challenge

Should we modify the number of key words as part of SLR operating experience audits to improve focus?

Highlights

- Achieved common understanding of the attributes that are most important or require management
- Decision based on a full suite of scenarios that would not have otherwise been considered
- Enhanced transparency and documentation
- Collaborative effort



Refueling Outage Inspection

Challenge: Complete RFO inspections despite...

- Increasingly shorter RFO durations
- Many critical activities
- Limited resident inspector staff

Solution: Utilize dedicated region-based inspector

- Focus on risk-assessment and management
- Select periods of heightened risk and critical activities

Be riskSMART Highlights

- Manage – Address licensee concerns with added inspection
- Realize – Positive feedback from resident inspectors and staff

Onsite ISFSI Inspection with COVID-19

Challenge: Conducting Prairie Island ISFSI inspection during COVID-19

- Dry cask storage activities only performed every 2 years
- Some inspection activities require direct inspector observation

Solution: Multiple Inspection Options Considered

- Five options considered
- Options ranged from cancellation to routine treatment

Be riskSMART Highlights

- Successful use of Be riskSMART to evaluate multiple options
- Consideration of >1 risk area: Oversight and Public Perception
- Act – Remote inspection with onsite follow-up
- Manage - Innovative use of cameras
- Teach – Sharing lessons learned with other regions/headquarters

Security Bounding Time

Challenge

Develop a Commission paper that includes recommendations for providing credit for a broader set of operator actions, including the use of FLEX equipment, and providing credit for response by local, State, and Federal law enforcement in our security inspection program at operating nuclear power plants.

Potential Solutions

A risk-informed concept for protecting against the design basis threat (DBT) that considers the range of capabilities and assets available to licensees that, taken together, provide reasonable assurance that licensees can maintain adequate physical protection of their sites against the DBT.

Two new concepts:

- Implement a new concept, “Reasonable Assurance of Protection Time” (RAPT), which recognizes the existing layers of protection available to sites along with how the safety and security of the site would evolve over time following initiation of an attack, in a revision to existing guidance;
- Provide options for the Commission’s consideration on whether and how to implement a site-specific security bounding time (SBT)

Be riskSMART Highlights

Be...clear about the problem – Recognizing the importance of the first step in the framework.

- In the development stage of the concepts in this paper we were really challenged to look at the problem statement from a different perspective due to challenges in defining the timeframe for survivability of an adversary.

Act...on a decision – Industry is already working toward implementing the RAPT concept.

Legal Review Timing

Challenge: Should the Office of the General Counsel defer formal legal review of certain staff initiatives until after the staff has had some early engagement with external stakeholders?

Be riskSMART Highlights

- Spot – Balance the advantages of a thorough legal review with Staff's eagerness to get early stakeholder input
- Manage – Early and proactive communications with client offices to promote a common understanding (i.e., together build a Risk Appetite context for various areas)
- Teach – This framework can be used to evaluate changes in the timing and scope of legal reviews

Forward Funding

Challenge: How to improve efficiency around the agency's forward funding (prior year obligations available to spend)

Be riskSMART Highlights

- Be ... clear about the problem – Federal-wide issue, opportunity to maximize the use of resources
- Spot – Approach from a neutral perspective, consider challenges and opportunities
- Teach – Proactively manage balances as the year progresses rather than as a metric at the end of the year; and continue working on how budget execution influences budget formulation

Research Regulatory Readiness for Emergent Technical Issues

Challenge: Regulatory Readiness for technical issues not currently addressed in business lines

- Close technical gaps ahead of regulatory needs
- Identify “over the horizon” research with longer-term benefits

Solution: Future Focused Research Program

- Balanced research portfolio addressing a wide range of advances in technologies
- Identifies long term research needs

Be riskSMART Highlights

- Manage – Be cognizant of novel technologies
- Teach – RES seminars & technical workshops

Project Team

Ambassadors

Community of Practice

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***Project Team**

****Executive Sponsors**

2021 Objectives and Key Results

- **Objective:** Increase the use of the Be riskSMART framework across all sectors of the NRC
- **KR1:** At least 85% of staff successfully pass a knowledge check following the completion of Be riskSMART training before the end of calendar year 2021
- **KR2:** The Be riskSMART framework is used to inform the evaluations and analyses that support at least 50% of the key decisions in each office in 2021
- **KR3:** In 2021, each Office submits to the IdeaScale Success Gallery four examples in which use of the Be riskSMART framework improved the timeliness and quality of decision-making
- **KR4:** At least 75% of external stakeholders surveyed by NRC during 2021 agree that the use of risk information has improved the timeliness and quality of the agency's decision-making over the past year.

ADDITIONAL INFORMATION

- Diagnostic tool
- Be riskSMART NUREG (publicly available)
- Case studies
- Posters with crosswalks to discipline-specific guidance
- [Training course in TMS](#)

EMBARK



VENTURE STUDIO

VISION

Give staff the courage to make real change

MISSION

We are creative catalysts who remove barriers to innovation and launch initiatives that improve the way we work to make SAFE use of nuclear technology POSSIBLE

OPERATING MODEL

No two EMBARK projects are alike — so how we engage varies.



We
ENABLE

We
ADVISE

We
PARTNER

We
CREATE

We
TEACH

We INSPIRE.

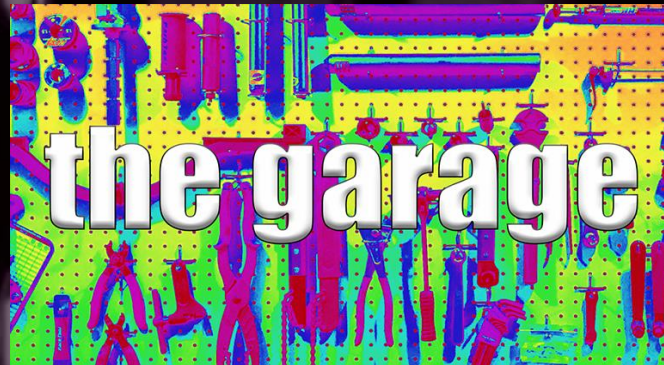
EMBARK

VENTURE STUDIO

DEPARTMENTS

THE GARAGE

The Garage is our process improvement effort. It is the place where we tune up our processes and upgrade our procedures to transform the way we regulate for the nuclear future. We are looking at our approach and prototyping new ideas.



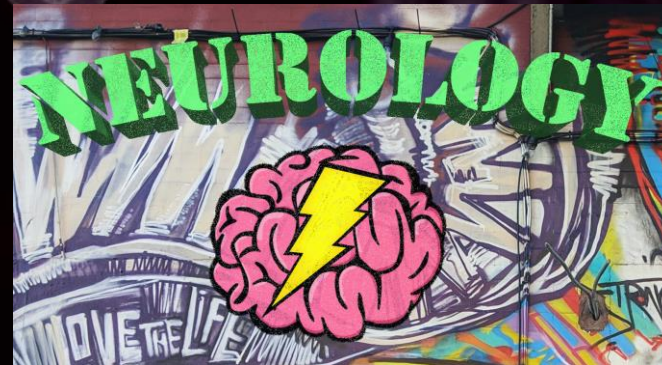
NEXTGEN DATA

NextGen Data is focused on taking data to the masses, leveraging the data we have in innovative ways to bring transparency and greater understanding for better regulatory decisionmaking.



NEUROLOGY

Neurology is about understanding risk, overcoming fear of failure, challenging the status quo, and breaking down barriers. We envision an agency that proactively and creatively adapts to our environment while staying true to our mission.



#HASHtagchange

HAShtagChange is all about improving the experience for our internal and external stakeholders and providing more effective tools that enhance the way we interact with each other.





Risk Informed Process
for Evaluations



Request for Confirmatory
Information

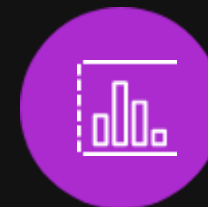


Subsequent License
Renewal Enhancements

EVALUATING *"BUSINESS AS USUAL"*



Oversight and
Inspection Activities



Mission Analytics
Portal



Risk Informed Process for Evaluations

Established a more efficient means to review licensing actions that address low-safety-significance issues within the licensing basis by leveraging current regulations and risk-informed initiatives to allow licensees to request plant-specific exemptions or license amendments for low-safety-significance issues using a streamlined NRC review process.



Request for Confirmatory Information

Created a subset of the standard request for additional information process that may be used to facilitate the licensee docketing of high-confidence, low complexity, factual information that was identified by or presented to the staff during the review process. A more efficient and effective means of communication.



Subsequent License Renewal Enhancements

Partnered with our staff in the Division of New and Renewed Licenses and completed a process improvement evaluation for subsequent license renewals. Identified activities that could be enhanced during the safety review while maintaining effectiveness, many of which are currently being implemented in ongoing reviews.

Conducted an Innovate Campaign seeking regional input for ROP innovation ideas using the Ideascale platform. Currently developing project plans for the candidate ideas. Additionally, developing dashboards and analytics tools for regional uses to enhance data driven decisionmaking and improve inspections.



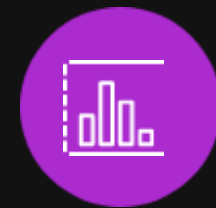
Oversight and
Inspection Activities



Empowering the NRC staff to be more informed, effective,
and agile than ever before through the democratization of
data and data analysis tools.



MAP
MISSION ANALYTICS PORTAL



Mission Analytics
Portal

The MAP Approach



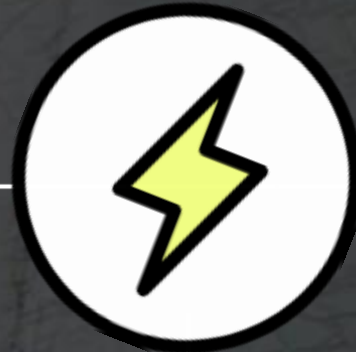
Create the Environment

Create a Data Analytics Environment that contains authoritative data sets that users can access.



Skillsets & Partnerships

Secure data analytics skill sets and partner them with program organizations



Empower Staff

Empower staff by providing them access to the data and tools they need



Technology

Acquire technologies and develop tools that enable more effective analytics and communications



The Benefits of Data Analytics...



Performance

Data analytics has allowed us to track and improve agency performance through reports that provide live feedback in ways that provide depths of insight that were not possible before.



Analysis and Estimation

The tools we have developed enable us to better track historical actuals in ways that will allow the agency to improve the way we estimate moving forward.



Workload Management

Analytics tools have been created that provide leadership more effective ways to track workload distribution among staff members so that the organization can more optimally allocate resources for mission accomplishment.



Resource Management

Analytics tools are also being developed and used for the management of agency resources to promote the optimal allocation of resources.

Demo

MAP-X – The External Portal

The purpose of MAP-X is to fundamentally transform the way we engage with our stakeholders by empowering them with data analytical tools, including a secure, flexible, and personalized self-service gateway to **retrieve, submit, and/or interact** with regulatory related information and assessment tools through a standard web browser.



Key Functions of the External Portal

Current Status



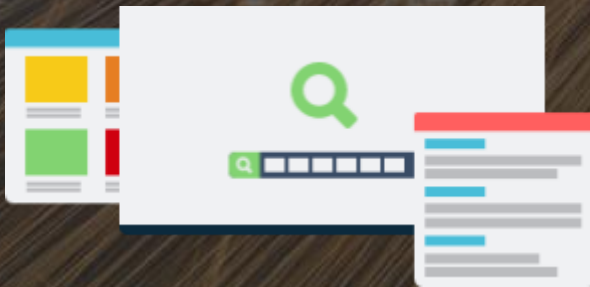
Submissions



Billing Information



Related Documents



Reading Room for Ongoing Requests



Connection to NRC Systems



EMBARK

VENTURE STUDIO

A stylized, multi-colored geometric logo resembling a star or a cluster of triangles, positioned between the words 'EMBARK' and 'VENTURE STUDIO'. The logo features a central point with several lines radiating outwards, forming a complex, multi-faceted shape. The colors transition from blue at the top to pink and orange at the bottom.

COME FLY WITH US!