UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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34TH REGULATORY INFORMATION CONFERENCE (RIC)

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COMMISSIONER BARAN PLENARY

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TUESDAY,

MARCH 8, 2022

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The Technical Session met via Video-Teleconference, at 9:45 a.m. EST, Jeff Baran, Commissioner, NRC, presiding.

PRESENT:

JEFF BARAN, Commissioner, NRC

RAY FURSTENAU, Director, Office Nuclear Regulatory Research, NRC

P R O C E E D I N G S

9:45 a.m.

MR. FURSTENAU: Welcome back everybody to the 2022 virtual RIC. Before we get into Commissioner Baran's remarks, I just want to remind everybody, throughout his remarks you can submit questions and we'll try to answer as many as we can after Commissioner Baran's remarks.

Now, it's my pleasure to introduce Commissioner Baran. The Honorable Jeff Baran was nominated by President Obama and sworn in as a commissioner on October 14, 2014. He's currently serving a term that ends on June 30, 2023.

During his tenure on the Commission, Commissioner Baran's priorities have included maintaining a strong focus on safety and security, improving oversight of power reactors entering decommissioning, boosting the openness and transparency of Agency decision-making, promoting environmental justice, and preparing to review and oversee the safety of new technologies. Commissioner Baran has visited dozens of NRC-licensed facilities.

Before serving on the Commission, Commissioner Baran worked for the U.S. House of

Representatives for over 11 years.

Originally from the Chicago area, Commissioner Baran earned a bachelor's degree and master's degree in political science from Ohio University. He holds a law degree from Harvard Law School. Commissioner Baran.

COMMISSIONER BARAN: Thanks, Ray. Good morning. It's great to be here at another RIC. I know we were all hoping to see each other in person this year, but this virtual conference is a great opportunity to show what's happening at the Agency, and discuss current technical and policy issues.

I admit I had been looking forward to a return to RIC humor. But as we all know, this isn't a time for jokes. It is a time of great concern and it is a time to stand in solidarity with the Ukrainian people and our colleagues at the State Nuclear Regulatory Inspectorate in Ukraine.

We honor their resolute commitment to nuclear safety under incredibly perilous and stressful conditions.

As we monitor the situation in Ukraine, three priorities remain at the forefront of NRC's domestic work: climate change, the response to the

COVID-19 pandemic, and the pursuit of environmental justice.

There's a growing consensus among policymakers that meeting ambitious climate goals will involve nuclear power. NRC's focus is on ensuring the safety and security of whatever amount of nuclear power is used.

When it comes to tacking climate change, I see NRC having a role in two main areas, the current operating fleet and new reactors.

For the operation of existing nuclear power plants now and into the future, NRC's job is to provide strong safety and security standards, and rigorous independent oversight.

This goes to the very core of the Agency's mission. I want to highlight a couple of important issues related to the operating fleet this morning. The first is subsequent license renewal, which allows nuclear power plants to operate for up to 80 years.

I want to emphasize that the review of subsequent license renewal applications has been and continues to be a high priority for NRC.

To comply with the National Environmental

Policy Act and ensure that subsequent license renewal decisions rest on a firm legal foundation, it is essential that we update the generic environmental impact statement to examine the 60-to-80-year subsequent license renewal period. The license renewal regulation also needs to be revised so that the updated generic environmental impact statement findings can then apply to subsequent license renewal applications.

In my view, these issues should have been addressed two years ago. That didn't happen. Now is the time to fix this problem so the NRC can move forward expeditiously with these important licensing reviews.

Waiting to correct the clear deficiencies of the Agency's environmental analysis would only cause further delay.

New fuel technologies are also a major focus for the Agency. Vendors and licensees are developing higher enrichment fuels that with higher burn-up could allow additional pressurized water reactors in the fleet to move to a 24-month refueling cycle.

They are also continuing to look at fuels

that can better withstand higher accident temperatures and provide longer coping periods during station blackout conditions.

I look forward to finalizing the 50.46(c) rulemaking, which will help the Agency get ready for new fuel technologies.

Here's why this rule is important. Currently, NRC's regulations recognize only two types of fuel cladding for a full core: Zircaloy and ZIRLO.

The regulations also recognize only one type of fuel pellet, made of uranium oxide. But vendors are looking at other cladding and pellet materials.

Because these new materials are not addressed by our regulations, licensees would need to seek regulatory exemptions to use them. That's not efficient and it makes it harder to innovate in ways that could improve safety.

The 50.46(c) rule will move the Agency to a technology-neutral, performance-based approach that applies to all cladding materials and fuel designs, so applicants will no longer need to seek regulatory exemptions from the existing requirements.

There is also an important safety component to the rulemaking. Findings from an extensive research program called into question the technical basis of the existing regulation.

The science shows that the combination of temperature and oxidation limits established in the current regulation are not stringent enough to prevent embrittlement of the fuel cladding.

And the existing regulation does not address degradation mechanisms revealed by the research, such as breakaway oxidation.

Finalizing the rule will represent significant progress on the framework for new fuel technologies. It will address the safety issue and adopt the technology-neutral approach that lifts a current barrier to innovative fuel designs.

I agree with the NRC Staff that it also makes sense to initiate a separate rulemaking to consider changing the regulations that make it difficult for an applicant to pursue a fuel design with greater than five percent enrichment.

A rulemaking will allow the Agency to evaluate the technical basis of the current five percent limit, and how increasing enrichment would

affect criticality safety.

In addition, the rulemaking process will give stakeholders the opportunity to weigh in on the pros and cons of changing existing requirements.

The licensing and oversight of new reactors is NRC's other main climate-related role. New reactor designs have the potential to be safer than existing designs.

Our goal is to establish the right regulatory framework for the review and safe operation of new technologies, such as advanced reactors. This is the Part 53 effort.

In my opinion, the NRC Staff working on this rule are doing an incredible job. It isn't easy to create a risk-informed, performance-based, technology-neutral framework that can work for molten-salt reactors and high-temperature gas-cooled reactors, micro-reactors, and reactors of several hundred megawatts.

The Staff is also trying to shape the rule to accommodate applications in which probabilistic risk assessment would play a leading role, as well as applications where PRA would not be as central to the safety case.

It's challenging, but the Staff is making good progress. And I think it makes sense for them to take the additional time to develop a deterministic pathway option. It's good to allow for different types of safety cases.

Yet, we need a rule that includes enough detail so that we avoid the problem of evaluating custom safety cases in a way that results in uncertainty about what NRC will find acceptable.

As the staff crafts the regulatory text, they are rightly focused on ensuring that Part 53 results in at least the same level of safety as the existing Part 50 and Part 52 frameworks.

Adequate protection is the minimum NRC is charged with doing under the Atomic Energy Act, not the maximum.

Adequate protection isn't the ceiling for NRC safety standards. It's the floor. The Agency has required many important safety measures over the years that went beyond adequate protection.

These include cost-beneficial, substantial safety enhancements that provide valuable defense-in-depth.

It's important that the essence of these

kinds of key safety enhancements be carried into Part 53. Not every requirement is going to be retained in the exact same way in Part 53, because we're talking about different technologies. But the essence of the safety-enhancement needs to be preserved. Otherwise, we could end up with a Part 53 regulation that is less protective of public health and safety than the current regulations.

Obviously, there's a lot to consider. This is an exciting effort and I'm confident that NRC can strike the right balance.

As the Agency moves forward with the rule, the Commission will also address significant related policy issues, such as emergency preparedness, siting, security, and the Generic Environmental Impact Statement for Advanced Reactors.

There's a lot of work to be done and I look forward to hearing a broad range of stakeholder views on the issues.

Responding to the COVID-19 pandemic remains another major priority for the Agency. This challenge is obviously not unique to NRC or our licensees.

The Agency has been largely operating

virtually for the past two years. We've had the IT in place to carry on effectively.

Going forward, we're sure to see many employees teleworking a few days a week. We're also in the midst of a return to normal in-person inspection.

Resident inspectors are now back on site and NRC's regional offices are getting back to in-person, team safety and security inspections.

During the pandemic, some inspections were performed remotely out of necessity. I see that as a temporary measure that made sense during an extremely unusual and challenging public health emergency.

As we move forward, there is broad agreement on the value of, and need for, in-person safety and security inspections.

Our inspectors have found that onsite inspection with direct observation of licensee activities is far superior to remote inspections. They point to numerous examples of issues that would not have been detected remotely.

They describe the clear difference between direct observation of what the licensee is

actually doing, and looking at a blurry camera view, or just relying on paperwork.

If our goal is performing a quality inspection -- and of course that is the goal -- there is just no substitute for having independent NRC inspectors onsite.

NRC is embracing technologies that allow inspectors to monitor plant conditions remotely as a valuable tool, but not as a substitute for in-person inspection.

Due to the unique health risks of conducting full force-on-force inspections at nuclear power plants during the pandemic, the Agency relied on limited scope physical security exercises for several months.

Then, as conditions improved, force-on-force inspections restarted with just one triennial exercise at each plant.

It's a positive development that, at most plants, we are now able to safely return to the normal complement of two force-on-force exercises.

Like many other federal agencies, NRC is increasingly focused on environmental justice. Last year President Biden issued an executive order on

advancing racial equity. He also issued an executive order on tackling the climate crisis, which directed federal agencies to "make achieving environmental justice part of their missions."

A White House Environmental Justice Advisory Council was established. And agencies started taking action.

I continue to believe that NRC must meet the moment. We must be ambitious. We should be asking tough questions about the way the Agency has traditionally operated.

And the Agency is energized. In April, the Commission unanimously tasked the Staff with performing a systematic review of NRC's programs, policies and activities.

The Staff team is engaging a broad range of stakeholders and developing recommendations to improve how the Agency pursues environmental justice.

I appreciate the Staff's outreach to stakeholders and disadvantaged communities that may not have historically engaged with NRC.

The Staff invited written comments, has held public meetings, both virtual and in-person, convened a listening session and panel discussion,

and initiated consultations with interested tribal governments.

The Staff Environmental Justice Team has several issues to look at. They are considering the practices of other federal, state and tribal agencies. They are evaluating whether NRC should go beyond the National Environmental Policy Act in incorporating environmental justice into the Agency's decision-making.

And the team is considering whether establishing formal mechanisms to gather external stakeholder input, such as an advisory committee, would benefit future environmental justice efforts.

The team is also reviewing the adequacy of the Commission's existing environmental justice policy statement, which was issued in 2004.

Even at that time, some stakeholders thought the approach announced by the policy statement was too narrow. For example, the Bush Administration EPA was critical of what NRC was doing.

The Staff team is evaluating NRC's adjudicatory procedures as part of its review. This is an aspect of NRC's work that requires a close look.

Our adjudicatory procedures are called "strict by design," and I worry that over the years NRC has erected a series of complex procedural hurdles that make it very hard for interested stakeholders, including disadvantaged communities, to have their concerns addressed in a hearing.

There may be ways to make the adjudicatory process less onerous, more efficient, and fairer, for everyone involved. We should explore that potential sweet spot.

I'm eager to see the Staff team's evaluation of each of these critical issues, its analysis of all the stakeholder feedback, and the different options for moving forward.

I don't pretend to have all the answers about where the Agency should head. But I'm convinced that we need to pursue environmental justice with determination, and an openness to the voices of communities that haven't always had a seat at the table. I want to see NRC achieve significant, tangible results on environmental justice.

As we take on these three major priorities, NRC is focused on its workforce. We're facing a significant hiring challenge. We have a

large number of employees who are eligible for retirement and we're seeing attrition each year of about six to eight percent.

That means we need to hire about 200 people from outside the Agency every year to sustain our workforce. It's more like 300 this year.

Compared to the last several years, that is a lot of hiring. And that hiring is necessary for the Agency to be ready for the work ahead of us.

It's a bit daunting, but very exciting. It presents a huge opportunity to boost our inclusion efforts by reaching a diverse pool of applicants, and then bring people into the Agency who really represent a cross-section of America.

As part of the effort to foster a diverse future workforce for NRC, I fully agree with Chairman Hanson that NRC should reinvigorate our terrific Minority Serving Institutions Program.

There are opportunities to make progress on other important issues this year. I'm looking forward to NRC issuing a proposed rule to establish binding cybersecurity standards for fuel cycle facilities.

Given the dynamic cyber threat

environment, this step is long overdue. Enforceable, performance-based cybersecurity standards like those already in place for nuclear power plants are essential.

NRC is also moving forward with a vital rulemaking on radioactive source accountability. Unlike for Category One and Two sources, there is currently no regulatory requirement for a vendor to verify the authenticity of a license for Category Three sources before selling them.

The Government Accountability Office highlighted this regulatory gap in 2016, when it found that a fictitious company established by GAO could produce counterfeit Category Three possession licenses and obtain commitments from vendors to sell it a sufficient amount of material to reach Category Two levels.

To solve this problem, NRC will propose requiring vendors that sell radioactive materials to verify Category Three possession licenses through the license verification system, or the appropriate regulatory authority.

License verification is a targeted solution to closing the regulatory gap highlighted by

GAO. Because real time verification occurs prior to the transfer of a source, it can stop an illegal transfer.

This would meaningfully address the problem identified by GAO, by preventing unauthorized entities from using counterfeit or altered licenses to obtain radioactive materials.

In response to concerns about the lack of routine oversight and accountability of generally licensed Category Three sources, NRC is also reevaluating whether general licenses for Category Three sources are appropriate.

NRC needs to be open to new ways of accomplishing our mission. We need to encourage and embrace innovation, while recognizing the value of regulatory approaches that have proven effective over time.

I think the Commission's recent decisions on the regulation of medical uses of radioactive materials highlight this approach. We should keep what's working and change what needs changing.

Under NRC's regulations to administer radiopharmaceuticals, a physician must be an authorized user, approved by NRC or an agreement

state.

There are two pathways for a physician to satisfy NRC's training and experience requirements to become an authorized user: certification by one of the medical specialty boards recognized in the regulation, or the alternate pathway of completing 700 hours of training and a supervised work experience.

Over the past several years, NRC has been assessing how well this framework is working. After reading the extensive public comments, holding Commission meetings addressing this topic, and talking with numerous knowledgeable stakeholders, including physicians, patient advocates, radiopharmaceutical developers, and state officials, the Commission concluded that NRC should maintain its existing training and experience requirements.

We heard persuasive arguments that the current training and experience framework is working effectively to ensure radiological safety, and is not resulting in a shortage of authorized users to administer radiopharmaceuticals.

Many stakeholders were concerned that a change or reduction in the training and experience

requirements could compromise radiological safety.

At the same time, the Commission understood the stakeholder interest in having a regulatory framework as well-suited to innovative radiopharmaceuticals.

So, we supported the NRC Staff's separate proposal to update Part 35 to establish generally applicable, performance-based requirements for emerging medical technologies, to ensure radiation safety for workers, patients and the general public.

Performance-based standards should eliminate the need to prepare case-by-case guidance documents for every new model, vendor or use. They can also do a better job than the existing regulation of addressing both well-established and new medical technologies.

As you can tell, we have a lot of work ahead of us. It's an exciting time of progress. There's an openness to new ideas and new approaches, with a strong focus on our core mission of protecting public health, safety, and the environment.

After the past two years, I'm enthusiastic about getting back to more face-to-face conversations, to hearing your thoughts and feedback.

I've had the chance to visit several plants in recent months. Those visits are always worthwhile because I get to see facilities and equipment firsthand, check in with NRC's resident inspectors, and talk with licensees and workers about their concerns and areas of focus.

So, I want to thank those of you who have hosted me at your sites. I look forward to getting out to additional sites during the coming months.

With that, I'm happy to answer your questions. Thank you.

MR. FURSTENAU: Thank you, Commissioner Baran. And I know we have time for questions. There's quite a few. We'll get to as many as we can, but we might not get to them all.

The first question, the NRC uses the term risk-informed quite a bit. How do you consider risk, or risk information, in your decision-making?

COMMISSIONER BARAN: Great. Well, risk is another major area of focus for the Agency. I see the kind of Be RiskSMART philosophy being used throughout the Agency, whether it's on technical decisions, on corporate decisions, or budget decisions.

So, I think it's very good and it's kind of a unifying focus for the Agency. There's a lot of work on risk-informed tech specs, 50.69 applications, we're seeing it relevant to existing rulemakings, ongoing rulemakings, updates to inspection manuals.

What am I looking for when I'm trying to make a decision about where we should head? I'm really looking for the complete safety case. Right?

If we're going to make a change, if we're going to take a step, I want to understand what's the safety case for that decision.

And I'm going to want to look at probabilistic risk assessment. I'm going to want to consider non-quantitative risk insights that may be available, operating experience, inspection experience, engineering judgment.

It all comes together to making these decisions. And that's really the essence of a risk-informed decision, right? It's not going to be a pure PRA-based decision. We've got to consider all these factors and all the available risk insights, and engineering judgment of course, to come up with the right decision.

And as part of all that, defense-in-depth remains a core principle for the Agency. It's a core concept as part of risk-informed decision making.

You know, I think actually advanced reactors in Part 53 is a pretty good example that PRA can play an important role. But it isn't the only tool out there, right?

And so, the initial draft language of the advance reactor rulemaking really focused on applications where the safety case would primarily be based on probabilistic risk assessment.

The Agency heard from a number of stakeholders, a number of developers. Well, they saw different ways of potentially putting forward a safety case.

Particularly for some of the micro-reactors and others, they wanted to be able to approach it more deterministically, or have PRA play a role, but maybe not the lead role, in their safety case.

And so, I'm glad to see that the Staff is taking the time to create those kinds of different pathways for a safety case. But in the end, we have to see what's the safety case for making a decision.

And that includes all the factors, PRA and others.

MR. FURSTENAU: Okay, thank you Commissioner. Several questions on environmental. So, I'll try to get through those and I'll combine some when it makes sense.

The first one, in your view will the NRC need to undertake additional rulemaking to adapt its NEPA regulations for subsequent licensing?

COMMISSIONER BARAN: So, the Commission recently decided that we did need to proceed with rulemaking in this area. And there are really two key things that need to be done.

Right now, the generic Environmental Impact Statement for license renewal did not really look at 60 to 80 years. That is the key subsequent license renewal period, and the document made it pretty clear it didn't look at 60 to 80.

And so, the main thing we have to do to comply with NEPA is to do an evaluation of the environmental impacts from 60 to 80 years that actually matches the subsequent license renewal period.

And so, because the generic Environmental Impact Statement is in regulation, we need to do a

rulemaking. But there's another piece that involves rulemaking, which is that actually the subsequent license renewal regulation currently has the word "initial" in there. The use of the GEIS essentially is limited to "initial" license renewal for these purposes.

And so, to address that to allow the updated GEIS once it's been updated to be used in these subsequent license renewals, we've got to make a tweak there.

So, a couple of things to do by rulemaking. But I think the main thing we really need to do there is do the environmental analysis. We've got to make sure we do the environmental analysis for that full 60-to-80-year subsequent license renewal period.

MR. FURSTENAU: Okay, thank you. You spoke of the importance that the Biden Administration has placed on fighting that global climate change. Given that the nuclear plants generate no carbon, shouldn't that beneficial aspect of their operation be recognized and credited in the environmental impact process for new and existing nuclear power plants?

COMMISSIONER BARAN: Yes. And so, it's definitely a part of the NEPA environmental review. You look at an environmental impact statement, it's going to talk about what are the alternatives to this project.

It's going to kind of have an analysis of the different alternatives. And part of the environmental impact that's going to be discussed in the environmental analysis is going to be, impacts on climate change, emissions, those issues. So, those are included and something the NRC is already doing. And of course we should be considering all the environmental impacts of the decisions we make.

MR. FURSTENAU: Okay, thank you. A short question here, environmental justice. How does environmental justice differ from equity?

COMMISSIONER BARAN: Well, when I look at environmental justice, and I'm really passionate about this issue, I want to make sure we have the appropriate focus on it at NRC, and I'm excited that we're doing the work we are doing to take a look at it.

It's traditionally been looked at as avoiding disproportionate impacts on environmental

justice communities. And that's an important aspect to look at.

And so, whereas some of the equity issues are maybe less directly applicable in terms of the executive order to NRC's work, we're not an agency that does a huge amount of contracting, for example.

We have some contracting and our folks who work on that are actually really excellent in terms of small business and minority-owned contracting.

But that's not the thrust of what NRC does. And so, when I think about where are the opportunities here, I think about asking questions substantively. What can we do in our decision-making to promote environmental justice and recognize that as a core value?

But also our processes. Are our processes adequately designed to be accessible for disadvantaged communities? Make sure that people can understand our processes and use them in a reasonable way.

And so, that means looking at our adjudicatory processes. It means looking at the way we interact and consult with tribal governments. It

makes sense to really think that through.

Right now, we're taking this approach of largely going through NEPA. Is that the right way to go? Should we think more broadly?

We need to be thinking about the policy statement -- the existing Environmental Justice Policy Statement.

As I've kind of alluded to in my remarks, there's been a view out there, really since it was put out, that it may be too narrow in its approach. And it kind of reads like a legal brief and it kind of reads like a litany of all the things NRC isn't going to do on environmental justice, and I think we really can do better than that. And I think we should. And so, I'm looking forward to, it's only going to be a short time now before we see the NRC Staff team's recommendations and their analysis of all the different options.

And I'm excited to see that. I'm excited to delve in. And I've been following all the meetings closely, either watching them or reading transcripts, reading the comments.

I think people are really engaged on this and they're hopeful. And now, we've got to take the

important next step of really thinking through what are the improvements we can make.

MR. FURSTENAU: Okay, thank you. Next question is on adequate protection. Would viewing adequate protection as the floor be considered disingenuous? There are many other programs out there -- for example, INPO -- that are there to raise the standard. How can adequate protection serving as the floor support consistent implementation of the Agency's mission?

COMMISSIONER BARAN: Yes, well that really is the history of NRC over the decades. And it's important not to lose sight of that.

I mean, our basic mission under the Atomic Energy Act is to ensure reasonable assurance of adequate protection of public health and safety.

But the entire way NRC has regulated for decades, in Part 50 and Part 52, when you look at the backfit rule, and imbued in all of that is the view that there are a number of times where NRC will go beyond adequate protection.

That is the essence of a cost-justified substantial safety enhancement. And a lot of very important requirements over the years that have had

tremendous safety benefits have been those types of enhancements.

And so, the point I'm making there, and I don't think it really should be controversial, I think it's the way the Staff is looking at it, that within Part 50 and within Part 52, there are many aspects of those regulations that go beyond adequate protection right now, and have for years and years and years.

And so, if we created a Part 53, that's just adequate protection, it'll be less than what we've been doing. It'll be less than what's in Part 50, it will be less than what's in Part 52.

And so, the point I'm making is really just to kind of focus for a moment on that reality, that the Agency has often gone beyond adequate protection, and rightly so. A lot of those have been very important safety and security requirements.

And so, the whole point of Part 53 is you have new technologies that aren't exactly like the technologies we've seen historically, and we want to have a framework that's adapted to them.

And we're going to have requirements and current regulations that are going to make sense for

Part 53, and some that aren't.

But where we have gone beyond adequate protection, where we have done something more and have those safety enhancements, we want to make sure we are capturing the essence of that in Part 53 so that we fulfill the promise that Part 53 is going to be the same level of protection that you got in Part 50 or Part 52.

And that's really the only point I'm making. That's not a change. That's really what the Agency has been doing for decades.

MR. FURSTENAU: Okay, thank you. This is a Part 53 question, since you were speaking about Part 53. When will Part 53 be ready for use?

COMMISSIONER BARAN: Well, that's a good question and a reasonable question. And so, kind of backing up, NRC has a statutory direction basically that had about seven years to get the regulation done.

The Commission thought we can do it faster than that and it would be useful to have the regulation and the framework in place before 2027, I think is what the statute has.

And so, there was an aim to get it done by 2024. We got a lot of feedback, and the Staff did

too as they were going through the process, that there was an interest in a more deterministic pathway, which I don't think anyone was really -- I don't think the Staff was really expecting when they started the rulemaking.

For years the focus has been more on risk-informed, probabilistic risk assessment as the center of a safety case-type approach.

And that was really the licensing modernization project that industry was working on and DOE was involved, and then the Commission in my time here kind of endorsed as a principle going forward.

And so, I think that was really the expectation, that this is what applicants were looking for. They were looking for something that would really be very PRA-focused.

Well, what the Staff found when we had all these public meetings and they were gathering information, is that's true. There are a set of vendors and potential applicants that really do want to have PRA at the center of what they're doing and at the forefront of the safety case.

But there are quite a few that don't,

that really had other concepts in mind, where, yes, you'd have PRA would be involved, but they're going to proceed with a different kind of safety case.

And from them we heard this interest in something more deterministic. And so, the Staff thought it made sense to take the time to make those changes. The Commission agreed that if that was a pathway that had a lot of interest, we should scope that out too and take the time to do it right. And so, the Staff's doing that.

And we still have a ways to go. Hopefully, in 2025, we're going to see the framework in place.

But in the meantime, the Staff is benefitting from all this thinking about the framework. And so, for an applicant that comes in the door tomorrow, the Staff's very far along in its thinking about how it would approach those reviews.

And the pre-application discussions with vendors and potential applicants are so critical, because that really gives the Staff an opportunity to understand the technology, understand the particular application and what the vendor has in mind, how they plan on demonstrating their safety case.

It gives the Staff an opportunity to flag areas where there might be gaps or potential concerns. It's work so that when we get the application, it's as complete as it can be and it's based on the foundation of a lot of mutual understanding between the NRC Staff and the Applicant about what needs to be demonstrated and what the Agency is going to find acceptable.

And so, even though the whole framework isn't there, I think the Staff is ready to do these reviews and we have good ongoing discussions and pre-application. We have one application in-house where I hear things are going very, very well, very smoothly.

So, yes, the framework is important. Yes, we want to get that right. It's a key priority. But we have to do two things simultaneously. We've got to be getting that framework in place, and simultaneously folks are coming in the door with their applications, actually a variety.

And we have folks who are talking about using Part 50 and seeking a construction permit, we have folks who are talking about Part 52 design certification, or in some cases, just going straight

to a combined license.

And so, we're seeing a real variety of interests in the different avenues. And that's great. That's perfectly fine. And with pre-application engagement, the Staff can be ready for those different approaches.

MR. FURSTENAU: Okay, thank you. You mentioned in your remarks about cybersecurity. Is there anything in the area of cybersecurity that's going on that keeps you awake at night?

COMMISSIONER BARAN: Well, I'll say this. The Commission, we get pretty regular cybersecurity briefings. We have closed Commission meetings for obvious reasons, with classified information, related to cybersecurity, with other federal agencies.

One never leaves one of those meetings feeling good. It's a persistent threat environment, it's a constantly evolving threat environment. And as an Agency, we need to be ready and we have to make sure our licensees are ready for that.

And on the power reactor side of things, I feel pretty good. We have a good regulatory framework in place. It is performance-based, as you

would expect. I mean, this is not an area where you're going to require a specific widget or a specific fix, because it's just changing too quickly. It's going to be immediately out-of-date.

And so, we have performance-based requirements. I think they're working well. The Staff does the inspections and just recently completed the last of the full first round of inspections of all the sites on cybersecurity.

So, that's pretty good. I'm feeling like we are in good shape there. One of the things I would highlight, we do have a gap right now that we need to fix. It's on the fuel cycle facility side.

There, we do not have the same binding performance-based cybersecurity standard. We've been at a rulemaking for a while now, and looking forward to completing that rulemaking, really at this stage just to get the proposed rule out and so we can get comments on it.

Because that's an area where really, I think, we need to take action. Given the environment we all recognize we're living in, that's a common sense step that is long overdue.

MR. FURSTENAU: Okay, thank you. I've

got a number of questions related to the COVID emergency. And I'll try to paraphrase them into one question for you.

You had remarks about the COVID emergency and what the NRC was doing as well. But as we hopefully emerge from the emergency, what are the main lessons learned do you think the NRC as a regulator should take away from this experience?

COMMISSIONER BARAN: Well, when I think about the oversight of our licensees, and let's focus on that for a moment. I think there are a couple of key lessons from that.

One thing we learned, for a while there it really wasn't safe to have our resident inspectors at sites very often. It wasn't safe to do these large team regional inspections, force-on-force, EP and other things. We weren't doing a lot of the important inspection work we normally would.

And that was just the reality of the situation. We were in an extraordinary kind of once-in-a-century situation, and we weren't doing the level of in-person inspection work that we're used to, and that I think the American public has come to rely on the Agency to perform.

Did we do enough to get through that period? Yes, we did. But is it how you want to proceed going forward? No, it's not. And one of the things that I think that, kind of stepping back a little bit during that period, really crystallized for so many folks within the Agency, how important that in-person inspection is.

When we weren't doing as much of it as we're used to or is appropriate in normal conditions, we started to really kind of, not remember, because I think we always knew, but I think it really just crystallized for everyone the importance of walking down the safety equipment, talking to operators, observing operators at work, observing the maintenance folks, being there and available to hear concerns, or have someone stop them in the hall and say, "hey, take a look at this."

Just how often the things that are detected are detected when we have inspectors just walking through the plant looking around. I mean, they're so good at knowing what normal conditions look like and spotting things that are off-normal.

And so, we don't have that when folks aren't doing that. I think we really feel the loss

of that. And so, for me, one of the main takeaways that we learned on the inspection side is just how critical in-person inspection is.

But here's the thing. It's not like you're going to do in-person inspection exactly the way you did it before the pandemic, because I think one of the lessons we learned is that there's all this technology out there that can really augment what we're doing.

And it's not a substitute for in-person inspection, but it's super valuable. Just kind of an easy example of that is many of the plants -- I don't know if it was every plant, but certainly I think most -- provided the resident inspectors with a laptop that had access to some of the data from the plant.

And so, this enabled the residents to keep an eye on basic safety parameters and operating parameters, even if they weren't onsite.

Well, that's a terrific tool to have, right? And I think we're going to see that going forward. There are going to be times when it's three in the morning and the plant trips and the resident inspector is going to be able to actually use that

and figure out, okay, is this a complicated trip? Is it uncomplicated? Do I need to rush to the plant right now, or can I get there in a couple of hours in the morning?

Those kinds of things are really useful. It's not taking the place of in-person inspection or an onsite presence, but it's leveraging that technology in a way that's really going to enhance what we're doing.

And so, the Chairman alluded to earlier, just kind of all the IT that we have gotten in place really, fortunately, prior to the pandemic, that allowed us to transition pretty seamlessly to an all-telework environment essentially, for an extended period of time.

Those technologies are going to help inspectors in the plant and they're going to help us back at headquarters too.

So, I think those are a couple of the key lessons we've learned. And then, in terms of just how do things change otherwise, from a more kind of business process point of view, I think we're forced a little bit to modernize and streamline in ways you weren't really expecting. Right?

I mean, paper wasn't really going to work the same way when we didn't all have an office to come into every day, and with all the printing capabilities and everything.

So, I think folks have a much greater appreciation for the options they have in IT, and much greater utilization of all those things. And I think, like much of the federal government, and really the economy broadly, we're going to see much greater telework going forward, and the kind of different concept of what does a workday look like.

It's not arriving at nine and leaving at five, necessarily, five days a week from work. It's going to be people coming in a couple of days, maybe they're teleworking a few days.

For some, they want to come in, that's great. But for the folks that want to telework, we know that that has worked very well. And we know that there's a value in the face-to-face interactions for collaboration and for the Agency's organizational culture. And so, when folks are in, I think we're going to see a lot more of that kind of in-person collaboration.

People are going to focus their time on

the things that's harder to do maybe, when they're working from home.

So, it's going to make some changes I think to the way we operate. And that's not surprising, because I think it's just true for almost every organization. Life after the pandemic isn't going to look exactly like it did before.

MR. FURSTENAU: We have time for one more question. Another lessons-learned question. Your remarks identified several rulemaking efforts currently underway. For example, a Part 53 medical treatment regulation, several others. Do you see an overriding lessons-learned from these efforts that could be applied elsewhere? Particularly, in additional investigations for NEPA to support subsequent license renewal?

COMMISSIONER BARAN: Well, I think one issue that the Agency has been tackling is just the length of time it takes to get through rulemaking.

Rulemaking is one tool we have as a regulator. It's not the only tool, but it's an important tool, because there are times you want to get a framework in place for a new technology, or you want to have updated safety and security

requirements.

And so, it's a key tool that we have to make sure works well and that we can implement it in a reasonable amount of time.

In my time on the Commission, I've seen rulemakings that moved along pretty quickly and did everything they needed to do.

We got all of the stakeholder public feedback, analyzed it, made any appropriate changes and moved forward, and the decision-making was timely.

I've seen some that really have dragged on. And it's just taken too long. I've seen rules that, as I know you all have, that have taken a decade or longer to finish.

And that's too long. And I think part of the problem with that is it leaves uncertainty out there about what's going on.

Part of it is, there's an important thing to be done, we've got to get it done. But also, it leaves you really open to the problem of kind of changing circumstances, changing priorities over time.

And so, it's important I think that we

follow through on some of the efforts that the Staff has been making to think through, how do we optimize this process as a process?

As a rulemaking process, how do we make sure that we can move through it in a reasonable way, do everything we need to be doing, do it well, but then reach a conclusion so that the Agency completes the work and our stakeholders have that certainty.

And part of that's the Commission too. We've got to make sure that when we have a proposed rule in front of us or find a rule, that we work on it in a timely way.

And one of the things I'm really proud of from the last year, we've had three Commissioners for a while now. We've been really productive. We've gotten a lot of things done, a lot of things out the door in terms of decisions.

And it's important to make decisions. People need those answers, and working through the backlog of things that have been pending for too long. And so, I've been excited about that. I'm proud that we had a really productive last year since the last RIC.

MR. FURSTENAU: Well, thank you,

Commissioner Baran. And unfortunately, that's all the time we have for questions. We got to as many as we could.

So, again, thank you for your remarks and for answering as many questions as we could. And with that, I'm going to close the session. Thank you for attending.

COMMISSIONER BARAN: Thanks, Ray. Thanks everyone.

(Whereupon, the above-entitled matter went off the record at 10:31 a.m.)