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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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33RD REGULATORY INFORMATION CONFERENCE (RIC)

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TECHNICAL SESSION - T13

REGIONAL SESSION-REACTOR INSPECTION PROGRAM:
ADVANCES AND CHALLENGES

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TUESDAY,

MARCH 9, 2021

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The RIC session convened via Videoconference at 1:30 p.m. EST, Dan Dorman, Deputy Executive Director for Reactor and Preparedness Programs, presiding.

PRESENT:

DAN DORMAN, Deputy Executive Director for Reactor

and Preparedness Programs, OEDO/NRC

LAURA DUDES, Regional Administrator, RII/NRC

JACK GIESSNER, Regional Administrator, RIII/NRC

DAVID LEW, Regional Administrator, RI/NRC

SCOTT MORRIS, Regional Administrator, RIV/NRC

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DON MOUL, Executive Vice President and Chief Nuclear
Officer, NextEra Energy, Inc.

KEN PETERS, Senior Vice President and Chief Nuclear
Officer, Vistra Energy/Luminant

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PROCEEDINGS

1:30 p.m.

MR. DORMAN: Good afternoon, everyone, and welcome to Session T13, the Regional Session, the Reactor Inspector Program Advances and Challenges. My name is Dan Dorman and I have the privilege to be the Chair of this session.

As you can see on the slide, I am the Deputy Executive Director for Reactor and Preparedness Programs here at the NRC. And my scope of responsibilities includes oversight of the Office of Nuclear Reactor Regulation, the Office of Nuclear Security and Incident Response, and the four regional offices.

Today, we have with us the four regional administrators. These are four senior leaders of the NRC. Each of them, early in their career, served as a resident inspector at a nuclear power plant and they have followed different paths through NRC leadership to arrive in their current responsibilities.

Dave Lew is the regional administrator for NRC's Region I in the Northeast. His office is located outside of Philadelphia, Pennsylvania.

Laura Dudes is the regional administrator

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for NRC Region II in Atlanta, Georgia, and covers the Southeast.

And Jack Giessner is the regional administrator for Region III. His office is outside Chicago and covers the Upper Midwest.

And Scott Morris is the regional administrator in NRC Region IV. His region covers the Southwest and the West of the United States. And his office is located in Arlington, Texas.

We also have with us two senior leaders from the nuclear power industry. Mr. Don Moul is the chief nuclear officer for NextEra Entergy. And Mr. Ken Peters is the chief nuclear officer for the South Texas Project Nuclear Operating Company.

So, we have an opportunity to have a conversation with broad perspectives from senior leadership on NRC oversight activities at commercial nuclear power plants.

And unlike the other sessions that you may be going to throughout the RIC, this one has no prepared presentations. So, we're going to jump right into a Q&A session.

I have a few questions to start teeing it up, but I want to welcome you to, on the right side of

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your screen, use the Q&A feature to feed questions to us and help move the conversation into areas of your particular interest.

So, with that, I'm going to jump right in.

And the first question, I'm going to go right to the elephant in the room, COVID impacts. And I'm going to start with Dave Lew.

And, Dave, how have our inspections and our oversight activities been impacted by the public health emergency?

MR. LEW: Thanks, Dan. So, let me start by saying that the ROP, the Reactor Oversight Process, was designed with flexibility to account for site specifics, such as differences in performance or design.

The same flexibility also served us well during the public health emergency, but allowing us to adjust and optimize our inspections. For example, we placed greater emphasis on outage planning, which was impacted by the pandemic.

We've verified that licensees were appropriately implementing the exemptions that were granted. And there were many more adjustments that were made in how we implemented. As a result, the ROP

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was successful in verifying that reasonable assurance of safety was maintained.

That said, there were significant impacts on inspections, which prevented us from doing business in-person or caused us to delay inspections until local conditions improved.

For example, the pandemic forced us to accelerate and expand our thinking about different ways to complete the inspections. Most notable was our ability to leverage technology. Our inspectors had remote access to real plant data, remote access to corrective action reports and other processes, like work control, and could observe onsite meetings from home.

We also worked very closely, and I think we worked very well with licensees to enable inspections to be conducted safely. It was incumbent on licensees and the NRC to ensure personnel safety, whether it be licensed operators who are needed to operate plants safely or resident inspectors who are our eyes and ears and our first responders.

I think, lastly, a lot of additional, and I mean a lot of additional work was required to account for the continually changing local conditions

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and we were monitoring many, many local conditions, and developing protocols to protect the people.

This was particularly true for licensing of new control room operators, in which our examiners had to be close enough to observe candidates, their performance in the simulator, and to assess their performance out in the field.

So, we were very successful in addressing the impacts of the public health emergency and trying to optimize our inspections in light of the pandemic.

MR. DORMAN: Okay. Thanks, Dave. Let me turn to the industry side. Ken, how did the PHE impact operations at the nuclear plant and how did you adapt to it?

MR. PETERS: Thanks, Dan. There are a number of things that we had to do. For my organization in the spring of 2020, we were just about to start a refueling outage. And if anybody's ever been at a plant getting ready for a refueling outage, you in-process a lot of people, supplemental employees, to help you do the refueling activities.

So, we had to quickly adapt our whole in-processing physical layout to ensure we were socially distancing and take all the other measures that folks

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did to mitigate the effect of COVID, temperature monitoring, et cetera. So, we did a lot of work to change the physical environment.

Once the outage actually started, we actually had more leadership in the field present during the outage, again, to make sure that we were using all the appropriate COVID protocols, primarily distancing and mask use, to make sure we weren't putting folks at risk.

We did remove some work from the outage, to minimize a lot of work in close spaces. I think a number of plants in the industry did that.

And then, when we came out of our refueling outage, we ended up designating certain senior leaders to be in the plant every day of the week to make sure, because of our COVID measures, we weren't unduly limiting field presence of the leadership team. Those are some highlights.

MR. DORMAN: Okay. Thanks, Ken. Jack, Ken just highlighted some of challenges that they had of providing safe margins for their staff in the COVID environment.

How did you decide whether to send inspectors, when and where to send inspectors into

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that environment? Particularly, he talked about the outage, when there's a tremendous number of people, but even in non-outage circumstances, if you could just give us a sense of your decision framework?

MR. GIESSNER: Sure. The regions shifted, and to me, it's just a shift of mindset. Originally, of course, we always assumed inspectors were safe and were focused on our mission.

The pandemic put a focus, not that it reduced our mission focus, but it changed the focus to make sure that we were keeping our folks safe, and keeping the licensees safe. So, in the three major activities that I saw, Dan, the way I look at it is emergency response and then, of course, baseline inspection and then, operator licensing.

In emergency response, we knew we would have to send people, not for the outage necessarily, but if there was an emergency, we likely would have to send somebody to the site. But we were sensitive, because everybody's personal case, we weren't going to make people go in that had situations. But we had the defense-in-depth to do it.

But we were smart. Even on incident response, we looked at ways where we could use remote

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inspections, maybe if there was a scram at night and we could verify the different parameters, safety parameters, we wouldn't need to go in for a special inspection, we would look at that.

On the baseline inspections, Dan, we looked at basically five questions. And these are the five questions, are the personal situation, how are things personally with you and you talk to your supervisor.

Second, what's going on at site? Is there risk significant issues you need to look at? Maybe the outage is a case where you need to go in. Maybe the plant's performance and human performance or other actions weren't acceptable, you might need to look at that.

Third, we looked at how could the things be done remotely? Could we use the IT infrastructure to maneuver our folks to the right location?

And the last two had to do with local conditions. Whether COVID at the site was acceptable.

If the outage had a lot of COVID, how would we do that? And then, of course, it would be COVID in the area.

And I think when it came to outages, we

had to take a look. If there was a spike, maybe we looked at going back to going to the minimum, which was once every three days, when we were going onsite.

Some cases, we went on more frequently, because the outage activities needed that or it was another activity that needed emergency response.

Other times, we went longer. If it was needed because of the COVID activity, we went longer than three days. And we justified that and the managers made an assessment.

I think the special case, Dan, is on operator licensing. As folks know, the NRC issues a license to every reactor operator and senior reactor operator. Initially, we initially delayed the licensing exams. We got internal and external feedback that maybe we needed a more strategic approach for the long-run.

And not that we changed those five questions, but we made certain assessments of how could we get onto a site to do the exam and be safe? In some cases, we elected to sequester with the individuals. And we also looked at things that we could do to minimize the impact, voluntarily took and got COVID tests.

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So, I think we used this, what I'll call dynamic approach to looking at each specific case, so that we could make an assessment that we had that reasonable assurance of safety, but we focused on protecting our people and that ensured that we protected the health and safety of the public.

So, kind of, that was the big three about the continuous approach we used.

MR. DORMAN: Okay. Thanks, Jack. So, Don, from your end, how was that interface with the region, you interface with a couple of regions in your fleet, and how was that interface on planning inspections and making sure we're keeping your folks safe, we're keeping our folks safe, but we're also fulfilling our safety mission, and how did that work from where you sit?

MR. MOUL: Yeah, thanks, Dan, it's a good question. And, yeah, I work with David and Laura and Jack, Regions I, II, and III, in my fleet.

And adaptability is the word that comes to mind, because when this all started, well, literally, a year ago, as we really started ramping up and wondering what it was going to be like, I had four outages coming up in the spring.

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And we had to find a way to safely, number one, handle our workload, make sure we could get all the support we needed, and also, interface with the regulators so that your mission could be satisfied and we satisfied the needs of the public and their expectation.

So, it was everything from working out an MOU for getting loaner laptops for the Resident Inspectors. In outage time, access to our outage cameras, so that they could do some inspections remotely and see actual field conditions and look for RAD worker behaviors.

It was open dialogue, right? A lot of dialogue on a regular basis and making sure that my site VPs were keeping in touch with their Resident Inspectors and keeping a good line of communication open, so that if there was something significant, there were no surprises. No one's ever perfect in communications, but you strive to get people all on the same page, right?

And I think that we evolved in our approach as we went along, whether it was from testing protocols to how are we going to work our protocols in the control room, to make sure that the inspectors

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onsite had the right access so they could do their job, while not jeopardizing them or jeopardizing our licensed operators.

And it was really that open dialogue and the adaptability on both ends of the spectrum, both from the regulator and on the licensee side, I think, that got it to the point where we are now.

And it's funny, because if you think about where we were last year versus where we are now in our response, it has evolved and grown, and I think it's become more efficient.

MR. DORMAN: Thanks, Don. So, Laura, we've changed a lot in the last year, we're doing things a lot differently. Based on what we've learned and how we've adapted, what do you think we should continue and incorporate into our oversight going forward?

MS. DUDES: Thanks, Dan. Well, I think, first, I'd be remiss if I didn't thank Don and Ken and all of the utilities. As Don alluded to, when we went into this, the tremendous professional cooperation that we got in terms of IT capabilities really helped us.

As Dave said, we were able to accomplish our mission and that was in part because of the

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tremendous IT capabilities that we had and partnering with the licensee, establishing protocols so that our residents could have access to plant data.

But also, as we moved through into past week six and seven, that our Regional Inspectors could conduct remote inspections, there were reading rooms, and really a tremendous capability to exchange information.

And so, as we move through this, I would offer that we absolutely have learned lessons that will help us bring some efficient practices into our oversight program.

And we need to have that dialogue, right?, as a group, with the program office and the Office of Nuclear Reactor Regulations Reactor Oversight Process Working Group. We should be moving these things forward, these lessons learned forward.

And I know in Region II, we spoke with our regional utilities group in November about some of the things that were working well through the pandemic, some of the challenges we have. And I think there was three thematic areas that emerged.

The first one, which I touched upon, which was the IT. And, again, we were very happy with the

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relationships and the capabilities that the licensees provided, but we think that we could do more in that area, in terms of proposing a set of expectations for data exchange under there.

I understand that the systems are different and the protocols for each utility may be different, but it would be worth a discussion about a subgroup, an IT subgroup with the Reactor Oversight Process Working Group to really work out some of the details of that.

So, the IT is a great capability that will help us learn and implement some of these efficiencies.

Two other areas that I think are important to touch upon. One would be some of our regional inspections, they were able to do quite a bit of their document review and preparation and really what we call, like, the soul work, where your head is down and you're reviewing documents and preparing to execute the inspection.

So, that was a real benefit. And so, there's areas within that portion of the inspection that we may pursue in terms of efficiencies.

And then, lastly, it would be the resident

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inspectors. And the resident inspectors being able to, I think the example that we use often when we discuss this, we talk about an uncomplicated plant transient in the middle of the night, the residents having the ability to independently verify the data at the plant through the means of IT is a very helpful thing. And also, we're not putting a resident or senior on the road at midnight.

But with all of these efficiencies, and I'm very supportive of beginning the dialogue on what to take forward into the Reactor Oversight Process, we've also aligned on first principles. And I believe that the commissioners have touched upon this in their various speeches and we talk about the inspectors being the eyes at the plant or the boots on the ground.

And I think, as we move to incorporate these efficiencies into our program, we really want to be cognizant of the first principle that benefits all of us, which is having an independent professionally engaged regulator onsite, not only to do the independent eyes-on system walk-downs or verifications, but also to have those professional exchanges with licensee personnel on various topics,

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whether it's engineering or operations or radiation protection.

And so, as we move forward, I think I'll just wrap up by saying, I think that we are all aligned that there's efficiencies that we should bring forth as we emerge from the pandemic, as long as we keep in mind those first principles about the value and the presence of the NRC on the site. Thank you.

MR. DORMAN: Okay. Thanks, Laura. Scott, in light of all of that, we note in 2020 the number of inspection findings is down, but that's not a COVID thing necessarily, it's a trend over a number of years.

And I wonder if you could share your thoughts on what is that trend telling us or not telling us? Do we have Scott? Or did I lose Scott?

All right. So, we seem to have lost Scott, so while we work on getting Scott, let me tee up a different question.

With all of the experience that we have with work at home, there's a question from the audience about work at home in the regions now and post the public health emergency, but also long-term office space plans.

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And I'll just note that each of the regions is leased space and their lease's expiration dates are at different times. And Dave Lew happens to be the one who has the first in the queue for a transition. So, Dave, would you address how we're addressing long-term office space and work at home as we look to the future?

MR. LEW: Yeah, thanks, Dan. I think, first of all, I think this experience has demonstrated that we can do more work at home. Certainly, the tools that have been provided to us have made us just as effective in working from home.

So, as we move forward, and as a background, Region I's lease does expire next year. We have recently signed a new lease in a new building.

And in that new building, we've significantly reduced our footprint. Our rent, overhead rent savings is probably about 65 percent of what we're paying now. So, it's a significant savings.

And as we're looking at designing this facility, it's going to not necessarily have a workstation for every individual. I think it recognizes the fact that we will be doing more work at home and as a result, we will have folks who will be

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not assigned a permanent workstation, but as they come in, you assign a workstation, and maybe a different workstation, that they can work out of every day.

MR. DORMAN: Okay. Thanks, Dave. So, we have a question about how incident response has functioned during the pandemic. And, particularly, there's a question of were Regional Response Centers staffed in-person during the PHE?

I'm going to turn to Laura, because Laura gets a lot of the hurricane season coming through her region in the Southeast, and talk a little bit about incident response during the pandemic.

MS. DUDES: Thank you, Dan. Yeah, actually, this year -- too bad we lost Scott, Scott also had some experience. So, here's how we worked it this year.

We had several hurricanes that were going through that the region starts tracking when they're out in the Atlantic and we're really rolling up and developing some organizational inertia probably a week before the hurricane is even close to shore.

So, we really intended to do our incident response for the hurricanes remotely, always knowing that we were within 20 minutes of staffing up our IRC

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if we needed to. But we really wanted to see what the capabilities and the challenges were with doing a remote response.

And so, with the hurricanes that came through this year, we were able to address all of the agency's needs and do our job without going into the office. And so, going forward, we find that perhaps for these types of activities that may not require a full-blown response team, which hurricanes normally have a focused response team, that there is an opportunity to do that remotely.

The one challenge we had is not staffing the Incident Response Centers, but it was making sure we could find people to deploy to the various state emergency operating centers, as well as at the licensee's facility, because, again, if you do ride out a hurricane at one of the power plants, you're typically in very close quarters with others in the TSC or in the control room.

And so, that was a concern, in terms of what those protocols were. Gratefully, we really didn't have that challenge this year, but that is something that we did work through.

MR. DORMAN: Okay. Thanks, Laura. Let me

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turn to Ken for a minute, too. I don't want to pick on you, Ken, but you have a very recent experience with a challenge to your plants and to your grid.

And what I want to focus my question on is, how was that impacted by the PHE or not, by the public health emergency? How did COVID impact your ability to respond to that?

MR. PETERS: In general, Dan, that did not really impact our ability to respond. All the COVID protective measures that we undertook, social distancing, mask use if you can't maintain distance, those were maintained, both in the control room, throughout the plant.

Our corporation has an emergency operations center and due to the nature of the winter storm, that was up and running, again, but with staffing adjusted and physical spacing adjusted to accommodate the COVID mitigation measures.

And, frankly, just like this, and for normal business, we've done a lot via Zoom or other remote technology solutions. So, we held daily meetings, sometimes multiple a day, typically via Zoom with an option for a phone call if that didn't work.

So, we really didn't see that, other than,

like Laura said, in the past, an incident response might involve a lot of people packed in a fairly small physical space, but we didn't see that as hampering our response at all.

MR. DORMAN: Okay. Thanks, Ken. So, we have a question that goes both ways on potentially greater than green findings. And I think there's been, occasionally, that the NRC doesn't meet its own timeliness metric in completing the evaluation of the significance of greater than green findings.

And the question that's come in is, do licensees, from the NRC's perspective, have timely input to potentially greater than green findings? And then, conversely, does the industry believe that they have timely input to potentially greater than green findings?

So, I'm going to start with Jack, if I could, and get your perspective, Jack, on how we get input from the licensees in a timely way to support our assessment of potentially significant findings. Jack?

MR. GIESSNER: Thanks, yes. Normally, when we first tell the licensee we have a panel that says there might be some issue of concern that is

potentially greater than green, and then, when we formally send a letter, which is called a Choice Letter, we formally tell the licensee, this is what we're coming up with.

And a good licensee is thorough and I think one of the items is how thorough do you need to be? And I think, my perspective is, it really depends on risk significance. If you're risk smart and it's a white finding, do you put the same amount of time that it would be if it's a potentially red issue?

And I think good licensees want to be thorough and so, they submit a lot of information. Sometimes the information can be quite a bit and to be a good regulator, you want to look through 6-700 pages.

But I will tell you, in the last year, in the past maybe couple years ago, there was a lot of data. I think 2020 has shown us, and I'm looking forward, that the licensees have been responsive, they have been giving us good data. A lot of data, yes, but they've told us what's coming out and they've provided it.

So, I look optimistically that we're getting into a good spot on this. That's my take.

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MR. DORMAN: Okay. Don, how's it look from your side?

MR. MOUL: Well, likewise, when we've gone through some of these, and Jack's exactly right, kind of a graded approach, you took a look at the risk significance of it and you determine what kind of a resource you're going to put to it.

But we want to make sure we get it right.

And what has worked well is a good open dialogue, especially when you're talking about risk significance, working with the SRAs, we have our in-house risk folks, whether it's the SPAR model or our very own PRA models, making sure that we have that technical discussion on risk significance.

And not wasting the NRC's time by just making the same arguments, potentially, and just saying it again. If we're going to go down an additional path, let's make sure we're bringing new information to bear and we're getting, again, down to the technical facts and the risk significance and really putting the focus where it needs to be, based on that risk significance.

So, I would say that the NRC's been timely and these are usually fairly complex issues, it's not

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kind of a cookie-cutter thing. So, it's worth the time that we take to have that interface and that sharing of information and technical inputs.

MR. DORMAN: Okay. Thanks, Don. Little bit different direction here, we have a question about the impact of COVID on first-line supervisors at the NRC, as they work remotely.

We've heard from Ken and Don about the importance of getting the leadership out in the plant, especially during the outages, and at the NRC, we went to 98 percent telework in March a year ago, and we're still about 94 percent working remotely.

So, Dave, let me ask you your perspective on how that's impacted our first-line supervisors' ability to do their work?

MR. LEW: Yeah, I think there was a lot of impacts on our supervisor. I think the first impact is just the added work ensuring that their staff remains safe as they do inspections. And I do remember a lot of weekend calls, evening calls as they were working through that. And so, they took on that much larger workload. And that was continuing throughout the COVID impact.

I think the other aspect that they had to

deal with is we still had new staff coming out and there had to be a balance, in terms of going out to the sites, ensuring appropriate oversight. And they exercised good judgment, in my mind, understanding their staff, the experience level, and why they needed to go out there. So, they continued to do that fairly well.

Relative to trying to communicate with the staff, I thought that they did fantastic. I think part of it was the tools that were available. And one of the tools to have close contact with the staff was the use of Teams, Microsoft Teams, where we do require that everybody, whether they're working remotely or not, have to be on Teams with their availability indicator active.

And what that created was a lot greater ease in terms of communications. It was easy to just reach out to people. And this is where it was important, I think, not just work out in terms of work products and enabling people to do their jobs, but just reaching out just to see how people were doing. Whether or not they were having issues that we could help them and knowing that we understood the situation that they were in.

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So, I think, overall, that was a tremendous impact, a lot of work, but I think at the same time, there were tools that allow us and behaviors that allow us to make sure that we continue to work very efficiently and effectively.

MR. DORMAN: Okay. Thanks, Dave. Shifting gears a little bit, there have been a number of risk-informed initiatives over the years and there are a number of licensees that are going through the process of licensing basis changes to either adopt 50.69 for risk-informed control of equipment and there are tech spec initiatives for risk-informed surveillance intervals and allowed outage times.

And the question is, looking at the risk analysis that supports these programs, we don't see that as part of the inspection program. And so, the question is, should it be?

So, let me turn to Laura first on this one. Should we be inspecting the risk analysis that licensees do to support the decision-making in these programs?

MS. DUDES: Well, I think it's -- when you say should we be inspecting the risk analysis, there's two points to be made.

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So, just by the very nature of going through the 50.69 or the risk-informed completion time or surveillances, those licensing actions, there is a rigor behind the NRC's review of the licensee's overall PRA.

So, we don't really need to go back and look at that. However, what our inspectors do do, and we've had some experience with that particular, licensees moving in that direction here in Region II, they do review the analysis that's used for the specific component that may have an extended completion time.

They do look at the licensee's rationale and justification when they are moving components around in 50.69 or changing a surveillance frequency.

So, there is a process and there is training available for the residents, where licensees do get those license amendments.

Our residents do get a fairly strong or robust set of PRA and risk-informed training as part of their quals. Now, they don't necessarily go back to the source document, because that's been reviewed and there's peer review expectations at NRR, but they do check the assumptions for the implementation, which

I think is really the right place for them to be at.

MR. DORMAN: Okay. Let me turn to one of our industry guests. Ken, do you have a perspective on that, in terms of what's the right bit of oversight on these risk-informed initiatives?

MR. PETERS: Yeah, thanks, Dan. That's actually not a question I'd really thought about much before, but I'm aligned, I believe, with what Laura said.

Being an old licensing guy, that's how I started my commercial career, I do understand that the agency does a very thorough review of the licensing request that utilities submit that is the underpinning of a program like that, whether it's 50.69 or differences in your tech specs.

So, I think that gets a very detailed, thorough review, to allow it to be approved, assuming it is.

And then, I believe, so, once that's done, I believe, like any other decision-making or action we take at the site, that it is subject to one based on typically either the residents, generally, or any team inspection that comes and wants to post how they did a certain activity. So, I don't see an issue with that.

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MR. DORMAN: Okay. Thanks, Ken. Don, we got a question for an industry perspective on how the NRC is doing in its transformation to become a more modern risk-informed regulator and how you've seen that impact on your end?

MR. MOUL: Well, that's a loaded question, I like that. No, actually, look, moving a culture to be more risk-informed, it's a journey, right? And I've seen movement along the way in the right direction.

I mean, we're really taking a look at the significance of findings. And I think there's an NRC slide I've seen before called A Map of the Universe of Findings, where it talks about high versus low safety significance on the Y-axis and clearly within the licensing basis versus not clearly within licensing basis on the X-axis and it puts it into those four quadrants.

And if you're kind of over in the lower right-hand, where it's low safety significance and in the licensing basis, that's kind of the sweet spot where you want to be regulating. And if you have to, you have to go up to the upper right-hand quadrant, where it's high safety significance and definitely

within the licensing basis.

But that lower left-hand quadrant, where it's clearly not within the licensing basis and it's very low safety significant, I mean, I think that that's the area where the Very Low Safety Significance Issue Resolution process, it fits, that's what it's made for, that's what it's all about. And I've seen some instances where it's been treated that way, and appropriately, right?

And, again, as always, there are going to be varying opinions on where it lives on the safety significance. If we're risk-informed in determining where that safety significance is, that's all we can ask for, right? That's the foundation we should always bring it back to.

So, I'm seeing progress, I think it's moving in the right direction. I think the conversations that tie it back to the overall core damage frequency probabilities and the risk models, it's the right underpinning to keep us in the right spot.

MR. DORMAN: Okay. Thanks, Don. You mentioned the Very Low Safety Significance Issue Resolution process and we've got a question for the

regions on experience with that. And so, I'm going to turn to Jack to give us your perspective on that process.

And I'll just note that when we talk about risk-informing, one of the main drivers of risk-informing is to make sure that we're all focusing our resources on the most important issues. So, is that helping, Jack?

MR. GIESSNER: Yeah, I think it is. We implemented the Very Low Safety Significance Issue Resolution program at the beginning of 2020, so we have a year under our belt.

And then, there were two competing sides. There were some folks that were worried that the licensees would push hundreds of items into that, they would say, jeez, this isn't part of our licensing basis. And there was another one that would say, hey, inspectors aren't going to embrace it.

And I think our first year saw seven. And you may not think seven is a lot, but I do think, right?, that when we initially start, that shows that we are getting that backlogged dam of items that are not areas that we can clearly define the licensing basis, but we have a reasonable assessment that it's

very low safety significance.

So, I expect, and one of the items that I'm proud that in Region III we've gotten our backlog of unresolved items that used to have a number of like 20 or 30 that were over two years old, and I know licensees don't like those in the backlog, but we were struggling with them. We're now down to a handful and I think that I expect that within the next year, we'll be able to use that program.

So, we used the program and I think we need to be sensitive, right?, we don't want to desensitize our folks so that they say, jeez, this is just a process for me to drop an issue in. If you determine that it is in the licensing basis, our program covers that.

So, I think we just got to be sensitive when we're doing an assessment on that. But I think, so far so good, that's my take.

MR. DORMAN: Okay. Thanks, Jack. I think we may have Scott back. Do we have you, Scott? Okay. I see you talking, but I still can't hear you. Okay. So, if the team can continue to work on that, that would be great.

So, Don, we got a question for you. What

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was and is the impact of having pods of personnel in the critical group available to meet mission requirements during the COVID period?

MR. MOUL: Yeah. So, again, with this adaptability, we went to a very proactive testing regime to start with. We were one of the few licensees that actually went to antibody testing as a precursor.

And we also developed protocols to, if we needed to, work individuals who were IgM-positive or showed signs that had been exposed, but did not have COVID-positive or PCR-positive test results.

And we worked those protocols out with our medical director, to make sure that we could keep everyone safe and still have the availability to work folks in their licensed capacity. It was learning curve along the way.

A lot of it is really communicating, not just the right work practices when you're at the station, but also trying to influence behaviors outside the station. I think we're not the only licensee that saw that that was one of the key drivers to some of the folks turning up COVID-positive and being in a quarantine situation.

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We monitor it every day, quite honestly, who's moving in and out of our quarantine protocol, making sure we have good margin to be able to meet all of our requirements. And it was, again, a heck of a learning curve along the way.

But when you're trying to determine the best approach, we had great corporate support. We're talking a lot about nuclear, but we're a South Florida utility that had 28 named storms coming up here, so we were talking about testing people that were our storm riders, with the people that were getting ready to service our customers if they had the hurricane go ripping through the area, and line crews and such.

So, we had great support from the corporation to really put our nuclear staff as one of those tier one groups of employees and really at the center of the prevention stance that we took along the way.

MR. DORMAN: Okay. Thanks, Don. Let's try Scott again. Do we have you, Scott?

MR. MORRIS: Yeah, can you hear me?

MR. DORMAN: I can hear you now. So, Scott

--

MR. MORRIS: Wow.

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MR. DORMAN: -- so, Commissioner Baran brought up the topic of the trend in findings during his remarks this morning, and we know that trend of decreasing findings that's been going on for about five years now has continued into the pandemic. And we just wanted to get your thoughts on what may or may not be indicated by that.

MR. MORRIS: Yeah, Dan, thanks for the question. And I apologize, Murphy is alive and well and living in my home right now. Apparently, my wi-fi went down, had to reboot my router. So, I'm back. But, again, thanks for the question.

This is something that many of us have tried to grapple with us for the last several years, Dan, and I'm going to offer my opinion, obviously, invite others to weigh in as well. And I think both, not only did Commissioner Baran bring it up, but I believe Commissioner Caputo made mention of it too in her speech.

So, just before I dig into my opinion on it, just a quick background. Some of you may know, one of my previous jobs, I was a director in NRR and I had the Reactor Oversight Process as part of my responsibilities. And when I got there back in 2014,

we had just received a report from the Government Accountability Office.

And in the report, the GAO noted a disparity in the number of green findings between the regions. So, this isn't -- they didn't really look at the overall numbers of findings, they just looked at the number between.

And I bring it up because I think this is when we really started to shine a light on this issue of green findings, because we set out to understand the disparity between the number of findings between regions.

I'll admit, I personally struggled with investing time and effort into figuring that out, because, obviously, by definition, green findings are very low safety significance. And at that time, of course, we were in Project AIM, which meant declining resources, refocusing ourselves.

In my division alone, we were really looking at a lot of key aspects of the ROP back then, including redefining the engineering inspections, streamlining the significance determinations, improving the self-assessment process, and a whole bunch of other stuff.

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So, in that time of limited resources, I looked at this issue of green findings and I said is it really worth spending time to figure this out? Because by definition, they're very low safety significance issues.

But in the end, we looked to our principles of good regulation, and principally the reliability principle, a.k.a. consistency between regions. And we really did, based on that, start to really dig into understanding, not just why the numbers were different between regions, but just the issues we were documenting and why and what was passing through the screen.

And, again, it's very true, the number of findings has come down significantly in the last five years, probably upwards of 60 to 70 to 75 percent just in the last five years. Of course, last year, with COVID and IT, even if you throw out that data from last year, we're still down over 50 percent from where we were in 2015.

Honestly, I think there's a lot of different factors at play here and they're all worth examining. But, frankly, I think it's extremely difficult to identify which factors are really driving

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that downward trend. It's like we have an equation with multiple variables and not enough equations to solve the problem.

But I think it's worth looking at each one of the issues, and I'll just run through them in my mind, in no particular order.

Clearly, industry/fleet/individual plant performance is clearly a factor. Again, it's hard to say to what extent it's a factor.

Improved risk assessment tools that are available, not only to the licensees, but to us, that in many cases are showing increased margin to safety than maybe we had previously recognized and how those factor into our significance determination models and products.

Clearly, there's been better risk-informed decision-making across industry and how and where the industry and individual sites elect to devote their resources and putting it into making the plants more safe and more reliable.

I mean, one could look at the FLEX equipment, the post-Fukushima mods alone, and many sites have taken those additional, those new strategies and equipment and baked that into their PRA

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models, which also builds margin.

The role of industry oversight, INPO, sharing of operating experience has gotten better and better, more data is being shared, better analysis of the data, better use of the data is a key.

And then, looking inwardly to the NRC, I can tell you, particularly in Region IV this is true, we spent a lot of time looking at the minor/more-than-minor screening process. And shined a much brighter light on the things that we were passing through that screen. We've added management reviews, peer reviews, some regions use challenge boards.

The NRR program office has enhanced their guidance, supplemented their guidance to add clarity to what is minor and what's more-than-minor. They've upped their game on oversight and, certainly, their analytics.

Frankly, I think licensees push back on the NRC a little bit more than maybe they used to, because they know we've shined a light on that threshold and they're asking us, I think, good questions. Why is this, why are you documenting this? Why is this more-than-minor?

So, I know for a fact that in Region IV,

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that minor/more-than-minor piece has been a substantive factor in this.

I could look at some other things that I don't think are as important, but worth considering. I think if you look over time, there's been, in recent years, been fewer security-related findings.

The further we get away from all the rules that we implemented back in the 2000s and the maturity of those licensee programs and our modifications to our inspection programs, certainly all the post-Fukushima supplemental inspections added some findings, that those are starting to drop off.

So, again, there's a lot of factors. I've heard people talk about the degree of inspector experience, that maybe that's going down. I don't know that that's true, I don't have the data, but it's something to consider.

And then, of course, we've all been talking about COVID. I think it's really hard to untangle the impact that COVID has with this overall trend. It's clearly a factor in 2020, but to what extent is not clear.

I think the bottom line, though, is we need to continue to look at the data, continue to

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examine these factors, and keep talking about them and find ways to extract insights and make appropriate adjustments. I'll stop there.

MR. DORMAN: Thanks, Scott. So, just a quick follow-up, with the numbers going down, how do you know you're not missing something important?

MR. MORRIS: Well, I think, I mean, you never know what you don't know, right? I mean, but I do know that we haven't really backed off in terms of our -- except for last year, which was of course because of the public health emergency.

But the amount of hours that our folks spend in the field and interacting with the licensee personnel and monitoring activity, it hasn't changed that much. And our programs haven't changed that much. We're still training people the same way.

So, how do you know what you don't know? That is a hard question to answer. But I will say that I think that we are continuing to look in the right places, we're making risk-informed decisions on what to look at and how often.

And the results are what they are. I mean, they're not -- and, again, they could be influenced by any one or all of the factors that I

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described.

MR. DORMAN: Okay. Thanks, Scott. I think one thing I would add on that, our oversight process does have objective indicators of performance in the performance indicators, that we don't see any --

MR. MORRIS: Right.

MR. DORMAN: -- significant change in, for example, the number of reactor scrams in 2020 was very similar to the number in 2019. Safety --

MR. MORRIS: That's right.

MR. DORMAN: -- system equipment reliability indicators all suggest a continuum of performance, not anything being missed.

MR. MORRIS: Excellent point, yeah.

MR. DORMAN: So, let me shift a little bit. Laura, you have the construction oversight in your region, and in particular, Vogtle 3 and 4 are under construction in Georgia. How has that been impacted by the pandemic and what can you tell us about where that project is?

MS. DUDES: Well, I mean, obviously, anyone would have some level of impact, just when you're trying to move that number of people through a construction site. However, I think the approach that

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was taken with the medical units onsite and the testing and quarantining allowed the project to continue at pace, right?

I think COVID's definitely a factor. I think that there's probably other factors associated with a new construction project, first of a kind, that are also impacting the project.

But from an oversight perspective, we have been able to do some of our inspection remotely, and then, be very surgical with our onsite presence, such that the NRC inspectors can get onto the construction site, see what they need to see in order to support our oversight program.

And, actually, I've been pleasantly surprised, as we've gone through testing and other activities, where the inspectors are really adding value by identifying challenges in some cases and raising them to the licensee.

So, I think it's unrealistic to think that COVID is not going to impact all of us on a project of that size, but the project continues to move forward.

I heard in the accident-tolerant fuel session earlier, where the gentleman was talking about that they expect to load fuel this year and get Unit 3

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online.

And so, from the NRC's perspective, we continue to make sure we have a healthy workforce that is ready and able to perform our oversight process when those items come up.

MR. DORMAN: Okay. Thanks, Laura. You mentioned the accident-tolerant fuel session this morning, we've got a question relating to accident-tolerant fuel and advanced reactors, and with higher burnups and higher enrichments.

The question is, when will the NRC address existing problems with high burnup fuel and storage and transport with over 3,200 loaded canisters across the country? So, Dave, you want to talk about the fuel and 3,000 loaded canisters and the challenges of high burnup and enrichment?

MR. LEW: Yeah. So, I think what we're going to do in the long-term, obviously, is a question that is a policy question and beyond this group.

MR. DORMAN: Yeah.

MR. LEW: So, first, let me say that.

MR. DORMAN: Yeah.

MR. LEW: But how we manage, how we ensure that spent fuel is managed on sites is something that

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we continue to look at as part of our oversight process.

So, it's not something that actually stops in terms of our inspection once a plant ceases to operate. We will continue to inspect and be risk-informed in terms of what we look at.

In Region I, we currently have a number of plants that are actively being decommissioned. I think one of the keys there is, in terms of risk, is to try and get the fuel into the dry casks as soon as possible. I see that as an industry trend. And I think, overall, that helps us manage the risk moving forward.

So, I think we do have a good framework to ensure that we provide oversight of fuel storage.

MR. DORMAN: Okay. Thanks, Dave. Yeah, and just to follow-on from Dave's initial remarks, so that's really a licensing issue that's handled by the Office of Nuclear Material Safety and Safeguards.

But I would note that higher burnups are not a new issue. The industry has been increasing burnups over the years and that has been addressed in the licensing of the storage canisters, by changing the licensing parameters to address those changes in

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the design of the fuel and in the burnup.

So, we have a question that's addressed to Don, and I'll let Don go first, but I'll ask Ken also if he has thoughts on it. It has to do with what are the savings for a licensee in the use of various risk-based programs?

And I know both of your organizations have been actively involved. I know, Ken, your organization had the graded QA program 30 years ago that was the forerunner of 50.69. And, Don, your organization has also been very involved.

So, I'll start with Don. How did that impact -- how did the risk-informed programs provide savings for you?

MR. MOUL: Yeah. The risk-informed platform gives us the ability to really take a measured approach on things that are drivers for us.

One of the things we're looking at right now, I mean, just when you think about surveillance frequency changes, right?, and getting more of our risk significant to a transient or a trip, as long as we have the right justification and we have the right performance of that equipment, we can take that risk to different states, online, offline, take it to a

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refueling outage frequency, if it's justified, and take that risk of unintended actuations off the plate for power plant production.

We take a look at some of the legacy items in licensing basis. And when you use the risk-informed approach to that, it gives you a different tool in the toolbox to see, is there another solution to this, other than a straight modification?

And so, we've seen some savings in that area. And, I mean, I'm sure Ken has as well.

MR. DORMAN: Ken?

MR. PETERS: Sure. Thanks, Dan. And the graded QA approach, that is down at South Texas and I am responsible for Comanche Peak, so I --

MR. DORMAN: Oh, sorry.

MR. PETERS: -- won't speak for them.

MR. DORMAN: I got that wrong, sorry.

MR. PETERS: No. But we are working on several risk-based licensing actions that would have them and, therefore, money, and allow us to focus on the most important things.

And it's like Don said, right?, every one of those, in the old days, and some of you aren't probably as old as me, but in the industry, we used to

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do testing that we called cold fast starts of diesel generators. And the industry, over time, learned that that type of testing actually accelerates degradation and earlier wear of the machine.

So, I think, over time, over a number of operating years of reactor history, we have learned where those kind of practices are either detrimental or, at the very least, not helpful to the overall reliability of our equipment and, therefore, plant.

So, I think all those kind of approaches, as we evolve, actually do make us more efficient and, therefore, provides us, as the licensees, the ability to focus most on where focus is needed.

A key aspect of that that most of the industry has embarked on is condition-based preventive maintenance of equipment versus just a pure time-based.

Again, you go back to the old days of cars, like me, I started driving, you change your oil every 3,000 miles. Well, then technology changes, right? The quality of oils have changed, synthetic oils are there, and you can go a longer time between maintenance, if you're doing everything else right.

And I think we're all applying those kind

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of approaches and looking to continue and we are focused on the most important items and we're being as efficient as we can with all our resources, whether it be financial, material, our people's time. And I think we're going to continue to see that.

MR. DORMAN: Okay. Thanks, Ken. We have a question regarding hiring and training new employees who may want to live in other areas and work remotely. And it's coming both to the NRC and to the industry.

So, let me start with Jack Giessner and ask you to give some thoughts on that. And then, I'll come to Don.

MR. GIESSNER: Yeah, I think that one of the things the pandemic has taught us is there is a lot of stuff that you can do remotely. And I think we need to move to the next section that talks about, can there be jobs that are completely remote?

Now, let's put on the table, there's no way that you can have a resident inspector completely remotely, you need to get onsite. You need to be the eyes and ears, you need to see human performance. So, on the resident inspector, that position has got to be local.

But on the other positions, and the senior

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managers at the NRC are talking about it now, we are looking at can we have positions that are completely remote? There are downsides and upsides, right? There is a synergy to have folks in the office and have discussions and water cooler talk, that in-person mentoring.

But there's also this concept of bringing the best and brightest and having that piece. Those two together make us think hard. And I think, now, the agency is taking a look at that, and I think it's for the good that we're looking ahead to telework, knowing that there are some positions that you can never completely telework.

And the only one I can think off the top of my head is definitely the resident inspector will always be local, and needs to be. So, that's my perspective, at least. I'll let other folks chime in on that.

MR. DORMAN: Okay. Don?

MR. MOUL: Yeah. From a licensee standpoint, I mean, I think as we step back from this, and everyone's going to sit back and say, what did we really learn through this whole thing? And there's going to be a lot, right? There is an undercurrent

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from a lot of our employees wondering, can I continue to work remotely?

And keep in mind, just like Jack's talking about with the resident inspector, our operators in the field, and we have emergency response organization requirements to be at that plant site or within a certain response time to that plant site, that's never going to really go away, right?

So, that's always going to be there. And, quite frankly, nothing takes the place of a good set of operator rounds or a good management tour and walk-around on housekeeping to make sure that you are inspecting what you expect in the plant and that the standards are where you want them to be.

So, with that as kind of the baseline, we are learning that the use of technology, and more than just videoconferencing, right? I mean, what are the other capabilities we have? We're spending a lot of our resources going to enhanced instrumentation in the field and remote monitoring and predictive capabilities and artificial intelligence and machine learning to help inform our work processes.

To Ken's point, it's no longer 3,000 miles for an oil change. You've got advanced pattern

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recognition telling you, you've got a bearing on this pump that needs to be worked sooner than you thought, or you're good to go for another cycle.

And to be able centralize some of those functions, those are things we're really going to look very hard at and can we gain some synergy?

And, again, to the best and brightest point, if you've got a couple of folks who are really subject matter experts in reactor cooling pump seals or what have you, you can really leverage that across a footprint, like ours, where there's 1,300 miles between some of my plants.

So, to be able to centralize will give us, I think, some real benefit. And we're going to take a real hard look at that.

MR. DORMAN: Okay. Thanks, Don. There's, somebody addressed a question to me, so I'll take that one here. It's a question about the Office of Investigations and are we looking at any process like the VLSSIR process on the ROP for the Office of Investigations.

And I would just note that the Very Low Safety Significance Issue Resolution is for areas that, we were talking about the quadrants earlier,

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that are low significance and not a compliance issue.

And on its face, if we're going into the investigation process, we are talking about something that we believe may be a compliance issue.

So, it's really, it's not that part of the question, but I do want to say that we are having conversations about the thresholds for launching investigations. And so, there is a look at the thresholds at which we send out the investigators.

And for those who are not familiar, the Office of Investigations is a very small piece of the NRC, which are our badged and armed law enforcement officers. So, that's that question.

There's a question about the positive reputation of U.S. government agencies like CDC and FDA were negatively impacted by their response to the pandemic. How does NRC avoid a similar fate if it is faced with an emergency?

So, Dave, you want to take a shot at that one?

MR. LEW: Yeah, I'll take a shot at this one. I think in any emergency, it's going to be unique. And I think a lot of it is, how well do we respond? And I believe that we do respond, in terms

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of our processes that we've developed for incident response, we've practiced that.

And I think it has to be credibility, in terms of what we do and how do we communicate? And we certainly try to do that, in coordination with other agencies, in other issues.

But, then, part of it is, there's going to be a whole set of activities that, post the emergency, that's important for us to focus on. And we need to focus on communications, that's probably the top thing, communications, communications, communications.

Making sure that we're providing information factually, being transparent, and also, articulating what we plan to do as next steps. I think all of that is very important.

We have a great team, in terms of our Office of Public Affairs, Office of Congressional Affairs, our state liaison offices, and they help us, in terms of making sure that we're reaching out to the key folks, so that we're trying to provide them information, provide our key stakeholders, because they have constituents as well. And I think that's important.

I think the other part of this, even

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before we get to that point, I think a lot of what we need to do is making sure that we have lines of communications with these external stakeholders.

And we need -- and it's not just the licensees, but it's also members of Congress, the local community, NGOs, states, all those folks, I think, are important in terms of building those lines of communications ahead of time, so that when it does come to a crisis, it's not the first time that we communicate with these individuals.

MR. DORMAN: Okay. Thanks, Dave. So, Ken or Don, the corollary to that question comes your way, in terms of, and it can be a weather-related event that impacts your grid, there's a number of things that can challenge your organization in terms of reputation.

What do you see as the keys to mitigating any damage to your organization's reputation as a result of events that are beyond your control?

MR. MOUL: Well, I'll jump in first, Ken. I mean, like I said, we're in South Florida, where we get our fair share of opportunities in this area. And planning and preparing for those bad days ahead of time.

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And then, we actually ran drills with the COVID public health emergency protocols in place, so that we knew we would be ready in case we had the worst of events from a weather standpoint, that challenge the reputation of your company, and also having to maintain the safety of our workers and the folks who are in the field serving our customers, and really make sure that they were protected as well.

So, we learned a lot through each time. And like I said, there were like 28 named storms, so we had more than a couple of dress rehearsals and we were lucky enough not to be hit directly, but you learn from every one of those and you critique your performance in every one of those.

And so, to keep you in that prevention space, that's what you do is, you take advantage of those opportunities to learn what you can when you're not in extremis. Unfortunately, you're always going to learn something when the real thing happens, but hopefully it's little things you're learning and it's not big things, that you've already taken care of that in your planning and your drilling beforehand.

MR. DORMAN: Okay. Thanks, Don. Ken, you want to add to that?

MR. PETERS: Yeah, I would. I do agree with what Don said. I think a big part of it is the being prepared. So, we, like everybody in our industry, has an emergency response plan and organization. And a key piece of that is exactly what Don said, right?

So, we practice, we drill, and those drills include all our stakeholders. So, that includes the NRC, that includes FEMA, that includes all our local and state agencies. So, for one thing, we all generally know what to expect of each other. So, if something were to happen, we go in with a high degree of trust that we know the actions that each of us are going to take.

And then, we do practice that. We practice that routinely. We do learn things, like Don said, and we continue to refine that.

Going to what David said, I think in terms of communication with the public or other stakeholders, I think it's exactly what David said, if we were to find ourselves in an actual condition, very timely and very credible information communication, so that folks know what's going on and how it affects them.

And a thing we need to watch for in our industry, we are all such technical people, we have to be very careful that what we communicate and how we communicate is not so wrapped in technical jargon that our message isn't actually getting through.

And then, the other piece of that is response to question or concerns, right? If there's something happening, besides communicating whatever information we have, we have to make sure we step back, take feedback, take questions, and then, follow up with folks on those.

And that's a big piece of what we practice too in our emergency scenarios, is how we communicate about things.

MR. DORMAN: Great, thanks, Ken. So, we're getting very close to being out of time. I got one last question for Jack, and I'll ask for a quick response.

When events happen at sites, licensees do a causal evaluation. Do you think the NRC can do a better job of assessing its own performance and learning where it could potentially have identified issues earlier?

MR. GIESSNER: Short answer, yes. Other

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than the 8.3, where you do an assessment at the end, there is no formal assessment. We ask questions at our meetings, but I think that's an area we could do better.

Ken talked about the cold start on the diesel. And Admiral Rickover was a big one on continuous learning, and he always would ask at the end of an event, a submission he did is, what did you learn to the formal organization and how did you go forward?

And I think that's an area we can work on.
In fact, I jotted it down, work with that question,
gold star for me, because I think it's something that
we need to think about and it's important. Thanks.

MR. DORMAN: Great. Thanks, Jack. And I want to thank Ken and Don and Dave and Laura and Jack and Scott, our panelists, for a great session.

I want to thank Brad Bishop and Mark Haire, who were instrumental in planning and helping behind the scenes in executing this session.

I want to thank all of our participants who've done a great job feeding questions forward and keeping the dialogue going.

And this concludes Session T13. Thanks

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very much, everyone, have a great afternoon.

(Whereupon, the above-entitled matter went off the record at 2:44 p.m.)

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