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NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING TO DISCUSS RULEMAKING: ALTERNATIVE PHYSICAL SECURITY REQUIREMENTS FOR ADVANCED REACTORS

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THURSDAY

JANUARY 20, 2022

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The Meeting convened via Videoconference, at 11:00 a.m. EST, Dennis Andrukat, Facilitator, presiding.

PRESENT:

DENNIS ANDRUKAT

LOUIS CUBELLIS

STACY PRASAD

BETH REED

MICHELE SAMPSON

ALSO PRESENT:

CHRISTOPHER CHWASZ, Idaho National Laboratory

KEVIN DEYETTE, NuScale

SCOTT FERRARA, Idaho National Laboratory

RANI FRANOVICH, The Breakthrough Institute

DYRK GREENHALGH, Kairos Power

EDWIN LYMAN, Union of Concerned Scientists

DAVID YOUNG, Nuclear Energy Institute

P-R-O-C-E-E-D-I-N-G-S

11:02 a.m.

MR. ANDRUKAT: Okay, good morning. Hopefully everyone can see the slides and can hear me very well.

MR. YOUNG: We can year you, Dennis.

MR. ANDRUKAT: Fantastic. Thanks, David. I want to welcome everyone, and thank you for participating in today's public meeting to discuss the Alternative Physical Security Requirements for Advance Reactors, also known as the Advance Reactor Security Rulemaking.

My name is Dennis Andrukat. I'm from the NRC's Office of Nuclear Material Safeguards and Rulemaking -- excuse me, and Security -- and I will be serving as the facilitator for today's meeting on this rulemaking.

This is an information meeting with a question-and-answer session. The purpose of this meeting is for the NRC staff to meet directly with the individuals to discuss the regulatory and technical issues.

Attendees will have an opportunity to ask the questions to the NRC staff, or make comments about the issues discussed, but we do ask that the attendees

wait until the end of the staff's presentation.

The NRC is not actively soliciting comments towards the regulatory decision at this meeting.

The purpose of today's meeting is to present the recently released, revised, preliminary proposed rule language, as part of the Alternative Physical Security Requirements for non-light water reactors and small modular reactors. The proposed rule is currently in development with the staff.

The staff will also present key elements of the latest draft implementation guidance documents, and there are currently two that are in development.

We are using Microsoft Teams. So, the agenda today is broken into two main presentations. We're going to discuss and present the preliminary proposed rule language, the current version.

This is also the handout that we see in the public meeting notice. And we will also discuss the key elements of the associated implementation guidance.

We do plan to have a break at about the halfway mark, depending on how everyone feels and the progress being made.

We are using Microsoft Teams for this

public meeting, and so this will require all of us to continuously assure that our phones and laptops are muted when we are not speaking, and to do our best not to speak over each other.

To help facilitate discussion during the meeting, we request that you utilize the raised-hand feature in Teams, so that we can identify who would like to speak next. The staff will then call on the individual to ask the question or make their comment.

The raised-hand button, which is shaped like a small hand, is along the top row in the Teams display area.

You can also use the chat window to alert us that you had a question or comment. Please do not use the chat window to actually ask the comment or to address or ask your questions, as the window, the chat window, is not part of the official meeting record. It is reserved to identify when someone has a question, or to handle logistical issues.

If you joined the meeting using the Microsoft Teams bridge line, i.e., the phone, and you would like to ask a question or provide a comment, you may do so by pressing star-six to unmute your phone, to identify that you have a comment or a question. When you are done speaking, please go back on to mute

by pressing star-six again.

The ADAMS Accession number for today's presentation is ML22019A075. And the ADAMS Accession number for the referenced preliminary proposed rule language is ML21336A004.

And I placed a link to the ADAMS presentation in the chat window. The ADAMS number for the preliminary proposed rule language is in the presentation. You'll see that here shortly.

This meeting is being transcribed. So, in order to get a clean transcription and to minimize distraction, again please be courteous. Please use the mute function, as well as please be sure to identify yourself before you speak and the affiliation for which you're speaking.

A summary of the transcript will be made available on or before February 21, 2022.

Again, the format for today's public meeting is an informational presentation, but I would like to highlight a few items.

As you can see on this slide, you see the name of the rulemaking. You can see the docket ID number, NRC2017-0227, that you can find under regulations.gov.

I would also like to point out a slight

change. The supporting guidance, as I mentioned earlier, there are two. DG1365 is now DG5022. And those familiar with the NRC's regulatory guide division structure will note that this is now a Division-5 guidance document, which fits under the Division for Physical Security.

The other associated draft guidance document is DG 50.71, which focuses on the target set identification process.

Ad now, we'd like to go through the presentation slides, starting off with the preliminary proposed rule language presentation.

As I mentioned earlier, here is the ADAMS Accession number for the handout. This is the full preliminary proposed rule language, the current draft. It is in redline/strikeout format. And that is a comparison of the proposed changes to the current existing language in the regulation.

There is a disclaimer here. Please note the NRC is making this preliminary proposed rule language available to the public solely for the purpose of providing information to the public.

The release of this proposed rule language will facilitate today's discussion, but does not represent the final staff position, nor has it been

reviewed by the Commission. Therefore, the rule language may undergo additional revisions throughout the remainder of the rulemaking process.

I will highlight that the previous released preliminary proposed rule language is ADAMS Accession number ML20182A157, and that was released September of 2020.

The next few presenters represent staff from the Office of Nuclear Reactor Regulation, Ms. Beth Reed, and the Office of Nuclear Security and Incident Response, Mr. Lou Cubellis and Ms. Stacy Prasad.

And with that, I'll turn the meeting over to Beth Reed of the Office of Nuclear Reactor Regulation, to continue to present the preliminary proposed rule language. Beth?

MS. REED: Thank you, Dennis, and good morning everyone.

Today, we will discuss both the preliminary proposed rule language and draft guidance in 73.55(b) and 73.55(s). 73.55(b) addresses performance requirements, and 73.55(s) addresses applicability of the proposed rule and the specific alternative security measures. Next slide, please.

MS. SAMPSON: Beth?

MS. REED: Yes.

MS. VALLIERE: I apologize. Dennis, I believe we had some opening remarks from Michele Sampson that we inadvertently skipped over.

MS. REED: Sorry, you are correct. Thanks, Nan.

MR. ANDRUKAT: Thanks, Nan. Go ahead, Michele.

MS. SAMPSON: Thanks, Dennis. Thanks, Nan. And I guess I won't hold us up. But, Michele Sampson. I'm Acting Director in the Division of Physical and Cybersecurity Policy in the Office of Nuclear Security and Incident Response.

And I did want to thank everyone for participating in today's public meeting on the Preliminary Proposed Rule text for the Alternative Physical Security Requirements for Advanced Reactors.

The rule is intended to provide security alternatives, recognizing that advanced reactors encompass a broad spectrum of potential designs, such as micro reactors, modular reactors, and on light water reactors, with production potentially from the tens of megawatts up to the power levels of today's light water reactor designs.

While not every alternative may work for

every reactor size and design, the rulemaking is intended to adapt the physical security framework that was designed for large light water reactors, to provide risk-informed, technology-inclusive options for advanced reactors.

The Commission's direction to the staff for this rule was to develop these alternatives within the existing security framework.

Power reactors licensed under 10 C.F.R. Parts 50 or 52 must defend against the design basis threat of radiological sabotage at all times, and would be subject to the NRC's force-on-force inspection program.

In keeping with the Commission's advanced reactor policy statement, these security alternatives provide a regulatory framework to allow credit, in the form of operational flexibilities, when a reactor design can show increased margins of safety, including cellular transient times and relatively small and slow release efficient products, when considering the effects of the design-basis threat of radiological sabotage.

The proposal includes novel approaches not previously included in the regulatory framework for power reactors, and addresses certain specific

prescriptive security requirements.

The framework enables a licensee or applicant to include one or more of these alternatives in its protective strategy design.

We will discuss the preliminary rule language for each of these alternatives today, and then cover some of the key guidance on it that will accompany the proposed rule.

While this rulemaking provides alternatives within the existing security framework of 10 C.F.R. 73.55, there is a concurrent rulemaking effort, known as Part 53, which provides additional security options for advanced reactors.

These are two separate activities, and we will be focused only on the limited scope rulemaking in today's meeting.

So, again, thank you for joining us for this meeting, and I'll turn it back over to Beth so that she can begin talking about the rule language.

MS. REED: Thank you, Michele. Sorry about that. Didn't mean to skip over you.

So, we should be on Slide 7. And I'll just start again. The preliminary proposed rule language was updated to ensure that the alternative security measures would be applicable to a variety of

power reactors, even those who don't have reactor cores similar to those of the existing fleet of large light water reactors.

Staff determined that using the existence performance objective and requirements of significant core damage found in 73.55(b), may not be a technology-inclusive measure in determining which systems need to be protected in order to prevent an unreasonable risk to the public health and safety.

The preliminary proposed rule language now includes, prevent a significant release of radio nuclides from any source, to the performance requirements under 73.55(b)3.

This approach is in alignment with the current framework for large light water power reactors that must protect against significant core damage or spent fuel sabotage. Both events have the potential to cause a significant release of radio nuclides. Next slide, please.

The previously proposed three-eligibility criteria, or change, that are now one applicability requirement found in 73.55(s)(1)(i), under applicability.

The alternative security measures are applicable to an applicant or licensee of a small

modular reactor, or a non-light water reactor, provided they meet the requirements in 73.55(s)(1)(ii) and (iii). Next slide, please.

Another update to the preliminary proposed rule language was to clarify what elements needed to be included in the analysis that is done to justify using the alternative security measures.

As part of the analysis, an applicant or licensee must identify the site-specific alternative security measures they intend to implement.

As part of the analysis required by 73.55(s)(1)(iii), a licensee or applicant should develop scenarios that examine the capability to maintain the site's physical security plan, protect target-set equipment from the DBT, or prevent an offsite release from exceeding referenced doses.

While employing the alternative security measures, using any or all of the former eligibility criteria are examples of some scenarios that could be considered. Next slide, please.

This analysis starts after the target-set identification process, which will be discussed later in this presentation.

This analysis focuses in on achievable target sets identified in the target-set

identification process, and assesses if they could defend against the DBT or not.

If a target set is compromised with the alternative measures in place and offsite dose above the referenced values occurs as a result, the alternative measures cannot be used.

The analysis should discuss the inherent features, engineered features or operator actions, employed at the facility, that would allow the radiological release to be delayed, minimized, or prevented.

For example, if following the left side of the flowchart you end up at the red box that says, cannot implement additional physical security requirements, the analysis can be expanded to include mitigative measures that could mitigate and prevent an offsite release, as shown on the right side of the flowchart, the blue box that says mitigative measures prevent release.

And if it's yes, then you could implement the alternative security measures. If no, then you can't use the alternative security measures.

Before turning the presentation over to Lou, I'd like to remind everyone that these proposed alternatives do not represent a final NRC staff

position, nor have they been reviewed by the Commission. Therefore, the preliminary proposed ruling, which may undergo significant revision during the rulemaking process, and the Commission may not approve any or all of the alternatives.

Now, I will hand the presentation over to Lou Cubellis from NSIR.

MR. CUBELLIS: Thank you, Beth. Good morning everybody. I'm Lou Cubellis, I'm a Senior Security Specialist in the Office of Nuclear Security and NSIR response, and today I'll be taking you through the five alternative security measures that we have currently in the proposed rule language.

Dennis, if you go ahead and hit next to get the five on the screen. As we look at these five proposed alternative physical security requirements, it may be helpful if we keep a couple of thoughts in mind.

One of these Michele mentioned during her opening remarks, which is that by Commission direction, this rule would have a limited scope, which means that licensees would still have to exist with the physical security requirements inside the existing security framework.

Therefore, they would be subject to the

requirement to protect against the design-basis threat of radiological sabotage, which is what we and I might today refer to as the DBT.

The Commission has generally described the attributes of the design-basis threat in 10 C.F.R. 73.1, including the type, composition and capabilities of an adversary that power reactor licensees must defend against.

The second thought to keep in mind is that except for the specific relief contained within this proposed rule, which I'll be covering in more detail here in the next several slides, small modular reactor and non-light water reactor applicants and licensees would need to comply with all of the other requirements in the existing 10 C.F.R. 73.55. Can we move to Slide 12, please, Dennis? Thank you.

This and the other predetermined relief contained in the proposed rule language would eliminate the need for advanced reactor applicants or licensees to request exemptions from the NRC prior to implementing these alternative security requirements.

With respect to the proposed S2I requirement, power light reactor licensees are currently required to have at least ten armed responders.

The proposed alternative security requirement you see here would provide flexibility for an applicant or licensee to consider design of its reactor facility, as well as other site-specific conditions, and then determine the appropriate minimum number of armed responders, including zero armed responders, that would be needed to defend against the design-basis threat.

Would you please move to the next slide, Dennis? Thirteen? Oh, sorry. I'm sorry, Dennis. One thing I want to say here is, I'm not sure if everybody's seeing that, but my slides are kind of moving around. So, I'm not sure if it's my connection. If it is, I apologize. I see we're on Slide 12 still --

MR. YOUNG: Hey Lou, this is David Young. It looks fine to us. Just so you know.

MR. CUBELLIS: Okay. It's kind of doing some pixelations and it's making some weird animations on my screen. So --

MR. YOUNG: Okay. Well, it looks good here.

MR. CUBELLIS: All right. So, we should be on Slide 13. I hope that the slides that gets on is Slide 13. If it is, you should see S2 and an Alpha

under S2.

For these two alternative security requirements, before we talk about the specifics in Alpha, I want to point out that the proposed security requirement here in S2, subparagraph ii, the point I want to make is that an applicant or licensee would be able to choose to meet this alternative security requirement only if it has zero onsite armed responders. That's the way it's currently written. And so, the applicant or licensee has to have zero and meet the requirements in an S1I.

And as we look at the proposed requirement for Alpha, licensees would at all times retain the responsibility for interdicting and neutralizing threats, up to and including the design-basis threat.

However, licensees would be able to rely on law enforcement or other offsite responders to perform the interdiction and neutralization functions.

And when I say interdicting and neutralizing a threat, it means to interrupt whatever the adversary is doing, and in preventing the adversary from continuing any actions that would threaten the safe operation of a site.

Law enforcement responders could be from any level of government agencies -- for example,

local, state or federal -- as long as they would have the authority and capabilities to interdict and neutralize the design-basis threat.

For example, local police or sheriff's department may have the authority to respond to a licensee's call for assistance, but a state patrol agency may not have that authority, because they may have authority only on state property, like a state highway.

We included in this proposed language other offsite responders. Those three words mean that a licensee or applicant could rely on armed security personnel who are employed by a licensee -- what we on staff sometimes refer to as a proprietary guard force -- or armed security contractors hired by the licensee, all of whom would be routinely positioned at an offsite location.

Relying on armed security personnel, their stationed offsite as a method that the Departments of Defense and Energy have employed for decades, to secure some of their sensitive facilities. Dennis, could you hit the forward button one time to go to the next requirement, please?

The staff is proposing five, what I'll call conditions, that would apply when a licensee

relies on offsite responders to interdict and neutralize threats up to and including the design-basis threat.

The proposed rule language you see here in Alpha-1 reinforces the fact that licensees would continue to be responsible for detecting and assessing threats.

If the licensee is relying on law enforcement for interdiction and neutralization, the licensee would communicate threat information to law enforcement so law enforcement could respond.

If the licensee was relying on other offsite responders -- for example, licensee-controlled proprietary or contract security force -- licensee would initiate response actions in accordance with existing requirements. Dennis, would you forward to Alpha-2, please?

The proposed rule language in Alpha-2 captures another key element for facilitating an effective offsite response, either from law enforcement or other offsite responders.

Sufficient the way they would prevent the design-basis threat adversary from completing tasks, and provide the opportunity for offsite responders to interdict and neutralize the adversary before it could

cause significant release of radio nuclides. Our next slide, please, Dennis, should be Slide 14.

The proposed requirement in Alpha-3 that you see here, would ensure that licensees give information to law enforcement or other offsite responders prior to an actual incident.

Site information may include things like sketches or drawings of the facility layout, including structures and avenues of approach and the owner-controlled protected areas, floor or elevation drawings for site structures, particularly those that are important from a safety or response tactical movement perspective, barrier information and defeat methods, which could include the use of standard access control items like access cards or mechanical keys, and then communication systems information.

The proposed requirement in Alpha-3 would also ensure that a licensee that relies on law enforcement or other offsite responders to interdict and neutralize the design-basis threat, provides those responders with recurring training opportunities so the responders can apply their knowledge and skills in the environments in which they would be expected to operate during real-world safeguards events. Slide 15, please, Dennis?

The proposed rule language in Alpha-4 that you see here would ensure that a licensee performs adequate contingency response planning, and should be able to satisfactorily implement its protective strategy when relying on law enforcement or other offsite responders, in lieu of, say, onsite licensee-on responders, to interdict and neutralize the design-basis threat.

The purpose of this requirement is to ensure that licensee documents in sufficient detail the specific role or roles that law enforcement or other offsite responders have in its physical protection program.

Staff understands here that a licensee may be able to document fewer details than it would for onsite responders, but a licensee should be able to document the roles, responsibilities, and expected actions, by offsite response personnel, that describe how the offsite response personnel intend to fulfill the interdiction and neutralization capabilities.

For example, when licensees are relying on law enforcement, a licensee obviously may not know where the law enforcement responders may be starting from when they get the call for assistance, because those officers will likely be performing routine

duties in the community.

However, if a licensee is relying on an offsite proprietary and contract security force, the licensee will likely know that force's starting location and state of readiness. Slide 16, please, Dennis.

All right, licensees would still be responsible for ensuring that the capabilities to interdict and neutralize threats, up to and including the design-basis threat, are maintained at all times.

Licensees would need to consider the possibility that unlike when relying on onsite-on responders, also responders may be impeded or prevented from interdicting and neutralizing the design-basis threat by circumstances that are independent from the safeguards of that at a site.

For example, simultaneous events in the community may compete for the same law enforcement resources. Or weather may preclude any offsite responders from reaching a site before the design-basis threat can complete radiological sabotage actions.

Therefore, the proposed requirement in Alpha-5 would require licensees that rely on law enforcement or other offsite responders for

interdiction and neutralization, to identify criteria and measures to compensate for the degradation or absence of that support, and to describe suitable compensatory measures within its security plan.

I think it's important to note here that the proposed requirement would also ensure that the compensatory measures that licensees identify for the degradation or loss of interdiction and neutralization capabilities, will provide an equivalent level of protection, and can be implemented in a timely manner, which are the same two principles that the NRC currently require for compensatory measures associated with equipment, systems and components that perform required security functions. Slide 17, please, Dennis?

When relying on law enforcement to interdict and neutralize the design-basis threat, licensees would not be required to meet the response requirements in the current 73.55 Kilo-3 through 7 paragraphs, or the response initiation requirement in Kilo-8, subparagraph II.

For example, a licensee would be relying on law enforcement personnel to initiate the response actions to interdict and neutralize threats, rather than an armed licensee personnel force.

Other offsite responders would be under a licensee's control, so the proposed relief in Bravo-1 would not apply, and the licensee would need to meet all the response requirements in 73.55 Kilo. Would you hit forward once, please, Dennis, to go to Bravo-2?

For Bravo-2, staff accepts the fact that law enforcement personnel qualifications and skills are equivalent to those required by Appendix Bravo to Part 73.

Therefore, licensees that rely on law enforcement for interdiction and neutralization, would not be responsible for ensuring that law enforcement responders meet most of the security and training qualification requirements in Appendix Bravo.

Examples would be things like employment suitability or qualifications, or duty and reference training qualifications or requalifications. The licensee would not be responsible for any of those things.

As we saw earlier in this presentation, the proposed requirement in S2III Alpha-3 would require licensees to still provide periodic onsite training opportunities, so that law enforcement could apply its skills and test its equipment in the actual

environment that it would operate in during a real-world safeguards event.

It's important to mention that a licensee relying on offsite proprietary contract security force would still need to train that force in accordance with Section 6 in Appendix Bravo to Part 73.

And regardless of whether licensees rely on law enforcement or other offsite responders to perform the interdiction and neutralization functions, the licensees would be required to establish, implement and maintain a performance evaluation program consistent with the requirements in Section 6 Charlie-3 in Appendix Bravo to Part 73.

The reason for this is that a performance evaluation program is a critical tool that licensees use to demonstrate and assess the effectiveness of their physical protection programs and protective strategies, including the capabilities of an armed response team, or in this case law enforcement or offsite responders, to carry out assigned duties and responsibilities during safeguards contingency events.

Would you highlight Bravo-3 please, Dennis?

When we look at the proposed relief in Bravo-3 -- I'm sorry, my slide -- there we go. My slides are still doing funny things for me and I

apologize.

When we look at the proposed relief in Bravo-3, the phrase, law enforcement or other offsite responders, means that an applicant or licensee that chooses to implement the proposed alternative requirement in 73.55CR(2)(ii), would be relying solely on an armed response force that originates outside a protected area, to interdict and neutralize the design-basis threat.

This particular proposal in Bravo-3 provides relief from three existing requirements that restrict armed responder movement or duties.

The requirements from which licensees would be relieved would be, first, be required to designate areas inside a protected area that would house the armed responders.

Second, that the armed responders remain inside the protected area at all times. And the third requirement from which licensees would be relieved would be to ensure that armed responders are not assigned any other duties or responsibilities that could interfere with their assigned armed response team duties and responsibilities. Would you move to Slide 18, please, Dennis.

The proposed rule language that you see

here would provide advance reactor applicants and licensees with the flexibility to consider and implement methods other than physical barriers that are currently defined in 73.2, to achieve the delays needed for the physical protection program.

As you see, we say that acceptable means are really any method. You're not limited to just the couple that are defined within the 73.2. Slide 19, please, Dennis.

The proposed rule language in S2IV would allow an applicant or licensee to establish a secondary alarm station at an offsite location. Okay, Dennis, I think we need to go forward one more. There we go. Thank you.

For example, when a slight footprint is small enough that an onsite secondary alarm station would be impractical, or potentially able to be disabled by a single act, an offsite secondary alarm station may enable a licensee to better ensure that that facility maintains the redundant functions of the central alarm station.

This provision also would provide licensees with flexibility to possibly improve efficiency by consolidating required secondary alarm station functions for multiple sites at a single

offsite location, potentially reducing construction, operation and maintenance costs. Would you please show B, Dennis?

The proposed language in essentially what is 4-Bravo, would require that an offsite secondary alarm station be able to perform the same functions as the onsite central alarm station, but a licensee would be relieved from the requirements to construct, locate and protect the offsite secondary alarm station to the same standards as the central alarm station.

For example, a licensee would not need to do things like locate the secondary alarm station inside a protected area, ensure the interior of the secondary alarm station is not visible from the perimeter of the protected area, or construct the secondary alarm station to be bullet-resistant.

A licensee would also be permitted to install equipment in the secondary alarm station that is different than that in the central alarm station, as long as the secondary alarm station can perform the equivalent and redundant functions of the central alarm station. Slide 20, please, Dennis. Very good, thank you.

The proposed rule language in Alpha would relieve advanced reactor applicants and licensees from

the requirements to designate the secondary alarm station as a vital area, and to locate the power systems supplies for the offsite secondary alarm station in a vital area.

For those of you that may not be familiar, a vital area is one where the licensee can limit access to protected equipment or operations that are important to safety or security. Would you go to Bravo please, Dennis?

The secondary alarm station and its power supply provide backup to a site's primary alarm station, which is the central alarm station.

Plus, the secondary alarm station does not contain any material that would pose a risk of radiological sabotage. Therefore, locating secondary power supplies offsite, as well as the secondary alarm station offsite, means they'd be in a different location than where our safeguards of that would be occurring.

It's important to know that the proposed rule would not prevent an applicant or licensee from implementing measures to protect an offsite secondary alarm station or its power supplies, or its functions. But those measures would not be a regulatory requirement.

At this point, I'll turn the discussion back over to Beth to start the presentation on the draft guidance.

MS. REED: Thanks, Lou. Next slide please, Dennis, unless you have anything to interject on for Slide 21. I take that as a no.

Okay, so we are now on Slide 22. Draft Guide 5072, which was formerly Draft Guide 1365, is new guidance that is applicable to small modular reactors and non-light water reactors wanting to use the alternative measures found in 73.55(s)(2).

This regulatory guide describes methods and approaches the staff of the NRC consider acceptable for advanced reactor applicants or licensees to comply with requirements in 10 C.F.R. 73.55(s)(1).

Further, the guidance discusses each alternative found in 73.55(s)(2), that may be applied if the requirements in 73.55(s)(1) are met. Next slide, please.

The draft guidance explains one approach for conducting a site-specific analysis required by 73.55(s)(1)(iii) that demonstrates that the performance requirement set forth in 73.55(b)(3) are met when selected alternative to use.

This analysis should identify each alternative that will be used, demonstrate the ability of the physical protection system while using the alternative measures in defending against the DBT, and if a target-set is compromised, perform a site-specific radiological consequence analysis to demonstrate that a significant release of radio nuclides does not occur. Next slide, please.

So, what is meant by significant release? As stated in the proposed rule, the term, significant release of radio nuclides, covers those security-initiated events that could impact the safety systems of the reactor, potentially resulting in a release of offsite doses that approach or exceed referenced values defined in 10 C.F.R. 50.34A.1.III.d(1) and (2), and 10 C.F.R. 52.79A.1.VI.a and b.

The 25-rim criteria has been used in Parts 50, 52 and 100, as a reference value that is used to evaluate plants' assigned features with respect to postulated reactor accidents, including design-based accidents, or DBAs.

DBAs are postulated accidents that a nuclear facility must be designed and built to withstand without loss to the systems, structures and components necessary to ensure public health and

safety.

By identifying and assessing the DBA, the NRC has been able to provide a useful perspective with regard to doses that ought not to be exceeded. It was for this reason that the requirements exist that the dose consequences be evaluated at the outer boundary of the low population zone over the course of the postulated accident.

As stated in the footnote in 10 C.F.R. 50.34A1, the use of 25 rim, and I quote, is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Unquote.

Likewise, the performance requirements in the proposed security regulations do not mean that this is an acceptable consequence.

Conservatism built into these assessments, a person standing in the plume for its full passage, and multiple layers of defense in-depth found, provide additional assurance that approved designs for reactors provide assurance of low-risk of public exposure to radiation in the event of an accident. Next slide, please.

As a follow-up to the last public meeting, NEI submitted a letter to the NRC requesting staff to

stop reviewing NEI-2005. Staff incorporated some of the concepts from 2005 into DG 50.71 and DG 50.72, such as target-set identification and radiological dose consequence analysis.

The discussions on the eligibility criterion are being issued as examples of scenarios that could be included in the analysis required by 73.55(s)(1)(iii). Next slide, please. Thanks.

Guidance, both for target-set identification and to determine the ability to use the alternative measures, will discuss an acceptable method to perform a radiological consequence analysis.

For the purpose of this proposed rule, the required analysis for 73.55(s)(1)(iii) will be performed by the applicant or licensee to determine radiation doses at the exclusion area boundary and the outer boundary of the low population zone from a postulated radiological release.

The consequence analysis will be based on achievable target sets, which will be further discussed by Stacy Prasad shortly.

The consequence analysis should determine the type and amount of radioactivity potentially released to the environment and offsite consequences.

The guidance will describe elements that

should be included in the radiological consequence analysis, such as, but not limited to, physical and chemical processes affecting the timing, composition and magnitude of release, facility-specific radiological source terms and atmospheric release and transport.

Now, I'll turn the presentation back over to Lou to discuss the guidance for the alternative measures.

MR. CUBELLIS: Thanks, Beth. Staff anticipates that the guidance for the specific alternative security requirements portion of the proposed rule will cover three primary areas, and you see those areas here on the slide.

Methods and approaches the staff will find acceptable for satisfying the alternative security requirements themselves, a methodology for calculating security delay time that would be required as a condition of relying on offsite response for the indiction and neutralization functions, and explanatory information and clarifications related to the relief provided within the alternatives proposed in 73.55CR(2).

Stacy, I think I turn it over you now for 5071.

MS. PRASAD: Thanks, Lou. You can go to the next slide, Dennis.

5071. This is just a revision of the current breakout 581, and that's targets of identification and development for nuclear power plants. Currently, it only addresses light water reactors.

So, what's happening with this revision? Two things. We're going to identify target sets for SMRs and non-light water reactors. And that's consistent with the changes that Beth previously spoke about with 73.55 Bravo-3.

The other thing this guidance is going to do is, it's going to have some pointers back to DG 50.72 that's going to establish how the target that process can be utilized to support implementation of the alternative physical security controls. Next slide, Dennis.

Here, the definition that you've been seeing in the past few meetings, this definition aligns with the B3 brew language, again, that we discussed earlier.

In addition, the definition provides an example of a significant release and it defines that as exceeding the radio nuclide release fraction

analyzed for the DBA, and it also includes creation of a released pathway.

As Beth just discussed in the slide-basis accident analysis, important structures, systems and components are identified to ensure public health and safety.

So, the reason we have this EG is to ensure the target sets are appropriately identified in analyzing the systems and the design of the physical protection program. Next slide.

This is the flow chart we've seen a bunch of times, is consistent to what we presented previously, but the exception is the example that we just talked about with exceeding the DBA release fraction.

The actual guidance, actually there's a paragraph describing how you'd work through the process.

If nothing would scream out saying that you can implement alternative physical security requirements, get to that bottom red box, and that red box will knock you back over to the flowchart that Beth provided earlier. So, there's a line between this reg guide and the other reg guide that was just discussed. All right, back to you, Dennis.

MR. ANDRUKAT: Okay, thank you guys very much. Before I get to the next slide on the next steps here, I guess what we'll do is we can go ahead and open this up to the attendees. We want to make sure everyone's had a chance to speak.

So, again, if you have any questions or comments, please use the raised-hand feature. And we will kick it off to the first attendee here. Let me see. Okay, I see Kevin Deyette from NuScale. Go ahead.

MR. DEYETTE: Yes, thank you. I want to first thank the NRC staff for taking the effort to go through what we're doing here for the rulemaking for advanced reactors for physical security. I think it's very important, so I do appreciate your efforts.

I have two questions. The first one deals with, I guess you could look at Slide 7, where it talks about the sources, where we're looking at the release from any source.

And it states on that slide that it is retaining the significant core damage and spent fuel sabotage for the light water reactors. And we did want to go to a performance-based rule.

But the question I have with this is the NRC has an SGI document which provides a definition

for spent fuel sabotage and a scenario.

If we change it to the wording that you have now, release of radio nuclides from any source, does that mean that additional scenarios for spent fuel need to be analyzed?

MS. REED: So, I guess this is my slide, so I can take that.

Thank you for the question. And that third bullet talk about retaining for the large light water reactors, so the significant core damage and spent fuel sabotage will be only applicable for the existing fleet of the large light water reactors.

The intent here is that the small modular reactors and non-light water reactors will have the requirement to prevent a significant release of radio nuclides from any source.

So, if you have a spent fuel pool, you should analyze it to see if a DBT could defend against the DBT if there was an attack. Would that spent fuel pool release any -- lower the threshold of -- not the threshold, but over the DBA.

And that's how, under Stacy's process, the target-set be determined to see if that needs to be protected.

So, I don't know if any small modular

reactors or non-light water reactors will have a spent fuel pool. That language is retained in B3 just for the large lights.

MR. DEYETTE: Okay, thank you. I appreciate that response. I still have somewhat of a concern. I know that folks that have been working on their design for a while incorporated security-by-design and the spent fuel is one area. And this may cause a change in direction or philosophy that we may need to look at. So, on that comment there.

MS. REED: Okay. Well, thank you. And this is trying to take into account the MSRs that have may have sources outside the reactor.

So, that's why I say that this is technology-inclusive, because you may not have the highest source in the core. It may be somewhere else. So, any place that could potentially have a release should be examined and analyzed, and see if it needs to be protected.

MR. DEYETTE: Okay, thank you. My second question dealt with the secondary alarm station, and would the language that's being put in, I think Slide 19 would be the best one to look at for that, it's talking about the fact that the secondary alarm station offsite would need to have the same

capabilities and functions as the existing central alarm station.

The fact that it doesn't have to be in a vital area and doesn't have to be bulletproof obviously would present some cost savings. But having the same function of capabilities may be problematic.

And the other concern I have with that is, with this offsite secondary alarm station, now you're looking at the cybersecurity implications, or security-related components, digital components, that are offsite and how is that going to impact the licensee's cybersecurity plan? So, that's just some food for thought.

MS. REED: Thank you. We appreciate that input.

MR. ANDRUKAT: Okay, let me switch back here. Ed Lyman, I think you're next.

MR. LYMAN: Hi. Good morning. I'm from the Union of Concerned Scientists. Can you hear me?

MR. ANDRUKAT: Yes, sir.

MR. LYMAN: Okay, great. I just have a few questions. There's a lot here. So, on Slide -- let's see, slide 14, about the provision of necessary information about the facility.

So, I presume that this will be safeguards

information, I guess. And so, where are the provisions for how that information is going to be protected and how the recipients are going to be properly vetted for receipt, and as well as, right, not only approved protection for the recipient, but also electronic potential for electronic transmission? What are the requirements for protecting that information?

MS. SAMPSON: Thank you for that question. So, these alternatives are within our existing security framework. So, the regulatory requirements that apply to power reactors for protection of safeguards information will still apply to these applicants.

MR. LYMAN: Okay. The second question. So, the local law enforcement would not be exempt from the performance evaluation program. So, that includes whatever drills manual. Is that correct?

MS. SAMPSON: So, to be clear, the NRC does not have jurisdiction over law enforcement. The licensee --

(Audio interference.)

MS. SAMPSON: So, the licensee will be subject to a performance evaluation program requirement and the licensee must ensure that they are

meeting the regulatory requirements to assess, detect, interdict and neutralize at all times.

MR. LYMAN: Right, but that means to stay on the line in local law enforcement to satisfy the functions, if they're going to have to be drafted into these drills and exercises. Right?

MS. SAMPSON: So, the licensee is required to identify the role that law enforcement will perform, and to provide law enforcement with site-specific information.

The licensee must also make periodic training specific to the interdiction and neutralization functions available to law enforcement.

MR. LYMAN: All right. I mean, I think, don't get me wrong, I think that's actually critical if they're going to have this expanded role if they have to be captured by this program. But if they, practically speaking, maybe unless it's too heavy for the licensee.

So, my third is, well, if I could comment. So, you've written this rule to be extremely general. And a lot of details are being put in the guidance, including -- doesn't mention significant, even though that's the same design as this release that's already in the regulations.

So, I guess I have a general concern about in the bag, making the rule too general, that it might have milestones or goalposts that some of those have to be incorporated into the regulation as requirements, rather than leaving so much in the guidance. And that's so that the public at least knows that there are certain minimum requirements that are being met in these evaluations. Those are my initial thoughts on this. Thank you.

MR. ANDRUKAT: Thanks, Ed. I'm sorry. And Ed, I didn't know if you had any specific examples for that last comment, that you wanted to share, or if that was more of a general comment.

MR. LYMAN: Well, one comment is the definition of the significant release. Because if you put in the guidance, you're going to get arguments about what is useful.

MR. ANDRUKAT: Okay.

MR. LYMAN: Also, things like the target-set. Well, again, I've looked at this rule and seen what particular aspects are already a regulatory requirement and should be -- an analogous requirement should be retained for this alternative. I haven't done that yet, but that's what I was thinking of.

MR. ANDRUKAT: I think this is helpful.

Okay, let's see. I'm going to move on to the next one. Rani Franovich?

MS. FRANOVICH: Good morning, Dennis. And it's good to have this opportunity to engage with you, Beth and Lou. And Happy New Year to all of you.

I have a question, Dennis, on Slide 14, if you could pull that up.

MR. ANDRUKAT: Okay.

MS. FRANOVICH: Hold on. I thought it was Slide 14. It may be -- oh, apologies. It's Slide 15, Dennis.

MR. ANDRUKAT: Sure. There you go.

MS. FRANOVICH: Great. So, I see on this slide a reference to high assurance. And my question is -- well, first an observation. High assurance is not typically used in the regulatory lexicon. It's typically reasonable assurance.

And I am aware that a high assurance standard found its way into the inspection and oversight documents used for security inspections, primarily the force-on-force inspection, and it led to a lot of confusion about the level of assurance sought under the NRC's oversight process.

And the Commission and its SRM2 SECY 160073, back on October 5, 2016, made it very clear

that high assurance is equivalent to reasonable assurance.

And as a result of that Commission clarification, the term high assurance was stricken from oversight manual chapters, inspection manual chapters, in the security cornerstone.

And I'm wondering how the NRC staff is reconciling that Commission direction that the assurance standard for security is no different than it is for any other aspect of our regulatory mandate.

How does the staff reconcile the use of the term high assurance with that Commission clarification that it's reasonable assurance, even in security?

MS. SAMPSON: Thank you, Rani. We appreciate that question. And as you've correctly noted, the Commission has addressed this issue and the staff fully appreciates the Commission's clarification that high assurance is equal to reasonable assurance.

The reason that we have used the term high assurance in this regulatory requirement is to mirror the existing regulatory language in 10 C.F.R. 73.55. But as you've noted, the Commission has weighed in on this issue in the past and this is preliminary proposed rule text which has not been through

management review or the Commission.

So, should the Commission choose to use two different terms within 73.55, the staff would certainly appreciate that guidance when the proposed rule is with them for review. Thank you.

MS. FRANOVICH: Great. Thank you for that explanation. Appreciate that.

MR. ANDRUKAT: Okay. All right, let's see. And Rani, can you just remind us your affiliation real quick?

MS. FRANOVICH: Apologies, Dennis. Of course. I'm with the Breakthrough Institute.

MR. ANDRUKAT: Fantastic. Okay, I'll go ahead and move on to David Young of NEI.

MR. YOUNG: Yeah. Hi guys. Good morning. David Young, NEI. I've got two questions. The first is, on Slide 10 on the flowchart, it talks about an analysis demonstrates. And so, it goes to that on a couple of blocks, but analysis demonstrates. That talks about that on Slide 10.

And then, when you go down to Slide 30 for the target set portion of it, it talks about screening for achievable target sets. I just want to say to the Committee, just discuss what they see are the key differences between assessments that might be done at

the target-set stage, or on screening for achievable target sets, and the analysis or assessment that would be done at the later stages, where I'm looking at analysis demonstrates.

Given that some of the features I'm looking at are the same kinds of features -- things being within DBT capabilities, or certain dose limits be exceeded offsite -- just want to understand what the differences are between the screening and the analysis.

MS. REED: Stacy, do you want to start from the beginning with the target set, and then I'll pick up with the analysis for the achievable target sets?

MS. PRASAD: Sure. So, the analysis that's going to be done in DG 50.71 is supposed to be a simpler analysis. So, this analysis is kind of consistent to the programs and the systems -- every time I have to talk I feel like I can't --

(Simultaneous speaking.)

MR. ANDRUKAT: You okay?

MS. PRASAD: I apologize for that. So, this is supposed to be a simpler analysis using the same kind of programs that you use for your DBA analysis. It's not supposed to be intended to be this

huge expanse of an analysis that we're looking at in the consequence analysis.

So, when you bounce it over to Beth's slide and she's looking at the consequence analysis, in that space you can lose the complete target set and you can still demonstrate that you're below the reference values. So, this is kind of a more encompassing analysis.

I know initially we toyed with the fact of having the same analysis for both, but then we separated the two to make the line of targets a little simpler, and then you only have to do the consequence analysis and kind of the bigger analysis if you go through a certain staff and DG 50.71.

Beth, you want to add anything to that? Or I misspoke about your guidance?

MS. REED: No, you were spot on, Stacy. Thanks. And just to reiterate, the analysis is only on the achievable target sets. And you go through it and you see what's achievable. Then, you apply the alternative measures and you have to demonstrate that they can defend against the DBT.

If they can't, then you do the radiological consequence analysis. And if it comes to the point where that analysis shows that there would

be offset release above the reference values, you then have to discuss mitigation measures. That's that on the bottom line, that blue box.

You can throw into your analysis what steps you do to mitigate and prevent or stop an offsite release. If it's then able to be mitigated and there's not a release above the 25-rim reference value, then you can use the alternative measures.

If it's not, if it is above the reference values, then you can't use the alternative measures, or you need to think of a different alternative measure, maybe a more robust one that can withstand the DBT, or different mitigative measures.

And whatever you come up with, that's what we need to see for 73.55(s)(2)(i). We need that description.

MR. YOUNG: Okay. Okay. All right.

MS. REED: So, the right consequence analysis for the 25-rim is only done if you can't defend against the DBT with the alternatives in place.

MR. YOUNG: All right. Okay. All right, I guess I'll just have to wait and see the guidance document when it comes out. And I appreciate the explanation. I got a little bit clearer picture, I think, of what you're looking for.

I still just maybe have some detail questions, but perhaps they'd just be better addressed when we see the proposed documents.

The second question I had was, is on Slide 29 and Slide 30. You talk about release fractions exceeding DBA analysis. And I guess, again, not solving it here, but just going to remind staff that there's different DBAs that get analyzed. It could be many DBAs.

So, having guidance on what particular DBA provides the threshold, or provides the criteria for which it's being exceeded, which DBA is that?

MS. PRASAD: Yeah, I appreciate that question. And I also appreciate you asking all these questions on my three slides.

We're having the same discussions to make sure we accurately reflect the DBA that we're talking about, whether it's going to be the most restrictive, or maybe specific to a target set, and the DBA that was analyzed consistent with those systems and equipment.

So, that hasn't been decided. Right now it's a more flexible determinate. As you said, it can be many different things, so we're going to make sure we get the right wording in there in the reg guide.

MR. YOUNG: Okay. Great Stacy. I'm glad you guys are thinking about that. And the other thing then, kind of related to that same thought, is as you start thinking about which DBAs you're going to look at and specify in the guidance, if you would, just make sure that the wording is pretty crystal clear on that, that you are talking about the design-basis accidents, you're not talking about like Chapter 19, severe accidents and beyond design-basis events and things like that.

MS. PRASAD: Yeah, because we are thinking about the Chapter 15 --

MR. YOUNG: Yeah, yeah.

MS. PRASAD: -- access.

MR. YOUNG: Right.

MS. PRASAD: Good point. I'll make sure that's clear in there as well.

MR. YOUNG: Okay, cool. All right, Dennis. That's all I had. Thank you.

MR. ANDRUKAT: Fantastic. Okay, let's see, Mr. Chris. Okay, let's move on to --

MR. CHWASZ: Oh, I'm sorry, I had trouble unmuting.

MR. ANDRUKAT: Oh, sure.

MR. CHWASZ: Hi, this is Chris Chwasz from

INL. So, I had a couple of questions starting back on Slide 9. And this is kind of echoing Ed's concern for not defining significant release in the regulation.

So, I guess I'm curious as to the staff's thought process for not directly referencing in the regulation 50.34, and the associated Part 52 values.

MS. REED: So, this is Beth. I appreciate your question, and that is something that, a conversation we've had internally about should it be in the rule language. It should be in guidance.

And we decided to clarify it in guidance. Leave it higher level, just like in Bravo-3, what significant core damage. That's not defined in the regulations either. It's more into the guidance.

So, that's the way we have chosen to go. Like we've said before, this is just preliminary proposed rule language. And once this draft is released for comment, that's a very appropriate comment to submit to the NRC once it's been released.

I don't know if anybody else has any further comments to add to mine. Feel free. I mean, anybody else from the NRC. Sorry.

MS. SAMPSON: Nothing further from me, Beth. I think you've captured it. Our intent was to align with a similar framework that we had for the

large light water reactors, where we used significant core damage.

MR. CHWASZ: That's understandable. Significant core damage isn't a value. So, not having value codified, like Dr. Lyman said, opens it up to interpretation.

In addition, that value or similar values being codified under Part 53. So, I don't understand why it wouldn't be codified here if it's the same expectation across the board. So, food for thought.

Moving on, Slide 15. All right, so I feel like there needs to be an observation or maintenance requirement with this, in that the offsite response needs to notify the site when they are in a degraded condition. I don't see that here. And I question the timeliness of compensatory measures without it.

MS. SAMPSON: We appreciate that comment. I would note that the NRC does not have regulatory jurisdiction over law enforcement. So, we are not proposing specific requirements for law enforcement to make notifications within this regulation.

The licensees are expected to have routine communications with law enforcement that would be providing this type of support, and the requirement for compensatory measures is a requirement that the

licensee identify and document compensatory measures within their security plans. So, it would not be something that they're identifying on the fly. It's an advance requirement.

MR. CHWASZ: I understand that, but I'm talking about the timeliness of enacting those compensatory measures.

And I'm not saying you would regulate the local law enforcement agencies, but you can certainly regulate the licensee and require that they have a program that considers that, and include it either in guidance or here in the rule.

MS. SAMPSON: Thank you for that comment. Thank you.

MR. CHWASZ: All right. Okay. Additionally on Slide 15, I just wanted to make a comment that licensees are taking on a large risk using the local law enforcement for offsite response, when ultimately the local law enforcement is not under the jurisdiction of the NRC, like you've said.

And so, if the LLEA doesn't meet the performance requirements, then the licensee is on the hook for that.

So, Slide 18. I think a little further clarification here on the physical barriers could be

needed. The 73.55(e) is a fairly large section and it covers PA, VA and vehicle barriers.

And the language described here makes it sound like none of those are required necessarily. And it brings up questions about access control. So, food for thought.

MS. SAMPSON: Thank you.

MR. CHWASZ: And then, Slide 19. And this goes back to a comment that was made earlier on the expense of having a SAS still. I mean, it's a fixed cost. A SAS is required whether it's onsite or offsite. I was curious as to the NRC's response to the possibility of a SAS serving multiple sites. Like a fleet-wide SAS.

MS. SAMPSON: There is nothing in the rule that would prohibit that, as long as the licensee can meet regulatory requirements.

MR. CHWASZ: Okay.

MR. CUBELLIS: Yeah. And Chris, this is Lou. I actually, if I didn't say it, I certainly had it in my notes to present on that exact point. That's one of the cost savings we envision, is a single SAS serving multiple sites.

MR. CHWASZ: Great. Thanks, Lou.

MR. CUBELLIS: Yep.

MR. CHWASZ: Okay. All right, next slide, 28/29. And this relates to Draft Guide 50.72. I know we don't have the text yet, so maybe this is a little bit premature. But are we going to see further guidance on security assessments and the consequence analysis required for advanced reactors to really address their unique technologies and materials on sites?

MR. ANDRUKAT: Sorry. Which slide did you want again?

MR. CHWASZ: Oh, it's like 28/29. I guess it can be 29.

MS. PRASAD: Yeah, I think that would be more applicable to the guidelines -- sorry, this is getting a little crazy -- in DG 50.72. So, for the draft guide for target sets does not assume success of the physical protection program.

So, when you're looking at if things can be defended beyond, if it's within the DBT's ability, that's going to be looked at in DG 50.72. So, with the ability to neutralize and stuff like that, of security systems.

The security system is not looked at for the success in target-set identification. Did I answer the question, or am I not understanding the

question?

MR. CHWASZ: No, sorry. I probably picked the wrong flight. So, relating to 50.72, I want to speak to that, and the kind of guidance it's going to provide specifically for our advanced reactors.

Reg Guide 5.81 does a good job of addressing target sets that's generally applicable. It looks like you're going to update it for advanced reactors. But I'm curious more about the expectations for the consequence analysis for like sodium being onside, or molten salt, or other like unique technologies and materials that are intrinsic to advanced reactors, and how will those be paired with a necessary like security assessment?

MS. PRASAD: Understood. I'm going to hand it over to Lou or Beth.

MS. REED: So, I'm not sure about the security assessment, but for the radiological consequence analysis, that's one that the guidance discusses exactly what elements we would find acceptable to be included.

And one of them is definitely the chemical compensation and how the chemical form affects the release and the engineered systems and all that stuff for the reactor, that we are in guidance discussing

how those are some of the elements that should be or could be included in the analysis.

And that one box on the flowchart I shared in Slide 10 gets into also mitigative strategies. And you could also include in that if it's a molten salt, obviously it's a lot slower release, definitely that different chemical properties. And so, those are the sort of things we're looking for and discuss in the guidance for the analysis.

MR. CHWASZ: Okay. I very much look forward to looking at that. Consequence analysis can be very, very tricky. And like in the example with molten salt, there are many different sources of radioactivity and release pathways.

And then, when you add in deliberate sabotage acts, those multiply.

MS. REED: Mm-hmm.

MR. CHWASZ: And so, I'm curious to see your methodology to determine a bounding analysis for some of these technologies. So, all right.

MS. REED: Okay. Thanks for your comment.

MR. CHWASZ: Thanks all for your work.

MS. REED: Thank you.

MR. CHWASZ: I'm done.

MR. ANDRUKAT: Okay, fantastic. Okay,

let's go back to Ed Lyman.

MR. LYMAN: Yeah, thanks. Just a couple of follow-up. So, these guidance documents, are you envisioning they're going to be SOI? Are going to be publicly available, or partially? What's your thinking?

MS. REED: In the 50.72, as it stands right now, it is publicly available. The 50.71 is basically an update on Reg Guide 5.81, which is OUO SRI. Is that correct, Stacy?

MS. PRASAD: Yes, that's correct.

MR. LYMAN: And just one more question on these slides. Could you go to Slide 33? So that is confusing me, is there a stray arrow here, or between screens for achievable target sets, and within DBT capabilities you have this little arrow?

MS. PRASAD: Yeah, there's a little arrow that's in there. It should be the little arrow, and not the no. It should just to right to the block within DBT capabilities.

MR. LYMAN: That makes a lot more sense. Thanks.

MR. ANDRUKAT: Okay, let's go on to Scott Ferrara. And don't forget to highlight your affiliation.

MR. FERRARA: Yeah, Scott Ferrara, Idaho National Laboratory. Had a question regarding the implementation of the local law enforcement interdiction. Personal experience from previous NRC and LLEA management of a facility, it seems like we're placing a lot of onus on LLEA and their response. Is it the NRC's expectation that a licensee would have to provide an MOU that is audible and inspectible by the NRC to ensure that LLEA will perform those duties?

MS. SAMPSON: So, the NRC's regulatory requirement for an MOU is unchanged by this rulemaking. We do recognize that allowing licensees to rely on offsite support to fulfill the interdiction and neutralization function is a novel approach and has not previously been included in the regulatory framework for power reactors.

So, we are developing guidance to assist licensees with how to implement these requirements and that guidance will be available with the draft rule once it's approved for publication by the Commission.

MR. FERRARA: Okay, thank you very much. I'd be very interested in looking at that guidance, having firsthand experience with this exact topic and requirement.

It can be very onerous and probably should

be something developers and licensees are looking at during their siting process. Thank you.

MR. ANDRUKAT: Okay, looks like we have one more. Hopefully, I'm saying this right. Is that Dyrk? Is that right?

MR. GREENHALGH: You are correct, thank you.

MR. ANDRUKAT: Fantastic.

MR. GREENHALGH: My name is Dyrk Greenhalgh. I'm affiliated with Kairos Power. I appreciate the hard work that the staff has done to make this presentation available, and also the background analyses that support it.

One of the questions that I have, I believe it's back on Slide 14, relating to the 73.55(s)(2)(ii)(a), Condition 3, the licensing providing necessary information.

What type of information is the Commission looking for that the licensee must provide to local law enforcement? And then the second corollary to that is, what's the imagined periodicity of the training to law enforcement, and what types of training would meet that requirement, since it is a must? Lou, you might be a good person to answer this one.

MR. CUBELLIS: Yeah, this is Lou Cubellis. First off, good afternoon, Dyrk. I think I have met you on multiple occasions, so it's good to hear you're in the audience.

I would say the short answer to the first part of your question, is what information do we envision being provided, required being provided. Is there really any information that law enforcement or the other offsite responders need to perform their functions?

So, whatever that looks like, it will largely be determined by whatever roles the licensee is relying on those offsite forces to perform, and the familiarization with the facility and the different methods for defeating delay features and systems of the facility to carry out the functions that they're required to carry out for the licensee's protected strategies.

So, I then gave some examples of basic sketches of the facility layout, structures that are important from either a tactical perspective or a safety perspective, avenues of approach, certainly structure elevation drawings, barrier information, defeat methods, key blocks locations, all that kind of stuff.

If that's something that law enforcement or other offsite responders would need to carry out their functions, then we would expect the licensee to provide that information. Obviously, communications is part of that.

MR. GREENHALGH: Yeah, excellent. Would that include, in your opinion, the need to provide them target sets?

MR. CUBELLIS: So, I'm only going to speak from my personal experience. I have, with the large light water reactor training that we do with law enforcement, I've been doing it for more than 15 years, we don't ever provide target set information to law enforcement because, in my experience, it has not been necessary to do that.

Providing general locations of equipment is generally sufficient and we don't provide combinations. The way we do it in the large light water world is, here is a list of all the equipment or potential actions in a given elevation and structure, and we made law enforcement aware of all of those different locations.

But they don't really know the relativeness of one location to another.

MR. GREENHALGH: Excellent. Thank you.

And then, the periodicity. What do you think would meet that requirement for training?

MR. CUBELLIS: So, right now -- and I'm sorry, I thought I had enough information to be dangerous. I didn't mean to cut you off.

The periodicity is, right now, spelled out in Section 6 Charlie 3, in Appendix Bravo to Part 73. The tactical response drills are clearly the exercises are annual. And then, as you know, every third year is a force-on-force inspection.

MR. GREENHALGH: Okay.

MR. CUBELLIS: And we do not envision that period as changing. At least we haven't at this point.

MR. GREENHALGH: Okay, I appreciate it. No more questions.

MR. CUBELLIS: Yes, sir.

MR. ANDRUKAT: Fantastic. Let's go back to Ed Lyman. I think have your hand up again.

MR. LYMAN: You know, I just want to express my reservations once more about what's going on here.

I don't think it's the right time for the NRC to contemplate allowing licensees to transfer more of their responsibilities to local law enforcement,

especially with the lack of clarity about the vetting process for local law enforcement, given the political climate, the potential infiltration of extremist groups in local law enforcement, and recruitment from those ranks.

And I think this is a dangerous path we're going down. In fact, there's so little guidance about how the licensee's going to maintain their controls over information, whether they have target-set information or not.

And I'd say that what happened in the past is not necessarily what would be needed for the future, given the increased, the greater authority of local law enforcement that may be needed to fulfill these duties.

So, I am very concerned about this. I don't think it's the right time. And that's all I have. Thanks.

MR. ANDRUKAT: Okay, thank you very much. And Rani, I think you have your hand up again.

MS. FRANOVICH: Thanks, Dennis. And again --

MR. ANDRUKAT: Did we lose you?

MS. FRANOVICH: I'm sorry. Can you hear me?

MR. ANDRUKAT: I can hear you now.

MS. FRANOVICH: Okay, my apologies. Again, this is Rani Franovich from the Breakthrough Institute. And I have a question that's kind of a follow-on to one Ed Lyman had asked earlier in the Q&A session.

And so, I'm just going to ask it directly. Is the NRC's expectation that LLEA will participate in force-on-force exercises as a component of an SMR licensee's protective strategy?

MS. SAMPSON: Hi Rani. This is Michele Sampson with the NRC. So, the regulatory requirement that we're putting in place is for the licensee to maintain the requirement to assess, detect, interdict and neutralize at all times.

Licensee may rely on law enforcement or other offsite responders to fulfill the interdiction and neutralization functions for threats up to and including the design-basis threat of radiological sabotage.

The question of what role will law enforcement have, we expect to be very dependent upon the reactor design. And it will be incumbent upon the licensee to do the radiological consequence assessment and the target-set analysis that have been discussed,

and to identify the protective strategy for the facility and what role law enforcement plays in that protective strategy.

At the end of the day, the licensee's compliance with security requirements, with the security regulations, will be subject to NRC's oversight included in the NRC's force-on-force inspection program.

So, that's the way is currently structured. And of course we look forward to comments during the public comment phase.

MS. FRANOVICH: Thanks, Michele. I think that answers the question. But just to confirm, I'm going to repeat back what I think I heard you say.

It really depends on the role local law enforcement agencies are assigned by a licensee, and if that role is one of having a protective function, then it would be subject to those oversight activities that the NRC implements at nuclear facilities. Did I understand that correctly?

MS. SAMPSON: Yes, I think that's a good summary.

MS. FRANOVICH: Okay, great. Thank you. That answers my question, Michele. Thanks.

MR. ANDRUKAT: Okay. I'm not seeing any

other hands raised. And for the folks that have dialed in and can't raise their hand, if you have any comments or question, you just hit star-six, and then you can be unmuted and you can let us know if you have anything.

In the meantime, I will go ahead and go on to the next slide here. And apologies to Stacy. I inadvertently put an extra arrow in there.

Okay, so the next steps here, so we had some good comments, good discussions and good questions. The next steps, of course, are to finalize this draft proposed rule packet, in addition with the draft implementation guidance, these two draft regulatory guides here, and then of course begin the concurrence process. And with that, several challenges, of course, along the way. This is a long time coming.

I will state that the plan, as far as future public meetings, for the most part we are not planning to have additional public meetings before the publication of the proposed rule.

So, the focus is now, we've had several public meetings, we've received a lot of good feedback, we've tried to consider that feedback, and we wanted to share kind of our latest development with

the rule text and some of the key elements of the guidance, especially since NEI 2005, right now we're ceasing the review of that, and thus incorporated such guidance into these two DGs here.

So, the focus now is to put together this rule package and get it into concurrence, and kind of get it out onto the streets out to the public during the official public comment period.

And to give you an idea of the dates for that, same dates as the last public meeting if you attended. The public schedule here is, we are due to give the proposed rule package to the Commission by June 28th, and then of course the final rule package to the Commission for their review and approval by October 19, 2023.

Okay, I'd like to switch gears for a quick second here. So, this is a transformation survey. So, this is unrelated to the rulemaking. This is just an opportunity that the agency has been recently developing and putting out to share with the public at our various public meetings.

The agency is currently undergoing a kind of a transformation environment and there's a group of staff members that put together this public survey. It's not required, and again, it's not related to this

rulemaking. It only takes about ten minutes, but please feel free to click on it and provide your thoughts on that survey.

And going back to this rulemaking, a huge thank you to not only the staff on our side, but the attendees and those that provided their interest, their comments, and their questions.

Again, the docket ID for this rulemaking is NRC-2017-0227. That's on www.regulations.gov. And the last link on the slide there is the public meeting feedback form/survey.

Please feel free to click on that to provide feedback on this particular public meeting, and we would love to hear from you.

Now once again, if you have any questions or comments, feel free to email myself -- that's dennis.andrukat, so D-E-N-N-I-S-.-A-N-D-R-U-K-A-T @nrc.gov (dennis.andrukat@nrc.gov), and I'm going to switch back over just to make sure -- we have one more raised hand. Mr. Tony. There you go.

MR. UNKNOWN: Tony Qualenca.

MR. ANDRUKAT: Yes, go ahead.

MR. UNKNOWN: I'm sorry. I just wanted to clarify. You said the timeline, October '23. That's calendar year, not fiscal year?

MR. ANDRUKAT: Correct. Correct. So, it will be the very beginning of the fiscal year 2024. Right?

MR. UNKNOWN: Yes.

MR. ANDRUKAT: Yeah.

MR. UNKNOWN: Thank you.

MR. ANDRUKAT: Of course. Okay, seeing no other hands raised, I will go ahead and conclude today's meeting. We ended early, which is good. You guys have some time back. And thank you very much.

(Whereupon the above-entitled matter went off the record at 12:43 p.m.)