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 Storing SNF and HLW - Open Session

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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MEETING TO DISCUSS COMMENTS ON DRAFT TECHNICAL BASIS
FOR RULEMAKING REVISING SECURITY REQUIREMENTS FOR
FACILITIES STORING SNF AND HLW

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MONDAY

MAY 2, 2011

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ROCKVILLE, MARYLAND

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The meeting convened at the Nuclear
Regulatory Commission, the auditorium at Two White
Flint North, 11545 Rockville Pike, at 1:30 p.m., Phil
Brochman, Moderator, presiding.

NRC STAFF PRESENT:

PHIL BROCHMAN, Moderator

ELVA BOWDEN BERRY, Facilitator

ROB KRSEK, Facilitator

MICHAEL LAYTON

SANDRA WASTLER

SUSAN BAGLEY and DENNIS ANDRUKAT

ALSO PRESENT:

EDWIN LYMAN, Union of Concerned Scientists

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P R O C E E D I N G S

1:31 p.m.

1
2
3 MR. LAYTON: Well good afternoon,
4 everyone. I'm Michael Layton. I'm the acting
5 Director for the Division of Security Policy, in the
6 Office of Nuclear Security and Incident Response.

7 It's my pleasure to welcome you to this
8 public meeting on the discussion of the draft
9 regulatory basis and future rulemaking that NRC's
10 undertaking for independent spent fuel storage
11 facilities and high level radioactive waste.

12 As you're aware, NRC considers public
13 involvement and the information about it for our
14 activities to be the cornerstone of our strong and
15 fair regulatory program for the nuclear industry. We
16 recognize the public's interest in the proper
17 regulation of nuclear activities, and we provide
18 opportunities for all citizens in the public to be
19 heard.

20 We're committed to providing an
21 opportunity for the public, to provide some meaningful
22 participation in this meeting, and then also to help
23 us in our decision-making process for this rule. To
24 this end, the staff issued a draft regulatory guide or
25 technical basis for public comment in December of

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1 2009, and we held a webinar in January of 2010.

2 The comment period for the draft
3 regulatory basis ended in January 2010, and we
4 received numerous comments for consideration. Several
5 stakeholders commented that the proposed alternative
6 approaches to those taken by NRC in the draft
7 regulatory basis, and request additional information
8 on the basis of the staff report, and approaches to
9 provide additional comments without a clear statement
10 of whatever the underlying basis was for our analysis.

11 As a result, the NRC is keeping with our
12 commitment of openness in scheduling this public
13 meeting today, and then we had a closed meeting this
14 morning, to allow dialogue and information exchange
15 with the stakeholders on the regulatory basis, prior -
16 - before we moved forward in the rulemaking.

17 I want to encourage you to really
18 participate actively in today's discussion, because
19 your input really does help us in our process. Again,
20 I want to thank you for your participation. What I'd
21 like to do right now is turn over the control of the
22 meeting to the facilitator, Rob Krsek, who will walk
23 you through some of the rules of engagement and other
24 housekeeping measures. Rob.

25 FACILITATOR KRSEK: Good afternoon. My

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1 name is Rob Krsek. I'm the NRC facilitator for
2 today's meeting, and also currently the Senior
3 Resident Inspector in Region 3 of the Nuclear
4 Regulatory Commission or NRC, as you'll hear it
5 referred to today.

6 It's my pleasure to facilitate today's
7 meeting, along with Elva Bowden Berry. Elva is -- Ms.
8 Bowden Berry is an attorney in the Office of General
9 Counsel, and we'll do our best today to help make the
10 meeting worthwhile for everyone, and we'll hope that
11 you all help us with that.

12 The meeting this afternoon is open for
13 public participation, where the public is invited to
14 participate. The meeting is a Category 2 public
15 meeting, discussing the NRC staff's evaluation of
16 comments received on the draft regulatory basis.

17 The comment period for the draft
18 regulatory basis is closed, but comments are available
19 for review on the website regulations.gov. Please
20 note that for the NRC's purposes, the terms "draft
21 technical basis" and "draft regulatory basis" refer to
22 the same document. Please note that we will only be
23 discussing publicly available information in this
24 afternoon's session.

25 The presence of electronic devices is

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1 allowed, but we ask that you silence or turn off those
2 devices for the duration of the meeting. The NRC is
3 also transcribing this meeting, and for those wanting
4 a copy of that transcription, you can contact Dennis
5 Andrukat after the meeting.

6 There are a few things you can do to help
7 minimize the distractions, and make sure we keep
8 background noise down to a minimum, and thus make it
9 easier to get an accurate transcript. First, if
10 you're going to participate in a discussion, please
11 make sure you speak loud enough for those
12 participating by phone to hear you clearly. Elva and
13 I will have microphones, and we ask that when you do
14 speak and make comments, that you speak into those
15 microphones.

16 When you do make a comment, we also ask
17 that you give your name and any organization that you
18 may represent for the transcripts. Also, let's try to
19 keep one main conversation going on at any given time.

20 Side conversations can make it more difficult for
21 others to participate and focus on the main
22 discussions.

23 Those of you participating by bridge line
24 can help keep the background noise level down by
25 keeping your phones on mute when you're not

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1 participating in discussions. If your phone does not
2 have a mute button, you can press Star 6 to toggle on
3 and off the mute button on the bridge line.

4 The meeting is also being conducted
5 through GoToWebinar, which allows us to provide slides
6 to those participating, and also allows participants
7 to ask questions.

8 Instructions were provided in the meeting
9 notice for participation, and those who are not on the
10 phone participating in GoTo Webinar and would like to
11 receive a copy of the slides after the meeting can
12 also contact Dennis Andrukat.

13 We're going to try to stick closely to
14 this agenda, so we can cover all the topics and
15 material, and have a good discussion of these items.
16 There's also a good chance that when we're discussing,
17 that you're not going to agree 100 percent with
18 everyone else's opinions, and that's okay. When
19 someone has the floor, please give them the respect
20 that you would like yourself.

21 The restrooms are located directly across
22 the auditorium lobby. Feel free to use those. There
23 will be a break in the middle of the presentation, and
24 then also emergency exits are located via the same
25 route that you came in, and then also located through

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1 the side doors on the side of the auditorium. Once
2 outside, we would ask that you please proceed to the
3 vehicle entrance gate, and assemble on the grassy
4 areas on Marinelli Road. With that, let's go ahead
5 and get started with Phil Brochman.

6 MR. BROCHMAN: Thank you. Good afternoon.

7 I'm Phil Brochman. For those of you who were here
8 earlier this morning, I want to welcome you back. For
9 those of you who are new to this meeting, I want to
10 welcome you as well. I'm a Senior Program Manager in
11 the Office of Nuclear Security and Incident Response
12 in the Division of Security Policy.

13 I have the lead responsibility for the
14 ISFSI's security rulemaking, and for those of you not
15 familiar with ISFSI, we mean the independent spent
16 fuel storage installation. Go to my first slide.

17 I'm going to, I've got some background
18 information to sort of bring you up to speed as to
19 where we stand on the rulemaking, some process issues.

20 Then I've sort of laid out some slides to talk about
21 what I sense are the major comment issues, or issues
22 with major implications. And my goal there is not
23 really to do a large presentation to you, but to
24 engender a conversation where you can raise issues and
25 ask questions. So, and I believe that there were hard

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1 copies available as you came into the auditorium. So
2 I'm going to skip over the agenda, and move on
3 directly to the Slide No. 5.

4 What is the status of the ISFSI security
5 rulemaking? That's been covered. Mike has covered
6 that. I've given you the regulations.gov web address
7 and the docket ID number. So if you go to that
8 website, search under that docket ID number. You will
9 get all of the documents and supporting information
10 that supports this tech basis, regulatory basis,
11 excuse me. I even fall into that trap myself.

12 Webinar. We had about 95 individuals
13 participate in the webinar. The NRC received five
14 written comments. I think the total number of
15 individual issues on the five written comments letters
16 is something over 40 comments. Basically, the NRC
17 staff, in terms of the status of our review, we're
18 still in the process of processing and reviewing these
19 comments.

20 But we wanted to schedule this meeting, to
21 give you a sense of where things stood, and to raise
22 some issues. This information will ultimately inform
23 the NRC staff's response back to the Commission. Go
24 to the next slide, please.

25 We sent, based on the comments, our

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1 initial, call it "quick evaluation" of the comments,
2 and the fact that some of them significantly disagreed
3 with the proposed direction that the staff had
4 developed and set forth, we sent a paper up to the
5 Commission. The paper number is, you see it in that
6 top bullet, the SECY-10-0114.

7 That went up last August, and there's the
8 accession number for it in ADAMS, if you want to find
9 it. The staff indicated it would continue to do
10 stakeholder outreach, and that we would issue a draft
11 adversary characteristics document. That has been
12 done. I think it went out in March of this year.

13 On the second bullet, the Commission
14 basically told us to keep on the path we were on to
15 engage stakeholders, to talk to them in detail, those
16 who had a need to know about Safeguards and classified
17 information, to provide an analysis of comments, any
18 modified recommendations and a fully developed basis.

19 They also wanted a supplemental paper by the end of
20 this year. Next, please.

21 Industry had -- as a process issue,
22 industry had indicated in their comments that they did
23 not appreciate or understand fully the threat and
24 vulnerability bases for what the NRC was proposing to
25 do. We have had -- the first meeting on that was this

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1 morning. One of the comments was -- and that was at
2 the Safeguards information level.

3 One of the comments was we needed, the
4 industry felt we needed more detailed information at a
5 classified level. We've committed to doing that. We
6 don't have a date on that as of the present time. But
7 we'll work on that and let the appropriate people
8 know.

9 The other request was from the Prairie
10 Island Indian community. They had requested
11 government to government discussions on the proposed
12 rulemaking. We've had an initial discussion with
13 them, and we're still exploring how we might best
14 achieve that request. Outreach efforts completed.

15 As I said, we issued the draft adversary
16 characteristics document for cleared stakeholders on
17 March 25th. Comment period closes June the 25th.
18 There is an extension request pending, or pending
19 shortly. This morning's meeting, what we talked about
20 was vulnerability assessments that were completed
21 after the events of, terrorist events of 9/11. Threat
22 considerations for ISFSIs and MRSs, if that's an
23 acronym you haven't seen before.

24 MRS stands for monitored retrievable
25 storage installation. Right now, under Part 72, you

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1 have spent fuel storage, ISFSIs, independent spent
2 fuel storage installations or ISFSIs licensed there.
3 You also have the potential for licensing MRSs.

4 MRSs are permitted to store both spent
5 fuel and high level waste. There are none currently
6 in the United States, nor are there any applications.

7 We discussed the adversary characteristics and
8 answered questions. As I said also, outreach
9 completed efforts. We've begun initial discussions
10 with Prairie Island, in terms of the nature and scope
11 of the rulemaking.

12 Planned outreach efforts. Further
13 detailed briefings. One of the big issues is that
14 right now, the NRC has established a program for
15 operating power reactors to have access to classified
16 information. ISFSIs and decommissioned reactors were
17 not part of that program.

18 So we need to put in place certain
19 measures, in order to achieve that access. That will
20 take some time. So we're likely to have two
21 classified briefings. As I note here in my slide, it
22 may take 6 to 12 months to complete that effort,
23 because it involves both a non-possession facility
24 clearance, as well as personnel clearances for a
25 limited number of individuals at a site or corporate

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1 facility.

2 Go to Background Info, please. As a
3 reminder, one of the points of confusion is the design
4 basis threat. We use the acronym at the NRC, DBT. It
5 currently applies only to general licensed ISFSIs.
6 That's based on the way the regulations are
7 structured. That has been in place for a number of
8 years, and that's the design basis threat for
9 radiological sabotage. There are other design basis
10 threats. They're not applicable -- however, they're
11 not applicable to ISFSIs or MRSs.

12 The other factor to understand is what we
13 call the protective strategy. Right now, ISFSIs are
14 required to implement a protective strategy, which is
15 called detect, assess and communicate. What that
16 means is that licensee detects, let's say, an
17 adversary force approaching the ISFSI. They assess
18 that yes, it's something potentially hostile. They
19 contact their local law enforcement.

20 So we've had the detect component, the
21 assessment component and the communicate component.
22 Once they have communicated to local law enforcement
23 that they need assistance, the licensee's
24 responsibility has been completed. The responsibility
25 then rests with the local law enforcement to respond

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1 to the site, and to address the adversaries.

2 As you may expect, let's back up. In
3 contrast, the power reactor fleet has a denial
4 protective strategy. There, they have defensive
5 systems and they have security force. Those security
6 forces interpose themselves between the adversary and
7 target set, what we call target sets. They interdict
8 and they neutralize.

9 So as you can see, there's a timing issue,
10 how fast is it going to take for law enforcement to
11 show up and have a capability to address the
12 adversaries, versus the licensee being responsible for
13 it? So and in terms of denial, there can be issues
14 such as denial of access, meaning you have to prevent
15 someone from getting something completely, or denial
16 of task, where let's say a task takes a significant
17 amount of time, and the question is can you get
18 response forces in place to prevent the task from
19 being completed in the estimated time frame.

20 The NRC staff has proposed that instead of
21 applying the DBT to all ISFSIs and MRSs, that the
22 licensees calculate the dose that could be achieved
23 from certain security scenarios. The security
24 scenarios will be provided by the NRC. This was in
25 the policy paper that the staff sent up to the

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1 Commission in 2007.

2 If you want to look at details on that,
3 it's in the background information on the draft
4 regulatory basis. You will find that Commission paper
5 and the staff requirements memo that the Commission
6 sent back to us.

7 One of the key concepts there was to use a
8 dose limit at the controlled area boundary for the
9 ISFSI, that would be equivalent to the safety-based
10 dose limit of five rem or .05 sievert. Licensees that
11 were unable to meet this dose requirement would need
12 to implement a denial protective strategy.

13 Another major point was no changes were
14 proposed to the emergency response structure or
15 requirements for ISFSIs. Currently, ISFSIs are
16 required to classify events to either the alert or
17 site area emergency level. The site area emergency
18 requirement only applies to what are called complex
19 ISFSIs.

20 An example of a complex ISFSI or an MRS,
21 complex ISFSIs is one that does fuel manipulations,
22 and we're thinking about things like fuel
23 consolidation or dry transfer. So right now, my
24 understanding is that I think that's about every ISFSI
25 that is a stand-alone or in that specific license

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1 category would only have to classify events up to an
2 alert level.

3 That's sort of my discussion of the
4 highlights, and let me just pause at this point, to
5 see if there are any questions on any of that
6 background information, from either the people here in
7 the room or anybody out on the web or the webinar,
8 before I go into the individual issues for discussion.

9 FACILITATOR KRSEK: I guess first, we
10 could take questions from anyone in the room. If
11 you'd just raise your hand, either Elva or I will walk
12 up to you.

13 MR. BROCHMAN: Looks like you've got one
14 there.

15 MR. LYMAN: I'm Ed Lyman with the Union of
16 Concerned Scientists. I apologize for not knowing
17 this, but was there a *Federal Register* notice issued
18 when the DG was put out for comment?

19 MR. BROCHMAN: No, there was not. There
20 was a decision made not to issue a *Federal Register*
21 notice when this reg guide was issued for comment.

22 MR. LYMAN: Now there have been
23 precedents. Recently, for instance, the AP-1000
24 rulemaking, where in the *Federal Register* notice for
25 that document, it referred to Safeguards information,

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1 that was part of the rulemaking, and had provisions in
2 the *Federal Register* notice for granting access to or
3 provisions for seeking requests for access to that
4 information, and guidelines on how it would be judged.

5 So it seems that in this case, it might be
6 appropriate, at least, to afford members of the public
7 the opportunity to try to make the case that they have
8 a need to know, to be able to provide comments on that
9 document. Thank you.

10 MR. BROCHMAN: Thank you. Are there any
11 other questions or comments here in the auditorium?
12 If not, nothing out there? All right. Okay, if you
13 can go to the next slide please, Dennis.

14 Design Basis Threat versus Dose
15 Calculation. As I said, I've got about six more
16 slides, and all titled "Issues for Discussion." I've
17 got some talking points. But my real thought here is
18 to engender a conversation. So let me start off this
19 one.

20 Design basis threat versus dose
21 calculation approach. There were comments from both
22 Union of Concerned Scientists and industry that said
23 the design basis threat approach was preferred over a
24 dose calculation approach. I noticed, as I mentioned
25 before, that currently only applies to general

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1 licensed ISFSIs.

2 The original proposed approach from the
3 Commission was to go the exact opposite direction, to
4 move all ISFSIs away from a DBT. One of the, as I
5 said, the significant issues there is the
6 implementation strategy. So I've talked about this in
7 the last couple of minutes. So rather than me
8 rattling on, I want to see if there's other -- if
9 there's comments or other questions that people want
10 to raise on this issue, or explore in a dialogue?

11 FACILITATOR KRSEK: Can we start with
12 anybody that's on the bridge line, to see if we have
13 any questions?

14 MR. BROCHMAN: That's fine.

15 FACILITATOR KRSEK: Anybody up there on
16 the bridge line?

17 (No response.)

18 MR. BROCHMAN: Looks like Mr. Lyman, you
19 get to be first up again.

20 MR. LYMAN: Again, Ed Lyman, Union of
21 Concerned Scientists. So your bullet says that the
22 adversary characteristics would be identical, for
23 either the dose calculation or the DBT for ISFSIs?

24 MR. BROCHMAN: Yes. I think that is the
25 staff's view at this point. The adversary

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1 characteristics are based upon threat and
2 vulnerability characteristics, as opposed to the
3 regulatory structure that we put in place to defend
4 the ISFSI. So we would, our view is that they would
5 be the same characteristics in both circumstances.

6 MR. LYMAN: And so if it's co-located with
7 a power reactor, that document, those are generally
8 different from the adversary characteristics for
9 radiological sabotage against the reactor?

10 MR. BROCHMAN: That's one of the
11 interesting questions. The Commission, in its
12 direction to the staff in the 2007 SECY paper,
13 directed that the staff identify or create separate
14 adversary characteristics for ISFSIs. However, they
15 were to be bounded by the reactor adversary
16 characteristics. The draft document that the staff
17 has created, it views as being bounded.

18 Now, bounded does not necessarily mean
19 identically the same, and that's one of the questions
20 that the Commission will ultimately need to decide
21 upon when it approves the final adversary
22 characteristics.

23 MR. LYMAN: Okay. It just, it seemed to
24 me one of the reasons why you would go to a DBT
25 approach, especially for co-located facilities, is

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1 simplicity, and that you wouldn't have to have two
2 separate types of adversary characteristics. I just
3 want to throw that out.

4 MR. BROCHMAN: That's certainly a
5 plausible and viable view. The question, though, that
6 it needs to compete with, is are the vulnerabilities
7 of an ISFSI and the vulnerabilities of a reactor the
8 same? If the vulnerabilities are different, then the
9 adversary characteristics may need to be different.

10 But I think as a general premise, you are
11 correct, especially with the facilities that are co-
12 located. The adversary characteristics should be as
13 consistent as possible, to avoid confusion and
14 complexity. But there may need to be a difference.
15 Right now, the staff has -- we put out a draft
16 document. This obviously will go through comment. It
17 ultimately would be issued with a final rule.

18 So nothing has been finalized yet, but
19 that's our thinking. That's the staff's current
20 thinking at this time. Are there any questions over
21 on this side?

22 (No response.)

23 MR. BROCHMAN: If not, and there's nothing
24 on the web or the phone bridge, let me go to second
25 topic for discussion, Dose Limit Implications. Next

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1 slide please, Dennis. Thank you.

2 There was a comment received from
3 industry, that essentially said, as I said before,
4 they preferred the design basis threat, DBT-based
5 approach, rather than dose calculation. The comment,
6 however, said "However, if a dose-based approach is
7 used or selected, industry would prefer a higher dose
8 limit be used for security-based events, than for
9 safety-based events."

10 The proposed approach was to use the same
11 value for security-based events and safety-based
12 events. Right now, the current Part 72 regulations
13 establish a dose limit of 5 rem at what's called the
14 controlled area boundary. We were proposing to use a
15 similar approach.

16 From a technical perspective, using a
17 larger dose number for security-based events is not
18 unreasonable, and it could provide some additional
19 flexibility in implementing security measures.
20 However, there are some trade-offs. One of those is
21 emergency response. The historical agency view is
22 that there were no security events that could exceed
23 the EPA Protective, the Environmental Protection
24 Agency, the EPA Protective Action Guidelines.

25 The Commission, in a 1995 emergency

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1 preparedness final rule, indicated that there were no
2 security events that could do that. However -- back
3 up. Because there were no events, there was no need
4 to classify emergencies to a general emergency level.

5 However, if there are events that could
6 exceed the EPA Protective Action Guidelines,
7 Classification 2, a general emergency level, might be
8 necessary. Currently, as I mentioned in one of my
9 earlier slides, ISFSIs are only required to classify
10 emergencies up to the alert level, or to the site area
11 emergency level for complex ISFSIs. General
12 emergencies are required for power reactors.

13 We also note the decommissioned power
14 reactors have typically requested permission from the
15 NRC, and revised their emergency programs so they
16 match ISFSIs. So they only go to an alert, most of
17 them typically only go to alert today. So that's one
18 significant issue that could come into play if you had
19 a higher dose value.

20 If the dose acceptance criteria exceeded
21 25 rem, then you're potentially going into vital
22 areas. When you look at the original, some of the
23 very early rulemakings that established Part 72, the
24 question was posed as to whether the spent fuel needed
25 to be protected in separate protected area, or

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1 protected in a vital area that was within a protected
2 area.

3 The Commission ultimately said no, that
4 was not necessary. It said two barriers would exist.

5 One barrier is the protected area barrier. The
6 second barrier is the cask wall or the spent fuel pool
7 wall. However, that cask wall and spent fuel pool
8 wall were not treated as a "vital area."

9 And so raising the dose numbers up above
10 25 rem would cause that question to be reopened. So I
11 think that's all I wanted to talk about on this one,
12 other than to say what questions, to see are there any
13 questions from anyone? We've gone out on the bridge,
14 and we'll do the auditorium first this time. Are
15 there any issues here in the auditorium?

16 FACILITATOR KRSEK: One question we just -
17 - from the people on the bridge, we'd ask that they do
18 mute their phones when they're not talking.

19 MR. BROCHMAN: Yes, I can hear them.

20 (No response.)

21 MR. BROCHMAN: You have a question? Is
22 there --

23 FACILITATOR KRSEK: Are there any
24 questions in the audience?

25 MR. BROCHMAN: Any questions in the

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1 audience here?

2 (No response.)

3 FACILITATOR BOWDEN BERRY: Do we have a
4 question on the bridge line?

5 MR. BROCHMAN: Do we have a question on
6 the bridge line?

7 (No response.)

8 FACILITATOR KRSEK: And again, if there
9 isn't a mute on your phone, you can press Star 6, and
10 that will mute your phone.

11 MR. BROCHMAN: The other thing I would say
12 is for people on the webinar, there's a little where
13 you can raise your hand if you have a question. Do we
14 have -- how many people -- do we have any people on
15 the webinar? Okay. So we have nine people out there.

16 All right. That's fine, not hearing any
17 issues here, I will move on to Slide No. 14, Enemy of
18 the State.

19 10 C.F.R. Part 50, the regulations for
20 reactor licensing, has a provision, a specific
21 provision in it, 10 C.F.R. 50.13, that removes
22 requirements for licensees to defend the facility
23 against a capability projected by an enemy of the
24 state. Aircraft attacks have been considered
25 something that falls into this area.

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1 One of the questions that, and just as a
2 context for those who weren't here this morning, we
3 received a presentation on vulnerability issues
4 associated with aircraft attacks on spent fuel storage
5 casks. One of the questions that may need to be asked
6 is, "Is equivalent language, enemy of the state
7 language, need to be placed in 10 C.F.R. Part 72 for
8 those facilities as well?"

9 This is not something that the staff has
10 reached any conclusions on. It's something that we're
11 just recognizing that we may need to evaluate this.

12 The other thing I would note is my bottom
13 bullet here on this page. This is the issue with
14 aircraft attacks. Aircraft accidental crashes, those
15 types of issues, are currently required to be
16 evaluated under Part 72. They are evaluated under
17 specific license issues. For a general licenses,
18 there's a different approach.

19 So we're talking here about deliberate or
20 malevolent use of aircraft, as opposed to aircraft
21 accidents. So are there any questions here in the
22 audience or let's start with the audience. Yes.

23 (No response.)

24 MR. BROCHMAN: Boy.

25 FACILITATOR KRSEK: All right. Seeing no

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1 questions here in the audience, do we have any
2 questions on either the bridge or the webinar?

3 (No response.)

4 FACILITATOR KRSEK: All right, hearing
5 none, Phil.

6 MR. BROCHMAN: Security Plan Reviews. We
7 do have one question in the audience.

8 FACILITATOR KRSEK: Oh, we've got
9 questions.

10 MR. LYMAN: Got to keep you earning your
11 salary. Ed Lyman, Union of Concerned Scientists. So
12 the aircraft issue raises some questions in my mind.
13 With regard to new power reactors, of course there is
14 a requirement now to conduct aircraft impact
15 assessments. So I'm wondering if there are new
16 ISFSIs.

17 It seems the better analogy might be to
18 also require that kind of aircraft impact assessment,
19 where the goal is to prevent -- well, of course, the
20 way that language is written, you can either protect
21 the cooling of spent fuel in a pool or prevent breach
22 of containment.

23 So I don't know how it would work with
24 ISFSIs, since you're not cooling. But it seems that's
25 another, if you're going to start opening up how to

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1 modify the regs to address aircraft, you might have to
2 think about being consistent with that as well.

3 MR. BROCHMAN: Thank you, Mr. Lyman. As I
4 said, I think the staff is still early in its
5 consideration of some of these issues. But what we
6 wanted to point out are some of the implications of
7 some of the comments and how, what a response to them
8 to -- could actually involve.

9 Security Plan Reviews. One of the things
10 that the staff had stated in its proposed regulatory
11 basis that engendered some comments was the issue of
12 prior review and approval. Under the current
13 structure for general licensed ISFSIs, those licensees
14 are not required to submit their security plans for
15 prior review and approval.

16 They are available for inspection, but
17 they're not required to be submitted to NRC
18 headquarters. In particular, the staff's view is that
19 if a security plan is necessary, is needed to
20 implement a denial strategy, a licensee, let's say for
21 whatever, for the regulations or some other reason,
22 the licensee has to implement a denial strategy.

23 Based on our prior experience in reviewing
24 security plans following the 2005 DBT orders and other
25 issues that have come along since the last time the

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1 ISFSI security regulations were changed, the staff's
2 view is that we really need to see these plans here at
3 headquarters, and do a prior review and approval
4 before they're implemented.

5 Now that has some implications, which I'll
6 get to in my next slide. But the advantage of this
7 principally is consistency across the country, in
8 terms of the regions. Right now there have been some
9 instances where we've seen implementation questions
10 have come up that, from one region to another, we
11 thought that had been, issues had been settled.

12 So it's caused us to have to go back and
13 re-look at some things that I think people thought
14 were firmly fixed. Part of that is due to different
15 approaches, or slightly different approaches in the
16 regions. The staff's view is that having a
17 centralized review of these plans here at NRC
18 headquarters gives us a greater degree of consistency.

19 Now one of the -- I'm going to talk about
20 the next slide, and then we'll do these in together.
21 The next slide, Hearing Implications. Submission of a
22 security plan to the NRC for prior review and approval
23 is something that my understanding could engender a
24 potential request for hearing, under Section 189A of
25 the Atomic Energy Act.

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1 There's also -- so that could be security
2 plans or, if you had to do something more significant
3 from an emergency preparedness standpoint, let's say
4 they required a new emergency plan that was at the
5 general emergency level, both of those would nominally
6 require prior review and approval, and submission of
7 them for prior review and approval would be a
8 potential triggering event under 189A.

9 One of the comments that was raised by
10 industry, and we had pointed this fact out, was that
11 under Section 218(a) of the Nuclear Waste Policy Act,
12 the Commission, and it refers to the Commission
13 approving by rule or rulemaking, technologies for the
14 dry storage of spent fuel at civilian nuclear power
15 reactor sites, without -- and here's the key words --
16 to the maximum extent practicable, the need for
17 additional site-specific approvals.

18 As a matter of fact, the current structure
19 for the general licensed ISFSI is that essentially
20 everything is inspected at the licensee's facility,
21 and therefore almost no issues are subject to
22 potential hearing. So essentially, we have zero
23 hearing opportunities. Industry was saying that the
24 Commission had an affirmative duty to continue that
25 process.

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1 The staff notes that the language of the
2 Nuclear Waste Policy Act is to the maximum extent
3 practicable. So the staff's view is that the
4 Commission has the discretion to allow for some
5 hearing opportunities, as opposed to feeling that
6 others are not necessary, given the structure and
7 complex designs, and prior approval of those issues
8 through a rulemaking process.

9 So that issue is, I guess I'd say that the
10 staff understands what the comment was, but we may
11 disagree with the issue. That's something that will
12 ultimately be presented to the Commission. I've
13 talked about flexibility.

14 So let me stop at this point and see what
15 comments, if any. Let's do the room first, I guess,
16 since that seems to where the comments are coming from
17 initially, on Security Plan Reviews and/or Hearing
18 Implications. Are there any questions or issues?

19 (No response.)

20 FACILITATOR KRSEK: Seeing no questions or
21 hands raised here in the room, go again to the bridge
22 line or the webinar. Is there anybody on the bridge
23 or the webinar that has any questions?

24 (No response.)

25 FACILITATOR KRSEK: All right. Hearing

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1 none.

2 MR. BROCHMAN: All right. The next slide,
3 Force on Force Assessments. Next please. Thank you.
4 Force on Force. The requirement for force on force
5 assessments comes out of Section 170(d), D as in
6 Delta, of the Atomic Energy Act.

7 It indicates, that Act indicates that the
8 Commission may identify, as appropriate, identify
9 force on force assessments as appropriate for classes
10 of facilities, where a private guard force is required
11 to defend against the design basis threat.

12 So you have a couple of tests here. One
13 is, is the design basis threat being applied.
14 Question No. 2, does the Commission consider that
15 appropriate for that particular class of facilities.
16 So with the direction in the SECY paper in 2007, to
17 move away from the DBT to a dose-based approach, the
18 staff did not need to address this question of whether
19 force on force would be necessary, because we'd be
20 moving away to -- we wouldn't be applying a DBT.

21 If, however, we move in the direction that
22 the commenter suggested, of applying a DBT, this
23 question now comes back into play. In looking at
24 that, one of the key things to consider is the
25 protective strategy. I say that because we could wind

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1 up with a situation where the design basis threat
2 applies, but the protective strategy still remains the
3 same, detect, assess and communicate.

4 A detect, assess and communicate
5 protective strategy is not really suitable for a force
6 on force evaluation. The reason being is we said, I
7 would say the benefit to the cost ratio is
8 unacceptable. Success is defined in a detect, assess,
9 and communicate strategy when the licensee
10 communicates, contacts local law enforcement to
11 respond, not when local law enforcement shows up, not
12 when local law enforcement has addressed the
13 situation.

14 So in that circumstance, all of the things
15 that normally you'd see in a force on force can get
16 very quickly truncated to help, done. So we're not
17 sure that there's a lot of value to be gained in that.

18 If, on the other hand, you're talking denial
19 strategies, then that may be a serious, more serious
20 question to be considered.

21 At this point, the staff does not, has not
22 come to any conclusions as to what would be an
23 appropriate choice. We're just pointing out the fact,
24 and we're looking to ultimately inform the Commission
25 on that matter.

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1 I do, I want to highlight the point at the
2 bottom. The NRC does not assess law enforcement, in
3 terms of how they evaluate and respond to licensee
4 sites. We do look for agreements between the licensee
5 and local law enforcement in terms of their commitment
6 to respond, and we do evaluate that.

7 But we don't do an evaluation like we do
8 in other areas. So let me open up this one and say
9 are there other, are there questions on this topic?

10 FACILITATOR KRSEK: Any questions?

11 (No response.)

12 MR. BROCHMAN: Must have been a lovely
13 lunch you all had.

14 FACILITATOR KRSEK: We have one question
15 from the audience.

16 MR. BROCHMAN: Mr. Lyman.

17 MR. LYMAN: Ed Lyman from the Union of
18 Concerned Scientists. On this last point, my
19 understanding is there have been some limited number
20 of exercises, post-September 11th, that have involved
21 larger, off-site resources as part of the exercise.
22 Is that right, looked at Beyond Design Basis?

23 MR. BROCHMAN: There have been some with
24 the Department of Homeland Security and the Federal
25 Bureau of Investigation. There have been some larger

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1 integrated exercises. But I think there's only been
2 one or two of those that have been held. So I think
3 it's a very limited number. But I think those are
4 more of an evaluating how everything comes together.

5 MR. LYMAN: But there is some precedent
6 for doing that, if you did want to assess whether the
7 assumptions with regard to LLEA response were
8 adequate.

9 MR. BROCHMAN: That is a possibility. But
10 as I said, I think at the present, what I was
11 indicating was more of the present reality, which is
12 the Commission does not evaluate and assess. If it
13 would look at that, it might be in the context of a
14 larger Department of Homeland Security effort. Any
15 other questions on this slide?

16 FACILITATOR KRSEK: Do we have any
17 questions from bridge line or the webinar?

18 (No response.)

19 FACILITATOR KRSEK: Hearing none, Phil.

20 MR. BROCHMAN: All right. Next slide, 10
21 C.F.R. 73.55 language. In the draft regulatory basis
22 document, the NRC staff had discussed using, or at
23 least attempting to use, language that the Commission
24 had recently approved for power reactor security, and
25 that's found in the Commission's regulations in 10

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1 C.F.R. 73.55.

2 The thought was we shouldn't reinvent the
3 wheel. If the issue was exactly the same or nearly
4 the same, the staff should consider whether using that
5 language is appropriate for ISFSIs, in addition to
6 reactors. I give you, I'll just give you an example.

7 Protected area barrier. A protected area
8 barrier consists of fences, intrusion detection
9 systems, assessment cameras, lighting, isolation
10 zones. So when you look at that requirement, those
11 regulations, and you say there's a protected area
12 barrier around a reactor, or there's a protected area
13 barrier around the stand-alone ISFSI, the question
14 that should be asked, we believe, is why should those
15 requirements be different?

16 They could be different. There may be a
17 good reason for it, but the question is why should
18 they be different? Now as we get into other more
19 complex things such as alarm stations, power supplies
20 and other issues, there may be reasons why there are
21 differences.

22 Our point here was to say where we could
23 take advantage of something. Where the Commission has
24 recently updated its regulations, the staff finds that
25 it's easier to use that recently updated regulation as

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1 a basis for what it's proposing, both from an external
2 standpoint and an internal standpoint.

3 So that is something we had proposed. The
4 comments back from industry were this was taking
5 ISFSIs too far. It was imposing too much. I'll just
6 leave it at that, and let industry speak, if it wants
7 to comment further on this.

8 But the questions we would sort of ask is
9 given the vulnerability differences between ISFSIs and
10 that, what type of -- what we might want to get
11 further feedback on is what type of measures are
12 viewed as unnecessary or excessively burdensome. One
13 of the other interesting questions is search
14 requirements.

15 Industry raised a comment, which
16 essentially dealt with where you have a stand-alone
17 ISFSI, and you don't have a separate search building.

18 Is it acceptable just to do pat-down searches,
19 searches of equipment, bags and other things when you
20 come in, given the large, massive robust nature?

21 What I would say is that the staff, in
22 thinking about that, may want to draw a distinction
23 between protection of the ISFSI and there are, you
24 know, a small compact item. He may not be able to
25 cause harm to an ISFSI, but it may be able to cause

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1 harm to the alarm station, or to security personnel.

2 So one of the questions that the staff
3 will need to address is, "What's the overall
4 objective?" Is the objective only to say that the
5 ISFSI casks are protected, or is it to say that the
6 ISFSI in toto, including the personnel, the alarm
7 station, et cetera, other monitoring communication
8 devices are also protected, and that's what the search
9 requirements are meant to establish.

10 I would note that I believe for stand-
11 alone ISFSIs, the original ones, they have a full --
12 the have a search train. Now whether it's the -- I'm
13 not quite sure whether this includes the new explosive
14 detectors. But there are some questions, in terms of
15 they could be looked at there. So let me, I think,
16 just stop at that point and see. Any questions here
17 from the audience?

18 (No response.)

19 FACILITATOR KRSEK: Not hearing any
20 questions from the audience, again, do we have any
21 questions from the bridge line or the webinar?

22 (No response.)

23 MR. BROCHMAN: Well, that was the nature
24 of the topics that I wanted to go through. So I guess
25 I'll just, since I've been doing all the talking up

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1 here, and I thought I was going to have more of a
2 dialogue, I'll open it up to are there other issues or
3 questions that you want to raise, regarding this
4 rulemaking effort, that I didn't talk about before?

5 FACILITATOR KRSEK: And again, we'll start
6 here with --

7 MR. BROCHMAN: We'll start with the room.

8 FACILITATOR KRSEK: Go ahead, Mr. Lyman.

9 MR. LYMAN: Just in the interest of
10 keeping this meeting reasonably long, Ed Lyman, Union
11 of Concerned Scientists. One of the issues we raised
12 in our comments that addressed why we were concerned
13 about the dose-based approach was the experimental
14 validation of release fractions, and pointed out that
15 the only program in the United States that was
16 actually attempting to do that was cancelled and
17 defunded before it was actually able to complete its
18 validation.

19 So I was wondering if there were any
20 additional, any additional thinking on the part of the
21 staff on how you would actually validate the release
22 fractions that would be used in the dose-based
23 approach. Thanks.

24 MR. BROCHMAN: Yes, thank you. One of the
25 -- the study you refer to, and I believe, if I

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1 understand correctly, there was the one that was the -
2 - it was the experiment. It was an experiment to
3 calculate release fractions and measure them using
4 actual spent fuel.

5 Where the program -- the program was
6 partially completed when funding was ended, and it was
7 an effort that was involved both the Nuclear
8 Regulatory Commission, the Department of Energy and
9 several foreign governments. Different parties
10 provided different components.

11 The study has been completed up through
12 the -- you see how far this will be. It was completed
13 through the use of a simulant. So in other words, the
14 test chambers, the measuring equipment, the shape
15 charge that was used to disrupt the material, all of
16 that was completed, up through the use of simulated
17 nuclear material.

18 That results were then compared against
19 the codes that had been used by Sandia. Sandia was
20 the facility where this was being conducted. Those
21 results were then compared against the codes. My
22 understanding is that the experimental results for the
23 simulants were greatly in alignment with the code or
24 the model that had been predicted.

25 The next step would have been to use real

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1 spent fuel. I do not know if that program will ever
2 be reconstituted. What I would say is given the
3 results that we've seen so far, that the simulant
4 modeling validates the code or the coding that would
5 be proposed. We would use the information we have
6 available, rather than disregarding it.

7 I think it's beyond the scope of this
8 particular effort, to require that particular project
9 to be completed. The NRC funds that were allocated to
10 this have all been expended. So the costs that were
11 needed to be paid were by other federal agencies,
12 which we don't have control over.

13 But there are some results. I don't know
14 that those results have been released yet. I'm not
15 sure if there's anybody from Sandia here that wants to
16 speak to that. If not, that's the best available
17 information that I have. Are there other questions in
18 the auditorium? Otherwise, we'll try the phone
19 bridge.

20 FACILITATOR KRSEK: Let's try the phone
21 bridge. Any questions on the phone bridge or the
22 webinar?

23 (No response.)

24 FACILITATOR KRSEK: Any follow-up
25 questions here from the audience, or any additional

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1 questions? Sure.

2 MR. LYMAN: Ed Lyman again. But there are
3 issues. So in other words, you would try to use the
4 validated models and extrapolate to the actual spent
5 fuel composition using just the theoretical properties
6 of the material? I mean the issue is whether there's
7 enhancement, a cesium release, you know, because of a
8 particular boiling point or those kinds of questions?

9 MR. BROCHMAN: I understand what you're --
10 I understand the question you're asking. I'm not sure
11 I have a complete answer. What I would say to you,
12 just as a point of information, that in the analyses
13 the staff has done since 9/11, there are other
14 nuclides -- there are nuclides other than cesium that
15 appear to be the significant drivers on dose, what
16 would be dose consequences.

17 Cesium was not one of the top two or top
18 three, and so --

19 MR. LYMAN: For old spent fuel more than
20 ten years?

21 MR. BROCHMAN: Pardon?

22 MR. LYMAN: For spent fuel that's been out
23 of the reactor more than ten years? Really?

24 MR. BROCHMAN: Yes. One of the other
25 issues is inhalation dose versus exposure, versus

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1 total body exposures. Before I go any further, since
2 I'm not an expert in this area. This is, you're
3 raising a very good question.

4 My understanding was the simulant could be
5 used, or the simulant results were modeling close,
6 were tracking closely with the model, in terms of
7 release fraction, and they were using, I believe they
8 used cerium oxide was the particular simulant they
9 were using. But that's all the information I have at
10 this point.

11 MR. LYMAN: Okay, thank you. I appreciate
12 that.

13 MR. BROCHMAN: Are there any other
14 questions, any questions in the webinar? It looks
15 like nothing at the webinar? Are you going to --
16 looks like we need to have a technical conversation
17 off to the side. Can we just check and make sure that
18 everyone on the bridge line is off mute --

19 FACILITATOR KRSEK: Oh please, let them go
20 ahead.

21 MR. BROCHMAN: Just making sure. Again,
22 press Star 6 to come off mute. We're just doing a
23 second check, to see if there's any questions on the
24 bridge line.

25 (No response.)

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1 FACILITATOR KRSEK: All right. Hearing
2 none.

3 MR. BROCHMAN: Hearing none, Sandy, did
4 you want to do some closing remarks? Of course, I'm
5 going to sit down.

6 FACILITATOR KRSEK: And the NRC staff will
7 be available for discussion, you know, immediately
8 following this meeting also.

9 MS. WASTLER: This was a little earlier
10 than I expected, I have to admit. I just wanted to
11 thank everyone on the bridge line, on the webinar and
12 here for your participation. Again, our goal was to
13 provide opportunity for active dialogue. I think
14 we've done that.

15 I'm a little, I don't know whether it's
16 confused, but I just assumed that there would be a
17 little more dialogue than there was. But
18 nevertheless, the opportunity has been there, and we
19 appreciate your input.

20 I mean, we're very early in the rulemaking
21 process. We have a long way to go. There will be
22 other opportunities, and I'm sure we'll reach a point
23 where we will have some very detailed dialogues. So
24 with that, I want to thank you for participating.

25 FACILITATOR KRSEK: And again, thanks

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1 everyone for participating on the table coming into
2 the meeting. There are forms to fill out, where we
3 get feedback on our public meetings, and that's the
4 way that we improve them.

5 So we'd appreciate that you'd fill those
6 out. For those on the webinar or on the
7 teleconference, you can contact any one of the staff
8 members involved with the meeting, to get a copy of
9 that form for feedback. Thanks again for everybody's
10 participation.

11 (Whereupon, at 2:28 p.m., the meeting was
12 adjourned.)

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