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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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578TH MEETING

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

OPEN SESSION

+ + + + +

FRIDAY

DECEMBER 3, 2010

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Advisory Committee met at the Nuclear
Regulatory Commission, Two White Flint North, Room
T2B1, 11545 Rockville Pike, at 8:30 a.m., Said
Abdel-Khalik, Chairman, presiding.

COMMITTEE MEMBERS:

SAID ABDEL-KHALIK, Chairman

J. SAM ARMIJO, Vice Chairman

JOHN W. STETKAR, Member-at-Large

SANJOY BANERJEE, Member

DENNIS C. BLEY, Member

MARIO V. BONACA, Member

CHARLES H. BROWN, JR., Member

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1 MICHAEL L. CORRADINI, Member

2 DANA A. POWERS, Member

3 HAROLD B. RAY, Member

4 JOY REMPE, Member

5 MICHAEL T. RYAN, Member

6 WILLIAM J. SHACK, Member

7 JOHN D. SIEBER, Member

8 DESIGNATED FEDERAL OFFICIAL:

9 DEREK WIDMAYER

10 NRC STAFF PRESENT:

11 VALERIE BARNES, RES/DRA

12 JAMES FIRTH, FSME

13 DIANE SIERACKI, OE

14 DAVE SOLORIO, OE

15 ROY ZIMMERMAN, OE

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I-N-D-E-X

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

8:30 a.m.

CHAIRMAN ABDEL-KHALIK: The meeting will now come to order. This is the second day of the 578th meeting of the Advisory Committee on Reactor Safeguards. During today's meeting, the Committee will consider the following:

1. Safety Culture Policy Statement
2. Preparation of ACRS Reports
3. Future ACRS Activities/Report of the Planning and Procedures Subcommittee
4. Reconciliation of ACRS comments and recommendations.

This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act. Mr. Derek Widmayer is the designated federal official for the initial portion of the meeting.

We have received no written comments or requests for time to make oral statements from members of the public regarding today's sessions there will be a phone bridge line.

Members of the public, Arizona Public Service and Human Performance Analysis Corp. will be listening to the safety culture policy statement

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1 discussions.

2 To preclude interruption of the meeting,
3 the phone will be placed in a listen-in mode during
4 the presentations and committee discussions. A
5 transcript of portions of the meeting is being kept
6 and it is requested that the speakers use one of the
7 microphones, identify themselves and speak with
8 sufficient clarity and volume so that they can be
9 readily heard.

10 We will now proceed to the first item on
11 today's agenda and Dennis Bley will lead us through
12 that.

13 MEMBER BLEY: Thank you. We are going to
14 hear from staff on the final safety culture policy
15 statement. We had a safety culture subcommittee
16 meeting a little over a year ago that was very
17 tutorial, lots of information from many different
18 sources, and one last month that went into the draft
19 of the policy statement. We didn't get the final
20 policy statement until a couple of weeks ago but it is
21 pretty much in line with what we had seen before.

22 So at this time I would like to turn it
23 over to staff to -- you have changed places.

24 MR. ZIMMERMAN: Thank you very much. My
25 name again is Roy Zimmerman. I am the director of the

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1 NRC's Office of Enforcement and with me at the table
2 are Dave Solorio - he is the branch chief who has the
3 responsibility for the development of the safety
4 culture policy statement -- and Diane Sieracki, who is
5 a senior program manager in the area of safety culture
6 and she will be providing the presentation shortly.

7 We thank the committee for this
8 opportunity to be able to update you and brief you on
9 the activities that we have under way associated with
10 finalizing the draft safety culture policy statement.

11 As was just indicated, about a year ago
12 the Subcommittee for Reliability and PRA was briefed
13 by the staff and by external stakeholders on the
14 progress and efforts that were under way associated
15 with safety culture.

16 And then early last month, the
17 subcommittee was again briefed on the accomplishments
18 of what has occurred over the past year. We think that
19 there's been considerable progress that has been made
20 as we near the finalization of that policy statement.

21 And you are going to hear about a lot of
22 those accomplishments and status of where we are from
23 Diane shortly.

24 During that briefing that we had in
25 November with the subcommittee, we benefitted greatly

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1 from the questions and insights that were brought to
2 us by the subcommittee and we brought a number of
3 those out in the documents themselves and also those
4 insights that we will take with us into the
5 implementation phase, so we thank the subcommittee for
6 the great insights that they provided us at our last
7 session.

8 Although the office of enforcement has the
9 lead for the development of the safety culture policy
10 statement, this has been very much a collaborative
11 effort within the NRC. There have been over nine NRC
12 offices that have been very actively involved because
13 what we are talking about here is a policy statement
14 that will be overarching for all those that we
15 regulate, so there isn't one particular program office
16 that takes the lead for the individual development of
17 the items.

18 So with OE in the lead and the support
19 through a Working Group and a steering committee that
20 provided us great guidance, it was a very
21 collaborative effort and very much appreciated. And we
22 have representatives from those office interspersed
23 through the audience today and we are glad that they
24 are with us and for everything they have done to
25 support this activity.

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1 Similarly we have had a very collaborative
2 working environment with our external stakeholders.
3 The industry again made up of a very large cross-
4 section of the industry that we and agreement states
5 regulate.

6 The interactions that we have had with our
7 partners via the agreement states and the public
8 themselves have provided us value comments throughout
9 this two-year process and we compliment them for the
10 role that they have played.

11 They have responded to two Federal
12 Register notices with valuable comments and they have
13 attended a variety of public meetings across the
14 country, including a three-day public workshop. So we
15 felt that the interactions with our stakeholders were
16 very, very positive on this activity.

17 With regard to safety culture, we continue
18 to view the need for a strong safety culture as a key
19 component to good safety performance among those that
20 we regulate.

21 In addition to past events that have
22 occurred within our nuclear industry, we are also, as
23 you are, well aware of recent high-profile events
24 outside the nuclear field such as the Gulf Oil spill,
25 the West Virginia coal mining accident and then here

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1 locally, Metrorail has had some difficulties.

2 And we continue to look at these to see if
3 they give rise to the potential role that safety
4 culture may have played with regard to these mishaps.
5 The approach that we are using is one of operating
6 experience.

7 We are intending to continue to look at
8 these events, studies that have been done by other
9 parties, and to draw from them so that we can learn
10 not only from the events that have occurred in the
11 nuclear industry and to share those with our industry
12 and our internal staff.

13 But we also want to look at those that
14 have occurred outside the nuclear industry where we
15 can learn where safety culture potentially may have
16 been weak and played a role in the event. So that's
17 one of the initiatives we have under way.

18 At this point I want to get into the bulk
19 of the presentation, so let me introduce our principle
20 presenter this morning --

21 MEMBER ARMIJO: Excuse me, Mr. Zimmerman.

22 MR. ZIMMERMAN: Yes. Yes.

23 MEMBER ARMIJO: Before you go further, I
24 haven't been part of that subcommittee so I just want
25 to get a big picture --

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1 MR. ZIMMERMAN: Sure.

2 MEMBER ARMIJO: -- of where the safety
3 culture policy is leading. Will it be followed up with
4 regulations and enforcement, you know, you're the
5 Office of --

6 MR. ZIMMERMAN: Office of Enforcement --

7 MEMBER ARMIJO: -- you know, what are you
8 going to enforce?

9 MR. ZIMMERMAN: Very good question.

10 MEMBER ARMIJO: And then the other question
11 I had is if and when this policy statement is put in
12 place, what legal effect does it have? For example, if
13 a member of the public wants to intervene in some
14 regulatory matter, can they cite the safety culture as
15 a basis for their intervention, saying well, this
16 applicant or licensee has a poor safety culture based
17 on their personal reading as opposed to the --

18 MR. ZIMMERMAN: Right.

19 MEMBER ARMIJO: So I'm just trying to
20 figure out where is this all going to lead?

21 MEMBER BONACA: Relating to this question -
22 -

23 MEMBER ARMIJO: Pardon me, Mario?

24 MEMBER BONACA: Relating to your question I
25 have an additional kind of question. About four years

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1 ago, there was a development of some instructions to
2 the resident inspectors, which they had been given,
3 and they have been giving feedback to us through some
4 visits we had at different regions.

5 And the guidance to the inspectors was
6 quite effective, it seems to me. And so it would be
7 interesting in the context of the question of Dr.
8 Armijo to understand how that links together with his
9 top-down policy statement.

10 MR. ZIMMERMAN: Thank you. Good questions.
11 The approach that we are currently on is one of a
12 policy statement that will express the Commission's
13 expectations. It is not a requirement, although we
14 considered whether we should go the requirement route
15 vs. the policy statement and our view is that we feel
16 that there is time, that if we don't receive the type
17 of support that we expect in the embracing of this
18 policy statement by our stakeholders, then we are
19 holding in abeyance the rulemaking aspect.

20 What we have found over the last couple of
21 years is very positive, a lot of very good, healthy
22 energy from the industry. We have not had to convince
23 the industry that this is an important area that
24 warrants attention. They have put energy into this,
25 they have already started in many, many cases to

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1 develop their programs and implement their programs.

2 So what you won't see are violations of
3 this policy statement coming out. We will, again, hold
4 in our hip pocket that if for some reason we are not
5 accomplishing what we expect to accomplish through the
6 policy statement then rulemaking is always another
7 alternative.

8 But I'm optimistic that through the
9 implementation phase and additional training for some
10 of the licensees that we don't deal with as regularly,
11 we recognize that not all of our different industry
12 groupings if you will are on the same path in terms of
13 how far along they are on this.

14 Some of the smaller gauge users, to use as
15 an example, compared to the reactors and what they
16 have progressed, they are different, and that's fine.
17 It's a matter of treating each in an appropriate
18 manner for what they need in order to be able to
19 understand. We want them to embrace safety
20 culture and to understand it and not look at this as a
21 flash in the pan, as the hot issue of the week or the
22 year, and to, in their own words, be able to
23 articulate why this is important in their
24 organization, whether it's a power reactor, a
25 hospital, gauges in the back of a truck used for

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1 density gauge measurement with very few people in
2 their company, we want it to be covering all of those.

3 MEMBER ARMIJO: I appreciate that. The
4 issue on the legal -- what does it mean legally from
5 the standpoint of the public using it or abusing it?

6 MR. ZIMMERMAN: It's expectations and it
7 will be watched -- what will happen is the lead will
8 transfer to the program offices so for reactors, NRR
9 will pick it up, NMSS will pick up fuel facilities for
10 implementation.

11 We will go into a support role to be able
12 to aid them in the necessary training and rollout
13 steps necessary for the expectations to be understood
14 through various types of meetings and edition types of
15 documents.

16 But again, it is a document that does not
17 have the backing of a requirement. It is making clear
18 what the expectations are. We have seen nothing but
19 good faith and high energy from all corners of the
20 industry thus far.

21 MEMBER SIEBER: Maybe I could add
22 something. The safety culture policy statement really
23 conceptually has two components. One of them is to try
24 to develop a set of behaviors which lead to successful
25 operation of facilities. And that includes leadership

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1 skills and all of this other thing.

2 The other one is to -- the other object is
3 to have a number of processes that deal with key
4 elements, for example your work control system and
5 your identification and recording of --

6 MR. ZIMMERMAN: Right, the traits.

7 MEMBER SIEBER: the deficiencies, and how
8 they are dealt with, prioritization. You can make
9 rules. In fact the ROP is based on this safety culture
10 policy statement. And you can have rules and to the
11 extent that a lot of enforcement is concerned, it's
12 based on ROP concept. ROP concepts have their origin
13 in safety culture.

14 But if you were to look at 100 nuclear
15 power plants and as you know, that's about how many
16 there are, power reactors, you will find a
17 distribution of skilled management, and at the very
18 top there are some very successful leaders. The
19 organization is focused on safety productivity, public
20 safety, their own safety, productivity and somewhere
21 in there down the line comes actually making a profit.

22 And at the other end, you find folks where
23 the organization, on the organization chart is
24 different than the organization that actually exists
25 in the plant. Maybe the union steward is the most

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1 effective leader in the plant.

2 And people may not have the enthusiasm and
3 the motivation to go into the depth of the detail.
4 That's pretty hard to put into a regulatory sense,
5 except when you measure and the ROP dose that, and I
6 think the focus here is to move policy mostly into the
7 ROP and regulate on this basis, and it's a
8 performance-based approach.

9 MEMBER ARMIJO: Well yes, that's kind of
10 the key things I'm looking for. What we are already
11 doing in measuring through the ROP.

12 MR. ZIMMERMAN: And that goes to Mario's
13 question.

14 MEMBER ARMIJO: Yes, quantitative stuff,
15 objective stuff, as opposed to subjective use.

16 MEMBER SIEBER: The Commission's had this
17 since '81 basically, or '82 --.

18 MEMBER ARMIJO: Okay.

19 MEMBER SIEBER: and developed it fairly
20 well, but this goes back through centuries. That's why
21 people win and lose wars. That's why some cultures are
22 successful and others are not.

23 MEMBER BONACA: The reason I asked the
24 question before was because I found that these
25 procedures, you know, we commented about four years

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1 ago are quite developed and they are very effective in
2 a way and most of all during the meetings we had with
3 regions during summer visits, we had very positive
4 experience from the resident inspectors.

5 I mean, clearly they embrace those
6 reviews. They understand very clearly what it means
7 repeat events and there is a structure to that.

8 So, no, I appreciate also the policy
9 statement but is there a gap right now between the
10 development of the policy statement and separately,
11 these guidelines which are already in place? Or are we
12 paying attention to making sure that they have meshed
13 together?

14 MR. ZIMMERMAN: Yes, I think the safety
15 culture policy statement, when it is finalized, is a
16 good underlying document to support what's being done
17 in the ROP. They won't conflict with each other, and I
18 think that as you indicated, the cross-cutting item in
19 safety culture and the ROP is one that the staff use
20 in a positive way.

21 The industry has sent signals to the NRC
22 that they would like us to take a couple of steps back
23 and use the self-assessments that they have piloted a
24 few times and allow us to take more of an overview
25 from a little bit of a distance rather than such a

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1 hands-on approach.

2 And I want to be careful speaking for NRR
3 who is here in the audience, but as I understand it,
4 NRR is indicating, not right away, this is new, the
5 cross-cutting item is working well just the way it is
6 right now. We applaud you for what you are doing with
7 your own self assessments. Let's get a little run time
8 here and understand once the policy statement is out,
9 some more run time with the safety culture, cross-
10 cutting item and then we will see if there's something
11 that we want to engage in dialogue but no promises.

12 But we don't see anything here that
13 conflicts and we work very closely with NRR to avoid
14 that.

15 MEMBER CORRADINI: So can I just summarize
16 everything I heard. So one, this is philosophical.
17 Two, the ROP process as is will move forward and it
18 may be potentially noodled with but at this point, at
19 least for reactors, because you made a point of saying
20 there's material facilities or fuel cycle facilities -
21 -

22 MR. ZIMMERMAN: That are not covered by it.

23 MEMBER CORRADINI: Right, exactly. So I
24 guess my -- I want to make sure, to get to Mario's
25 point, that at least the way the inspectors are doing

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1 their current work, it is based on a process that is
2 in place and this is a philosophical umbrella to
3 compare and contrast what is being done going forward.
4 Is that a fair statement?

5 MR. ZIMMERMAN: Yes.

6 MEMBER CORRADINI: Okay.

7 MEMBER ARMIJO: Okay thank you. I
8 appreciate that.

9 MR. ZIMMERMAN: Okay, a little quick
10 history on -- I now realize that time is important
11 this morning. Diane has her Masters' degree in
12 management and organizational behavior. She has over
13 25 years of experience in the nuclear industry, 10 of
14 which are in the safety conscious work environment
15 area.

16 Her most recent position before joining
17 the NRC quite recently, in August, is she was the
18 fleet manager at Dominion with responsibility across
19 the fleet in the employee concerns program. With that,
20 let me turn it over to Diane.

21 MS. SIERACKI: Thank you Roy. Good morning.
22 Good discussion and I may be able to add some points
23 to it as we go along as well.

24 This morning I'd like to talk about -- I'd
25 like to start with just a very quick overview of the

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1 background because I understand that the subcommittee
2 has heard background a year ago and we also had a
3 meeting about a month ago.

4 But some of you on the full committee, I
5 just want to get you a little bit up to speed and I'll
6 go through it rather quickly.

7 Outreach activities, as Roy mentioned,
8 that's really the part that has been instrumental in
9 getting us to where we are now, in getting our
10 stakeholders involved and so I'll go through what we
11 have been doing over the past year.

12 And then wrap up with the final safety
13 culture policy statement and the Commission paper and
14 what you will see there.

15 Okay, just very quickly, background. This
16 effort started way over two years ago, with a
17 directive by the Commission, basically asking the
18 staff to look at the material areas now, and the
19 agreement states. Look at the reactor process which
20 Mario mentioned and see if that is being effective.

21 And then what should we do with safety and
22 security? Should we have two policy statements or one?
23 So the staff looked at that, had a workshop in
24 February of '09 and got some stakeholder feedback, and
25 the results of that were a paper that went up to the

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1 Commission recommending that we do one policy
2 statement.

3 The ROP was looked at. Their self-
4 assessment process is effective and they look it
5 routinely, and that the Commission paper did include a
6 strategy for including the agreement states and
7 material licensees.

8 With that, the Commission brought down a
9 directive to go ahead, publish one statement and
10 consider vendors and suppliers when you do so, comport
11 terminology because there's a lot of activity that has
12 been done in the past, John mentioned that, and then
13 engage a broad range of stakeholders.

14 So what we did is we took the Commission's
15 directive and published that draft policy statement in
16 November of 2009. It was out there for a 120 day
17 comment period.

18 At the end of that comment period, we
19 received 52 responses, basically wrapped around three
20 themes. Individuals were looking for clarity on policy
21 statement implementation. Here you have the statement,
22 what will we do to implement it? Again along those
23 lines of are you going to enforce this, will there be
24 violations, what will you be doing on implementation.

25 Feedback was don't include security in the

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1 safety culture definition or the traits and I'll get
2 into some of that discussion just in a few moments so
3 we'll let that one for now.

4 Implications of a policy statement versus
5 a regulation. There was some confusion: what does this
6 mean? What's a regulation? Why isn't it a regulation?

7 So what we did is we had the Working Group
8 and the steering committee that Roy mentioned, made up
9 of our program offices, take a look at these comments
10 and help to bring those to resolution.

11 What we did is we put the policy statement
12 versus regulation language into a subsequent FRN so
13 that we could basically educate our stakeholders on
14 what the difference was and let them know that in fact
15 we did want to stay with a policy statement now which
16 is not regulations, not enforceable, but as Roy
17 mentioned, we'll see how we do with that, and if we
18 need to get into something further we will later on
19 down the road.

20 During that time frame that the public
21 comments were coming in, we also had a workshop in
22 February of 2010. It was a three-day workshop. Really
23 that -- the output from that workshop was instrumental
24 in getting us to the final safety culture policy
25 statement and I will get into that in depth a bit

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1 later in this discussion. I want to stay at the level
2 of outreach activities for now.

3 Through May and August, we had NRC staff
4 presenting to various conferences and forums, panels
5 et cetera, including a workshop on vendor oversights
6 so that we could bring the vendors and suppliers up to
7 speed, really educating them on what the policy
8 statement was all about and getting feedback.

9 Again, those were members of the program
10 offices as well as the OE office that went out and did
11 some of that.

12 We had an additional teleconference,
13 public meeting, with the panelists from the February
14 workshop that I just mentioned, and members of the
15 public in July of 2010.

16 We went over the results of the public
17 comments, the three that I mentioned, issues about
18 implementation, security and also rulemaking versus
19 policy statement.

20 We discussed the inclusion of security in
21 the traits and the definition with the workshop
22 panelists and the public at that time, and we
23 continued to receive endorsement for the workshop
24 definition in traits, which I will explain in a few
25 moments.

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1 The inclusion of security was a point of
2 discussion, both between and among the staff as well
3 as stakeholders. We had feed back that some wanted
4 security in. Some did not. Overwhelmingly, most of the
5 stakeholders did not see it as a term being necessary
6 to be included, and that is because there are other
7 important aspects as well, such as emergency planning
8 and radiation protection and why wouldn't we then call
9 out each of those in the definition or traits.

10 Certainly security is important, but why
11 would we call it out? So the staff took that and had
12 numerous discussions and it is very important, it's
13 one of our pillars, and we needed to get it involved
14 in some fashion.

15 So what happened was, with many
16 discussions we came to what is termed a preamble, so
17 we have in the policy statement, I know you have each
18 have a copy of it, we have a definition and then a
19 preamble which basically says what a trait is and then
20 in informs the user that you need to consider security
21 when you are looking at these traits, commensurate
22 with its significance as we move through.

23 I think it's a good way to kind of help
24 everyone to get where they need to be. We have covered
25 security. We feel comfortable as a staff and the

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1 stakeholders can buy into that because it is
2 commensurate with the significance and as it affects
3 them in their own regulated community.

4 Next page. After we wrapped up some of
5 those efforts, staff decided it would be a good idea
6 to once again publish the policy statement in the
7 Federal Register. And so we did that in September for
8 a 30-day comment period.

9 The reasons behind that were the fact that
10 we had a different definition in traits than we had in
11 the original November '09 FRN and we wanted to
12 actually include the traits within the statement of
13 policy. They have not been included previously, and we
14 wanted to talk about the preamble for security. Also
15 wanted to make it applicable to vendors and suppliers.
16 We included expectations for agreement states. And we
17 asked whether an INPO validation study result should
18 be considered.

19 Let me talk about these just a little bit,
20 because many of this goes right into the end policy
21 statement.

22 We included the traits, something that
23 hadn't been done before, and the reason for that is
24 because the traits that were developed at the workshop
25 and that you will see in the final very shortly, are

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1 very concise and brief and they lend a little more --
2 they take the definition and they give it some more
3 meat, if you will, and it also meets the Commission's
4 expectation that we want our regulated communities to
5 adopt the safety culture policy statement and these
6 are attributes or traits if you will of traits
7 themselves on the top.

8 Lots of different language out there, and
9 one thing that I wanted to mention, on Mario's topic,
10 common language is an issue that we really need to be
11 concerned about because in the components that we have
12 right now in the ROP, we have components and aspects,
13 and out in the nuclear industry, we have principles
14 and attributes.

15 If you look into the international
16 community, we have characteristics and now we are
17 talking traits. And so there is an effort to get
18 everybody on board, that's why this is a great vehicle
19 to get this out for our material licensees, fuel
20 cycles, in addition to the reactors, so that we are
21 all talking the same language.

22 And I can say that our reactor community
23 is very on board with this and in fact is planning on
24 changing their principles if we get a directive by the
25 Commission that this is the way to go, change the

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1 principles to match those traits as we move along so
2 that their documentation on the industry will be the
3 same, with respect to the ROP and how the policy
4 statement might intertwine there.

5 A possibility would be that the Commission
6 directs that we change some of those components to
7 match the traits and flesh those out with the reactor
8 community so we are talking that common language.

9 So that was really an effort, that we
10 wanted to make it very clear for our users that this
11 is the definition and these are the traits included in
12 the statement of policy.

13 Applicability to vendors and suppliers.
14 When we did the initial FRN in November, we had gotten
15 feedback that this should be effective to your vendors
16 and suppliers. Why wouldn't it be, because we are all
17 working in the same arena with nuclear materials et
18 cetera.

19 The question -- and we always had some
20 comments from our RIC session that we did last March,
21 that it would be a benefit to have vendors and
22 suppliers underneath this umbrella.

23 The question comes in as to how will you
24 implement that, and that is something that we are
25 going to have to look at as we move into that

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1 implementation phase. We are aware of that. The
2 program offices are aware of that.

3 It may be a little easier in some areas
4 than others. One of the things that you can do is you
5 can put contract language into your contract. We did
6 that with the safety conscious work environment policy
7 statement when that was issued.

8 There's also ways to look at you vendors,
9 if they are supplying safety-related materials or
10 components, we do audits through QA programs right
11 now. We could add these types of things in there, the
12 licensees could.

13 So there are some things in place already
14 that we could use and we will definitely look at that
15 in the implementation phase.

16 INPO validation study results. I am not
17 going to get into that in any detail. I just want you
18 to be aware that during this time frame, NEI through
19 the reactor community contracted with INPO to conduct
20 a validation study based on the traits that you see in
21 the policy statement.

22 And what they did is they had a survey
23 and they have sent that out to the reactor community,
24 gathered all of that data and did some analysis and
25 the results of that pretty much confirmed that the

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1 traits that we have come up with are the right traits.
2 There are some groups that are a little bit different,
3 but essentially they support the traits as we see
4 them.

5 Okay, next page. The September FRN public
6 comments out of that, we had 23 responses, basically
7 two themes. Our regulated community wanted us to make
8 a distinction between licensees and the policy and
9 give them credit for what they have already done.

10 The reactor community as you know has come
11 a long way but the hospitals and fuel cycle
12 facilities, even new construction, they've already
13 begun some of this process, and what they don't want
14 is for us to have a policy statement that would
15 essentially ask them to take out everything that they
16 have done so far and start over.

17 So this will be building on what they have
18 already -- what they already have out there, and we
19 have words to that effect in the policy statement.

20 Stakeholders also requested continued
21 involvement. That was almost unanimously. They really
22 want to be involved. We've had them involved a lot up
23 to this point in the development phase and they
24 absolutely want to be involved in the implementation
25 phase and that is the plan. The program offices will

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1 be working with their constituents as they move
2 forward.

3 During this time frame we also had one
4 final public meeting, a one-day meeting held out west
5 on September 28. It was an opportunity for us to have
6 some of our stakeholders present their thoughts and
7 ideas on where we are at right now, and we also had a
8 presentation done on those validation study results
9 that I spoke about so that we could give that
10 information to our stakeholders and they had it when
11 they provided their final comments.

12 Now I want to get into what I am going to
13 call the real meat of this. The February workshop,
14 the three-day workshop.

15 It was a panel of 16 stakeholders from
16 various affiliations. You can see some of them there.
17 The agreement states were there. We had medical
18 facilities, fuel cycle facilities, gauge
19 manufacturers, NDE folks, reactor folks et cetera.
20 There were 16 people and also an audience of
21 participants.

22 Those panelists worked together in
23 breakout sessions with the other attendees and reached
24 alignment on a definition and eight traits of a
25 positive safety culture. And those definitions and

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1 traits will help us to come to a common terminology as
2 I mentioned previously.

3 Next slide. I'm going to get into how that
4 was done. This is the definition that came out of the
5 efforts of the workshop and if we think back to the
6 November `09, the first draft, safety culture policy
7 statement, that definition was crafted by the NRC and
8 what we did was we looked at international
9 organizations, domestic organizations, basically did
10 some benchmarking and we ended up with the IAEA INSAG
11 definition and made some changes to it.

12 So the panel took that definition. They
13 took what IAEA has. They took what is in the
14 components and aspects for the ROP, looked at INPO's
15 principles and attributes, looked at some of the
16 theory that's out there, Dr. Shein et cetera, and we
17 have presentations by others who had definitions and
18 so on.

19 So we did take an opportunity to comport
20 terminology and came up with this definition. It has
21 stood the test of time, throughout all of the public
22 comment periods, outreach activities that we did to
23 gain feedback from others as we took this out at
24 conferences et cetera, and it has been the definition
25 that we have in the final statement of policy and it

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1 is nuclear safety culture, core values and behaviors
2 resulting from a collective commitment by leaders and
3 individuals to emphasize safety over competing goals,
4 to ensure protection of people and the environment.

5 Next page. The traits that I mentioned.
6 You'll see there are nine there, and there's a reason
7 for that, I'll get into it.

8 The first eight were developed by the
9 workshop and how was that done? Those 16 stakeholders,
10 we went through -- I was actually a panel member on
11 behalf of Dominion at the time, and what we did is we
12 took -- we did a sticky exercise and that means we
13 just brainstormed, what does safety culture look like?
14 What does that mean to me? -- wrote it down on
15 stickies and put it up on a board.

16 And then what we did is we -- very
17 scientific -- we binned these into what looked like
18 this looks like it belongs together, when we talked
19 about corrective action program processes that you can
20 trend issues and bring things up.

21 So we put all of those up on the board,
22 put them together in what we will call bins, and then
23 we gave descriptions to those bins, which is really
24 the traits.

25 So it wasn't very scientific, but what it

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1 brought to the table was the thoughts for all of these
2 different regulated entities and what does this look
3 like in my environment and my community, and keeping
4 in mind that we also had principles and components and
5 characteristics out there for us to look at.

6 And if you were to look at those other
7 documents you'd see that some of these are almost word
8 for word from those other -- using that same
9 terminology. So those --

10 MEMBER CORRADINI: Can I ask a question
11 about that?

12 MS. SIERACKI: Yes.

13 MEMBER CORRADINI: So you as Dominion, if
14 you were to look at those, what was missing at
15 Dominion at the time you developed these nine?

16 MS. SIERACKI: We were using as most of the
17 reactor community the principles, the INPO principles.

18 MEMBER CORRADINI: Which means --

19 MS. SIERACKI: What was missing there was
20 safety conscious work environment. There wasn't a
21 strong -- they had trust permeates the organization
22 and that's Environment for Raising Concerns on this
23 list.

24 MEMBER CORRADINI: Okay.

25 MS. SIERACKI: Of course as a reactor

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1 community, we also were in line with the components as
2 you do root causes et cetera, because that's under the
3 ROP. So we are very familiar with both sides, but
4 really it was an exercise in just, what does it look
5 like as a worker in the plant? What does this look
6 like for safety culture.

7 MEMBER BLEY: Mike, at the Subcommittee
8 they laid out these different definitions and how they
9 realigned so they were pretty complete except for one
10 or two exceptions.

11 MS. SIERACKI: And they really do correlate
12 very closely to the language that is already out
13 there. So essentially we ended up with these eight
14 traits. I am going to talk about Questioning Attitude
15 just for a moment, how that ended up on there.

16 The workshop came up with these traits and
17 then the Working Group and the steering committee,
18 which we have been talking about, took a look at
19 those, just changed the language, tweaked it a bit,
20 did not make any substantive changes, and I'll give
21 you an example.

22 When the workshop put together the traits,
23 for leadership they had leadership safety behaviors as
24 the title and the staff changed that to Leadership
25 Safety Values and Actions, just to provide a little

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1 bit more clarity, so they changed it somewhat from the
2 workshop.

3 Questioning Attitude was added. Based on
4 the validation study that we talked about just very
5 briefly from INPO, and also because we have been
6 thinking about complacency, with the Davis-Besse
7 incident et cetera, and that's an area that we thought
8 we want to put a little emphasis on in the policy
9 statement and Questioning Attitude is an area where
10 you can talk about complacency.

11 MEMBER BROWN: Isn't that similar to
12 Environment for Raising Concerns, though? I mean,
13 they're kind of coupled together --

14 MS. SIERACKI: It is.

15 MEMBER BROWN: Some of it looks a little
16 bit duplicative.

17 MS. SIERACKI: And that's why you didn't
18 see it from the workshop members, because they thought
19 of Questioning Attitude as a part of raising concerns
20 and as a part of Leadership Safety Values. It should
21 be a part of Problem Identification and Resolution and
22 so they embedded Questioning Attitude.

23 And that's why really our stakeholders are
24 not having a problem with adding another one in
25 Questioning Attitude, because it is very important.

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1 The staff -- we felt that it's important enough to
2 bring it out and call it out because it addresses
3 complacency.

4 Now, as we go through this process, you
5 will see the next tier which affects implementation,
6 and it might make a little bit more sense on how the
7 different regulated communities are going to take this
8 into the next level, which is implementation.

9 MR. ZIMMERMAN: I look at it a little bit
10 differently, that the Environment for Raising Concerns
11 can be a top-down, from the leadership in terms of
12 what kind of chemistry do they put -- what's the
13 personality they're putting into that organization? Is
14 it one that chills, I told you what to do so just go
15 do it, don't ask a lot of questions?

16 What are they putting out and permeating
17 out there as the environment that these people have to
18 work in? The Questioning Attitude in my mind is a much
19 more individualistic item, that we want individuals to
20 not get complacent, that -- I'm not sure if this is
21 right or wrong, but it was here yesterday and it was
22 here the day before that, so it must be okay so I'm
23 just going to walk right past it, rather than
24 wondering, I'm not sure it was there a month ago,
25 something seems to have changed. I ought to pursue

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1 this or have somebody pursue it and write it up.

2 So I see a little bit of a difference in -
3 - and these can be interpreted slightly different by
4 different organizations and you know our goal is, when
5 they use these overarching umbrella items, variable to
6 make these their own, as they tier them down one more
7 level for their own use. The next level down will be
8 different for the reactor compared to the hospital.
9 They will have different items and branch out.

10 A key that I spoke about with the subcommittee
11 that I think is very important is that these can't
12 just be words on a page. The managers have to be and
13 the staff have to be able to read this and understand
14 it and believe it and take it on board and not view
15 this as a flash in a pan and this thing's going to be
16 gone in a month.

17 They need to be able to relate to this and
18 buy into this process. And the way to buy into it is
19 the way Diane said, is they've had a chance to work
20 with a clean sheet of paper to help build this
21 themselves and when we went into it we were a little
22 concerned that the power reactor community that has
23 been involved in this longer, could potentially lead
24 this discussion, but the other licensees and
25 certificate holders really held their own with the

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1 power reactor community, and went toe to toe with
2 them, to be able to make sure they came up with a list
3 that they all felt very comfortable with.

4 It was encouraging to watch the way they
5 worked this out.

6 MEMBER BONACA: Now some of these traits
7 are much more powerful than others, it seems to me, so
8 far as action. For example, Environment for Raising
9 Concerns and the opposite which is discouraging
10 raising concerns is against the law, so you really --
11 this is not a trait alone. It just is close to an area
12 where there is legal requirements. Personal -- Work
13 Processes I think is more general. I don't know if
14 there is a distinction there that one could make.

15 I'm just looking at some of them, I mean,
16 I'm not saying they're inappropriate, some of them are
17 more effective and powerful than others.

18 MEMBER CORRADINI: Some are subservient to
19 others. That's your point too.

20 MEMBER BONACA: Yes.

21 MR. ZIMMERMAN: We have more --

22 MS. SIERACKI: Yes. And I do want to just
23 address that just briefly. One thing to add to the
24 Questioning Attitude which Roy had mentioned. One
25 other thing that makes that a little bit unique is the

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1 fact that in Environment for Raising Concerns, the
2 individual has to have a Questioning Attitude and you
3 have to have support from them. So it really is both
4 top and from the bottom up.

5 Questioning Attitude also would be
6 encouragement of what is new out there? I mean, not
7 just am I questioning what we have always done, but
8 what about creativity? What about is there a better
9 way of doing it? And so that's part of that
10 questioning attitude too so it is a little bit broader
11 than what the workshop had looked at inside some of
12 the other traits.

13 And then to address Mario's point, these
14 are not prioritized and so it isn't a list of first,
15 second, third, fourth. Some do carry more weight and I
16 think you will see that and there are a couple of more
17 slides for me to explain the way we are doing this,
18 but you will see that in the implementation phase, as
19 to which ones become more important and which ones are
20 less important, depending on the regulated community
21 that is looking at them.

22 The one thing I do want to point out,
23 leadership is the first trait here and that was done
24 by the staff and it was based on input that we
25 received from public comments in both of the public

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1 comment periods as well as other information that we
2 have gotten from stakeholders that leaders walk the
3 talk and it is the most important trait.

4 And so we did move that up to the top, but
5 otherwise there isn't a priority in the mix.

6 MR. SOLORIO: Dr. Brown, I'd just like to
7 add --

8 MEMBER BROWN: I'm Mr. Brown.

9 MR. SOLORIO: Okay, Mr. Brown --

10 MEMBER BROWN: I'd like the degree, but I'd
11 have to work for it. That's beyond me.

12 MR. SOLORIO: With respect to Questioning
13 Attitude, a theme from the public was --

14 MEMBER BROWN: Oh, I'm not questioning that
15 --

16 MR. SOLORIO: complacency, and when I look
17 at what INPO said for their validation, they also said
18 Questioning Attitude is something that we think is
19 important in the reactor industry, and it's just
20 interesting to me that you had two different, you
21 might say, segments come up with a general conclusion
22 that complacency was an issue that we needed to
23 address and to me it made a lot of sense to add it as
24 another trait.

25 MEMBER BROWN: Oh, I'm not questioning

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1 that. From the -- I'm trying to look at your list. The
2 longer a list of culture items, the less people will
3 have any idea of what you are talking about. This has
4 got nine items on it. And if I --

5 MS. SIERACKI: Let me --

6 MEMBER BROWN: Let me finish my point and
7 then you can shoot me down, okay?

8 (Laughter.)

9 MEMBER BROWN: I mean, when I look at the
10 list, I work through Work Processes, Continuous
11 Learning, Problem Identification and Resolution,
12 Effective Safety Communication, those items,
13 Respectful Work Environment, take those, those are
14 execution type, you know, items as opposed to
15 Questioning Attitude, Environment for Raising
16 Concerns, Personal Accountability and Leadership
17 Safety Value -- now I would have -- personal opinion.
18 From my background I would reduced those are the
19 culture issues, the other ones are --

20 MEMBER RYAN: Programmatic.

21 MEMBER BROWN: -- programmatic type issues
22 on execution. So -- and that's just -- I was in the
23 naval nuclear program for 35 years and we didn't have
24 a policy statement.

25 MEMBER CORRADINI: You had an admiral,

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1 though.

2 (Laughter.)

3 MEMBER BLEY: You had a respectful
4 environment.

5 MEMBER BROWN: Well, I wouldn't call --
6 yes, respectful work environment you could --

7 It was respectful in a way that most
8 people wouldn't have understood, back in the '50s,
9 '60s, '70s and early '80s. But, so, I think you said
10 it, the comment, I think, was that you Mike?

11 MEMBER RYAN: Yes.

12 MEMBER BROWN: Those are programmatic
13 issues whereas the cultural aspects are the items --
14 at least those are the items I would have focused on
15 in this. I don't have any problem with them, but I
16 would have had a sort of -- here's the big overarching
17 items. Here's things necessary to execute those. How
18 do you -- I mean, an Effective Safety Communication,
19 what do I mean by that?

20 Do I speak nicely and carry a big stick or
21 -- well yes, we used to yell at people. The other
22 point is, when you look at some of those items, they
23 become involved with metrics. And as soon as you lay
24 metrics into a culture issue, you -- it has become
25 bean-counting. It's not a -- I mean, how many meetings

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1 and how many training sessions do I have to have to
2 teach people about safety culture, or whatever those -
3 -

4 So all I am trying to do is characterize.
5 I have no problem. Don't think we have a problem.
6 People will have to address this obviously. It's just
7 that the more stuff to reemphasize, the more stuff you
8 put in this long list, the less the key items, in my
9 personal opinion, get the focus.

10 I mean, I thought it was great you added
11 the Questioning Attitude onto it, I thought that was
12 the right way to go, so I would have picked four of
13 them, put the other ones down into the programmatic
14 issues, and say well here's the big things, here's how
15 you help execute those.

16 MEMBER RYAN: Charlie, I don't -- I am
17 sympathetic to your point but I think if you pick one
18 that's kind of in the middle, Problem Identification
19 and Resolution, to me to identify a problem is in its
20 start a cultural issue. Can I do that without getting
21 my head pounded?

22 MEMBER BROWN: Environment for Raising
23 Concerns picks that up.

24 MEMBER RYAN: Yes, but you know, the rubber
25 meets the road on how does this work. And then the

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1 resolution process typically has some technical review
2 aspects and management assessment and financial
3 assessment and all that to prioritize whatever comes
4 out of that resolution process.

5 So I struggle a little bit with how do you
6 separate one from the other so much, because I think
7 they really overlap quite a bit.

8 MS. SIERACKI: Well, and I can --

9 MEMBER RYAN: I hear your point but it's
10 hard to put them in two boxes and say everything is in
11 its right box now.

12 MS. SIERACKI: And you're probably correct
13 that you could have taken those four and put the other
14 ones underneath it in the implementation phase, which
15 is where we are going next.

16 But the team, the members that put this
17 together and again, from all of those other regulated
18 communities felt that these were very important to
19 call out.

20 And it's not just a matter of having the
21 program, and there are a couple of words that we
22 attached. I'll just give you the problem
23 identification resolution.

24 "The organization ensures that issues
25 potentially impacting safety or security are properly

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1 identified, fully evaluated and promptly addressed and
2 corrected, commensurate with their significance."

3 So it's not just having the program, it's
4 really being effective, it's people using the program.
5 You're going to see that flashed up.

6 I'm going to give you an example of
7 leadership in just a minute, on the types of things
8 that, were in that sticky exercise if you will, to
9 flesh that out. It'll give you an idea of the thought
10 process that the team went through when the picked
11 these.

12 But bottom line is each of those members
13 of that panel felt that every one of these were
14 important enough and had enough underneath them to
15 call it a trait, to rise to that level.

16 And again, these -- oh, I'm sorry. They
17 are not made for inspection. That I can tell you. We
18 did not think of them from the thought of, gee, what
19 can they inspect, was not on the table. Yes.

20 MEMBER ARMIJO: I have a question about
21 Work Processes, why that would be a safety culture
22 trait.

23 Are we talking about effectiveness of work processes
24 or work processes focused on safety or -- to me that's
25 a routine, operational issue and I don't understand

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1 what it has to do with a safety culture trait.

2 MS. SIERACKI: Well if you think of, even -
3 -

4 MEMBER ARMIJO: I understand, and I'm with
5 Charlie on this thing, the key ones are Leadership
6 Safety Values and Actions, Personal Accountability,
7 Questioning Attitude, Environment for Raising
8 Concerns. Those to me are the kinds of things that I
9 could sit back and say that's safety culture.

10 The rest of this stuff looks like it's
11 routine stuff. Maybe I'm from the reactor --

12 MEMBER BLEY: I think the problem is the
13 routine hasn't always been there to support a safety
14 culture and that's why they're --

15 MEMBER ARMIJO: If you have those other
16 things --

17 MEMBER SIEBER: The routine is a trap. It
18 really is. Once you think it's routine --

19 MEMBER ARMIJO: That's why I don't want it
20 to be in there.

21 MEMBER SIEBER: then nothing improves.

22 MEMBER ARMIJO: Okay, never mind, I'm not
23 going to -- I wasn't on your Committee but go ahead.

24 MEMBER BLEY: I'd like you to think about -
25 - you've got 10 more slides and you need to get

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1 through them. But as you go through the rest, we are
2 moving toward the implementation, if you could attach
3 rough dates to when you think things are supposed to
4 happen, that would be helpful.

5 MS. SIERACKI: Okay I will do that.

6 MR. SOLORIO: Just a reminder, for Dr. --

7 MEMBER ARMIJO: Armijo.

8 MR. SOLORIO: Armijo. This was meant to
9 apply to all licensees, so in the material side of the
10 house, things that you might think are normal on the
11 reactor side of the house, were things that they
12 started thinking about, but we need to have more work
13 processes for what we do.

14 So it's applying to a much wider spectrum.

15 MEMBER BLEY: There's one thing I'd like to
16 toss in. I think some of this might have to do with
17 what you do in the implementation phase, how you
18 distribute these ideas to organizations and the like.

19 MS. SIERACKI: Exactly.

20 MEMBER RYAN: I want to add maybe a second
21 question on to Dennis's too. I think that there's a
22 division within the non-reactor area of licenses, of
23 broad scope and specific licenses in terms of this
24 word processes. As a broad scope licensee, we had a
25 very formal process a lot like a reactor to develop

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1 procedures, review them technically, get them
2 approved, implement them, change control, all that
3 kind of stuff.

4 So there is a group of non-reactor
5 licensees that are broad scope licensees that have a
6 program that looks an awful lot like a reactor, though
7 maybe not as complicated. So I think there is a
8 division.

9 MS. SIERACKI: Okay, let's move on. This is
10 just a visual on how this was put together. Safety
11 culture definition at the top, the nine traits now
12 that flesh out from a very high level perspective,
13 what t definition is, and the application is really
14 tier 3. You have heard us maybe say that term today.
15 And it really is the next steps which is
16 implementation.

17 In tier 3, the stakeholders will be
18 involved with the program offices and work out what
19 dose this really mean for a fuel cycle facility, for a
20 gauge manufacturer, for NEA people. What does this
21 really mean? And that's going to happen in the
22 implementation phase.

23 The next slide will give you an idea of
24 what that looks like. This is a tier 3 exercise. There
25 were probably 30 others. I'm just giving you a couple

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1 of points that came up that put us into that bin of
2 Leadership Safety Values and Behaviors.

3 Management is out in the field. They
4 resolve conflict. Rewards and sanctions are used to
5 reinforce desired positive safety behaviors. Actions
6 match words, in other words, walk the talk. Schedules
7 are realistic and do not challenge safety standards.

8 So these are the types of things that will
9 happen in the implementation phase that are tier 3
10 topics that will flesh out what that trait means in
11 each of these organizations.

12 MEMBER BROWN: Excuse me, you're going to
13 have procedures and descriptions?

14 MS. SIERACKI: No.

15 MEMBER BROWN: That's that sounded -- you
16 said tier -- I was looking at your previous slide,
17 under application, and it says, "Illustrates high
18 level descriptions are translated to lower level
19 descriptions. Describes programs, processes,
20 procedures, practices, behaviors." I mean, it's almost
21 like you have a handbook.

22 MS. SIERACKI: No, it's not --

23 MEMBER BROWN: No, not wait, you are
24 expecting the licensees, excuse me, I guess I'm trying
25 to get it in perspective as to what you expect to see

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1 from them when you do look at it and I'm not talking
2 about an enforcement regimen. That's not -- but the
3 expectations of what you would expect to see from the
4 licensees.

5 MR. ZIMMERMAN: The industry wants this.
6 This is their chance to tailor the umbrella that
7 applies to everybody to their organizations. In the
8 hospitals, we are looking at patient safety first, is
9 one of the types of items that they are going to bring
10 out, that the power reactor community likely will not
11 be bringing out.

12 So, they want their chance to be able to
13 tailor, customize safety culture for their
14 organization, because they are going to stand up in
15 front of their people and explain safety culture to
16 them for our organization, for our hospital and they
17 are going to go through the items that they pick to
18 try to bring it home for them.

19 And they need to bring it home for them.
20 There's got to be a little bit of emotion in the room
21 when they are talking. Otherwise it's just another
22 management meeting and this will go by the wayside. So
23 they have really got to get it ingrained.

24 That's the reason why they played such a
25 large role in building it from the bottom up, and

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1 that's why tier 3 is extremely important, so they have
2 free hand to be able to build what they feel is the
3 necessary customization for their organization. And I
4 think they are very much looking forward to this
5 opportunity. They don't view this as a work product,
6 but as the way they communicate with their staff on a
7 regular basis.

8 MS. SIERACKI: And it may be that they will
9 do some training for their staff after they put this
10 together. It may be that they will put together a
11 procedure to potentially have a -- not a corrective
12 action program but something along those lines.

13 So it may be that they will do that. Will
14 we require any of that? This is a policy statement at
15 this point.

16 MEMBER CORRADINI: So can I say it a
17 different way again? So this is a philosophical
18 umbrella, once the umbrella has developed, if the
19 expectation is that any licensee will look at their
20 current procedures and practices, reflect on the
21 philosophy and see that there is some alignment. But
22 something may change, nothing may change.

23 MS. SIERACKI: I'm going to guess --

24 MR. ZIMMERMAN: It's possible.

25 MEMBER CORRADINI: I mean, the range of

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possibilities are that.

MR. ZIMMERMAN: But they need to have that opportunity to say okay, we are overarching, we are underneath there with the reactors, with the non-power reactors, with the gauge users, the industrial user, we are in there with everybody, with this overarching trait level.

Now what do we want to do differently to bring it home for our staff so we don't lose them?

MEMBER CORRADINI: Okay. Because the reason I am asking the question so directly is I am a chair of a department that has a reactor that is a non-power reactor that is regulated by the NRC. I do not this to change what is a good practice in my current environment with my reactor operators, my reactor director and assistant directors.

So I have a stake in it. Maybe that's a conflict of interests. So I'm listening to this to make sure that I don't make it worse but actually potentially make it better.

MR. ZIMMERMAN: That would be the goal, to make it better.

MR. SOLORIO: I would just add, the framework we set up is to allow the licensees to show us how what they are already doing might mesh with

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1 what the high-level expectations on the traits are.

2 The medical community in their public
3 comments, or maybe it was the veterans administration,
4 said look, we are already doing a lot of what you are
5 asking for in these high-level traits. We think we
6 have it, and we set it up so they can show us.

7 MEMBER RYAN: Sorry I was just going to
8 say, there's another dimension to this I don't think
9 you have specifically touched on, although in a way
10 you have, and whoever wants to answer it is fine by
11 me. But the action in terms of numbers of licensees is
12 not NRC. It's the agreement states.

13 So you have got the Organization of
14 Agreement States, the CRCPD and all that and I'm sure
15 you've been in contact with those folks. What is their
16 reaction, you know, and this is a community where cost
17 drives a lot of their thinking on some of these
18 things. I'm sure you've heard that comment. Any
19 thoughts for our summary of what the agreement state
20 licensees think about all this?

21 MS. SIERACKI: We did -- and James -- I'm
22 going to have James answer this. He is actually -- we
23 actually had someone from the agreement states speak
24 to the subcommittee. They were at the table at the
25 meeting in February and they have supported the

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1 definition in traits and I'm going to let James just
2 speak on that a bit, on what their thoughts are going
3 forward. James?

4 MR. FIRTH: Yes, James Firth, NRC staff.
5 I'll take it on a couple of levels. First, the
6 question on resources. Right now a lot of the states
7 are suffering a lot economically, so they are
8 concerned about this being regulations which would
9 then require them to make drastic changes.

10 The states also feel that what they are
11 doing is consistent largely with the policy statement,
12 that in some respects focusing on things that are not
13 specifically violations is going back to previous
14 practices where they could use more information more
15 holistically to see where the licensees are running
16 into problems and address those earlier.

17 MEMBER RYAN: Leading indicators --

18 MR. FIRTH: To some extent and by having
19 the common language, by having the policy statement,
20 it gives an opportunity for, whether it's NRC or the
21 agreement states, to work with our licensees or their
22 licensees on trying to address things early, having a
23 common language that rather than having a licensee
24 fall short and having weaknesses in a number of these
25 areas grow and magnify over time where it really

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1 becomes a problem to correct that in the organization,
2 if things are seen earlier from an outside
3 perspective, it gives an opportunity for earlier
4 correction.

5 It may not be a leading indicator per se
6 but it still allows for early correction where
7 weaknesses are developing. But generally the agreement
8 states are supportive of a policy statement and
9 increased focus on safety culture.

10 And you still have, as with any diverse
11 set of states, there's going to be some different
12 perspectives in terms of just how valuable they see
13 that versus their concerns about other things.

14 We also have an IMPEP program which looks
15 at how the states are doing it, and they feel, we have
16 had a number of comments from the states saying the
17 process is working, it's already embedded in that, so
18 we should continue to do that.

19 And when you look at the regulations on
20 the material side as well as I think you have on the
21 reactor side, that some of the elements of safety
22 culture are either implicit or explicit in the
23 regulations.

24 So even though this is a policy statement,
25 there

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1 is, on some of these, a regulatory foundation in the
2 regulations. So we wouldn't be deciding on violations
3 on the policy statement, but there may be some things
4 that correlate to specific requirements that are
5 already in place.

6 MEMBER RYAN: Has the Organization of
7 Agreement States and the Conference on Radiation
8 Control Program Directors taken an active interest in
9 the program?

10 MR. FIRTH: Yes, they have. And --

11 MEMBER RYAN: They will really be kind of
12 the focus for the state agency folks.

13 MR. FIRTH: Yes, and we have been -- all
14 along the way we have been talking with both
15 organizations as well as all of the states. We have
16 periodic teleconferences with them. We have had
17 someone from the Organization of Agreement States
18 participate in a number of these workshops.

19 The February 2010 workshop, they have
20 decided that they wanted to take more of a
21 facilitative role similar to NRC, because they want to
22 allow the licensees and the other stakeholders to
23 really work on developing a language. They didn't want
24 to intrude as much in the process.

25 But they have been supportive of the whole

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1 process. In the most recent Organization of Agreement
2 States meeting, there was a session on safety culture
3 and that included presentations by both NRC as well as
4 someone from the Organization of Agreement States and
5 then we had a discussion among the states.

6 MEMBER RYAN: Dow did you handle the
7 question, why is this different than the IMPEP
8 program?

9 MR. FIRTH: Well, it's -- I mean, there's -
10 -

11 MEMBER RYAN: I mean, I can where they are
12 aligned in my own mind, but.

13 MR. FIRTH: In terms of implementation, we
14 want to see how things develop in the policy statement
15 we have to do the more strategic look in terms of what
16 .changes we want to make in our program, whether it be
17 in terms of -- whether there's changes in the
18 inspection frequency, how we communicate with
19 licensees. But we have not made any changes to the
20 IMPEP program at this time.

21 MEMBER RYAN: So you're really kind of
22 waiting to see how you will float and I put it in
23 quotes "inspect" the safety culture aspects of a
24 program, or --?

25 MR. FIRTH: There was like region three has

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1 tried to put increased emphasis on safety culture and
2 they identified a couple of licensees that had
3 numerous problems and so as part of the problem
4 identification resolution process, they focus on was
5 the licensee getting to safety culture as a route
6 cause?

7 So they used some of the inspection
8 procedures that were developed for reactors in terms
9 of the questions that are used. So they used that to
10 help them put a little more attention on safety
11 culture in those cases. So there were a couple of
12 cases where they have done that. But we haven't done
13 anything across the board on the materials stuff.

14 DDS. I'd just add for region three they
15 are doing that somewhat as a pilot I think.

16 MEMBER RYAN: Well, that's good. And I
17 guess the last thought I have in my head is in the
18 larger agreement state licensees I can see where it
19 would have a lot of utility and be a good element.

20 But somewhere, maybe after the hospital
21 group, somewhere down the line, you've got small
22 users. They've got gauges, instruments, articles, very
23 small licenses that don't have a lot of material.

24 Is there a cutoff for having to deal with
25 the large body in terms of just sheer numbers of

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1 licensees that really don't need the full Monty?

2 MR. FIRTH: Yes, and we have thought about
3 that some. We still have to again make some of the
4 decisions but I mean there's one element that's in
5 terms of, what is the risk that is associated with
6 their activities?

7 MEMBER RAY: There you go, so it's a risk-
8 based --

9 MR. FIRTH: You also have in terms of what
10 are the number of licensees, what's the complexity.
11 The approach we are taking at this point is that there
12 are some licensees that it may make sense just the
13 education and awareness will get us the best benefit
14 from the policy statement, that we don't necessarily
15 need to make the changes in any of our routine
16 interactions with the licensees, butt we may keep
17 bringing it to their attention, mention along the way.

18 And we have already made a lot of strides
19 in terms of getting word out to agreement state
20 licensees as well as NRC materials licensees, about
21 the development of the policy statement and the
22 importance of safety culture.

23 So the awareness is the first step. And it
24 may be that that in some cases is as far as we go. In
25 others we might want to make more specific and

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1 structural changes in what we want to do.

2 MEMBER RYAN: Sounds reasonable, I mean
3 it's a graded approach, is really what it boils down
4 to.

5 MR. FIRTH: Yes.

6 MEMBER RYAN: Thank you. That's great.
7 Thank you very much.

8 MS. SIERACKI: Okay. If you go to the next
9 slide. And we had some of this discussion already, why
10 these traits? We did benchmark domestic,
11 international, terminology and standards as I
12 mentioned before --

13 MEMBER POWERS: Can I ask you a question
14 about this benchmarking?

15 MS. SIERACKI: Pardon me?

16 MEMBER POWERS: Something just bothers me
17 about these traits that I don't understand. They seem
18 to be the product of leaving some sticky notes on
19 boards and things like that. Do we in fact know that
20 an organization say with a well developed sense of
21 personal accountability is in fact safer than an
22 organization with a well developed sense of group
23 accountability or some -- whatever the alternative to
24 personal accountability is. Do we know that, or is
25 that just a product of a bunch of people getting

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1 together and putting sticky notes on a board?

2 MR. SOLORIO: I guess I would start to
3 answer that by saying just like I guess in the case of
4 PRA, you know expert elicitation panels are used to
5 try to come up with what people think are the
6 appropriate things to focus on.

7 In this case, we started with somewhat of
8 a literature search in terms of what is out there
9 right now, as you heard the Dr. -- also referring to
10 scholars like Dr. Shein and what they think is
11 important.

12 And we asked this group of individuals who
13 were representing their areas, most of them were in
14 leadership positions so they already had a very high
15 understanding of what's important for making an
16 organization safe, to reflect on a lot of this current
17 literature in this area.

18 So while it was described as sticky notes,
19 I think the actual term is called mind mapping. It's a
20 strategic planning type of approach that's used and we
21 asked them to come up with this.

22 MEMBER POWERS: What I'm really hitting on
23 is okay, you got these experts in there, I mean, they
24 are experts because they write papers in journals or
25 something like that. Do they write it based on

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1 anything quantitative, measured? I mean, I had no idea
2 what the exact office at the personal accountability
3 is but I will say okay, maybe it's group
4 accountability.

5 Has anybody ever tried to measure and say,
6 yes, we'll develop personal accountability, it's much
7 better than having group accountability.

8 Okay? And is there anything quantitative
9 on that or is that just people's imagination and
10 thought?

11 MEMBER BLEY: I think it is right -- I
12 think the other side of it is there in incidents and
13 reviews of incidents you can find cases where you can
14 cite the lack of these as contributors to the -- but I
15 don't think what you are looking for sits there
16 anywhere.

17 MEMBER POWERS: What I have observed,
18 Dennis, is that any time we have an event at a plant,
19 we send some of our expert and safety culture up there
20 and they'll come back and say yes, verily, this
21 organization had a bad safety culture.

22 I have never seen us send somebody off to
23 a plant that did not have an event and come back and
24 say ah, this place has a good safety culture or a bad
25 safety culture or anything like that. It's always

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1 after-the-fact demonstrations.

2 MEMBER BLEY: Would you like to --

3 DR. BARNES: Yes, the mic is back here.

4 MEMBER BLEY: Yes, use the mic, announce
5 yourself and help us out.

6 MEMBER ARMIJO: You can just lower that mic
7 a little bit so you can speak into it.

8 DR. BARNES: I'm not quite sure how to --
9 is it working?

10 MEMBER BLEY: Yes, you're on.

11 DR. BARNES: Okay. I'm Val Barnes with the
12 Office of Research and I wanted to specifically
13 address that comment about whether there has been
14 research done, quantitative research and the words
15 that behavioral scientists use to describe what you
16 are asking is do we have any evidence that safety
17 culture or these concepts can provide us with
18 predictive validity in terms of different measures of
19 either organizational performance or work unit
20 performance so on and so forth.

21 And actually there is a very large body of
22 research that is being conducted in a lot of different
23 industries and environments. Of course the measures of
24 what constitutes safety performance vary by industry
25 and setting, but the literature is demonstrating that

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1 yes, the measures of safety culture are associated
2 with variability in safety performance however that is
3 defined.

4 And then I'm here speaking on behalf of
5 the work that INPO did but I'm very familiar with it
6 in terms of their validation study because we were
7 requested by OE to independently evaluate how INPO
8 conducted their study.

9 And the INPO results as well as the
10 independent verification and analyses that the NRC
11 staff did as part of that study didn't provide us with
12 results that support predictive validity of measures
13 of safety culture in terms of predicting reactor
14 performance under the ROP, because we didn't have time
15 to -- it takes time to look into the future and see
16 how measures at one point in time predict outcomes
17 down the road.

18 But what we did find was that employee,
19 personnel attitudes at different sites and INPO
20 collected data from every site in the U.S. except for
21 two, were associated with differences in performance
22 on a variety of INPO performance indicators as well as
23 NRC performance indicators.

24 So this is a very long-winded answer to
25 your question but yes, there has been quantitative

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1 research done in a variety of settings as well as
2 recently here in the reactor world and it's all very
3 interesting and suggests that safety culture is
4 related fairly strongly in social science terms to
5 safety performance in different organizations.

6 MEMBER POWERS: If we have that
7 quantitative information then why are we relying on
8 expert opinion solicitations?

9 MS. SIERACKI: I'm going to give you my
10 response to that. This is a policy statement and not
11 regulation and what we are looking for here is to get
12 some of these organizations that haven't begun the
13 process of looking at safety culture from that aspect,
14 from -- this is safety culture and this is what it
15 means -- to move into that arena and start to develop
16 that safety culture in the organization.

17 So these stakeholders have said this is
18 what it means to us, looking at other groups of
19 characteristics and so on that have been vetted
20 through some of the theory that Val has talked about
21 and I think it is interesting to note that these
22 particular traits were used in that validation study
23 and they do -- the results of that validation study do
24 support these traits as, through the study, that they
25 are good and they are valid.

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1 MEMBER BLEY: Let me relate something to
2 you from the subcommittee. I'm sorry you weren't
3 there. But two things. They started with the
4 qualitative approach and did this validation study. On
5 the other hand, as we tried to dig into the detail of
6 the validation study, the details were not available.

7 When Val says in social science terms
8 there's strong correlation, the playing of the results
9 of their factor analysis against some set of which we
10 didn't see, of plant history data from a number of
11 plants, comes up with correlations on the order of 0.2
12 to 0.4, which the social scientists tell us they find
13 very strong correlation and in my world I find it
14 fairly weak.

15 MEMBER POWERS: That's no correlation
16 whatsoever.

17 MEMBER BLEY: That's the way I find it. We
18 asked to see the studies. Because of some restrictions
19 that I'm not fully cognizant of, we haven't been able
20 to see them.

21 MEMBER CORRADINI: You couldn't see this
22 quantitative study?

23 MEMBER BLEY: They didn't bring them and
24 when I asked to have them provided, we were eventually
25 told no, they couldn't be provided to us, so there's a

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1 bit of a gap there, so we don't -- as the chairman of
2 that subcommittee, my confidence in those results is -
3 -

4 MEMBER POWERS: Is now evaporated.

5 MEMBER BLEY: is certainly not so strong in
6 the sense I haven't seen the details. But that's
7 basically what they showed us, was those kinds of
8 results.

9 MR. ZIMMERMAN: I think there may have been
10 proprietary aspects that came into play that precluded
11 them from sharing as much as they would have liked to.

12 MEMBER POWERS: I wonder then as to how you
13 persuade someone to adopt what you purport to be
14 successful behavior without a -- there's no evidence
15 that says I have -- I probably can't have all these
16 traits, I can probably have some subset of these
17 traits, then I might be a safer organization than if I
18 don't have these traits.

19 I mean, why would I do that? I would look
20 at this and say I'm not ready to change anything.

21 MEMBER BROWN: Well if you go back to the
22 previous slide, you flip it back, there's one line
23 that says that rewards and incentives and sanctions
24 are used to reinforce desired positive nuclear safety
25 behaviors.

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1 You might take a look at that and say what
2 does that mean. Don't go to sleep on watch and you'll
3 get a candy bar? I'm being a little facetious with
4 that.

5 MEMBER POWERS: But it's a legitimate
6 question to ask.

7 MEMBER BROWN: The thought process is how
8 in the world do you reward or sanction people to have
9 the desired thought process --

10 MEMBER ARMIJO: Well, you can fire people.

11 MEMBER BROWN: That's what we used to do.
12 It'd be really great if we didn't get fired.

13 MEMBER ARMIJO: I don't want to counsel
14 them, I want them out the door. I think these are
15 great, okay? I think these are great where you look at
16 the leadership of an organization and if you have that
17 kind of leadership, then I'm starting to feel much
18 better about that organization, I think they are --
19 the safety culture traits you could take off the
20 safety and put quality culture, running a factory,
21 it's the same things to turn out a quality product.

22 So these are kind of soft things, kind of
23 hard to quantify but I think they're valuable.

24 MEMBER REMPE: How come you don't have
25 leadership accountability? They have personal

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1 accountability and group accountability but leadership
2 accountability.

3 MS. SIERACKI: It probably was on the list.
4 Like I said there were several. I can answer that in a
5 moment.

6 MR. SOLORIO: Mr. Brown while she is doing
7 that I just want to point out the question that you
8 had about rewards and incentives. That was actually a
9 remark that we received from a subcommittee that
10 remember that when you are -- when a licensee is
11 trying to encourage high capacity factor at a reactor
12 site, there's a negative consequence to that, which
13 might be that people would put that over safety.

14 So the message we got and we are taking to
15 heart is -- provides some guidance, some clarity
16 around you can't use rewards to the detriment of
17 safety and that's why we were highlighting that.

18 MEMBER BLEY: I would like to make one
19 comment. After I told you the problems we had trying
20 to figure out the basis of the analysis, after lots of
21 time studying lots of incidents in nuclear and other
22 places, the items on this list, or many of them, often
23 crop up as underlying causes or driving forces so my
24 personal opinion is it's a pretty good darned list.

25 MR. ZIMMERMAN: I think it was put together

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1 by individuals that have many, many years of
2 experience in various aspects of the industry. Whether
3 we are dead on or not, maybe there is one that needs
4 to be tweaked, maybe there's ones that is missing,
5 maybe there is one that will get replaced. But we
6 think we have a very good starting spot and as I
7 mentioned earlier, we are going to be doing case
8 studies to be looking at instances where we see
9 problems and if there's a need to refine this list
10 then we will consider that.

11 MEMBER POWERS: Roy, one of the big
12 problems with your database is that you are drawing
13 these always from root cause analysis of incidents
14 that occurred, by and large, and what you are not
15 doing is going to plants or the institution or the
16 facility that has not had an incident and seeing ah,
17 do these guys have these characteristics or do we have
18 the Sam Armijo school of thought, where they don't
19 respect other people's opinion, they resolve conflicts
20 by firing people and --

21 MEMBER ARMIJO: I didn't say --

22 (Simultaneous speakers.)

23 MEMBER POWERS: Or whatever else it is that
24 you do.

25 MEMBER ARMIJO: I didn't say we don't

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1 resolve conflicts, we do not tolerate people who are
2 causing safety problems in the shop.

3 MEMBER POWERS: Well, my point is that if
4 you don't have a database, if a plant doesn't have an
5 incident, you guys don't look, and so you don't know
6 that in fact they may violate every single one of
7 these and they still just don't have an incident.

8 So you don't know that this --

9 MR. ZIMMERMAN: Well, the industry has
10 their program that they are rolling out to do self
11 assessments. We are looking at it in the ROP. So there
12 are some early indicators that we are taking credit
13 for and I don't want to underestimate the tier 3
14 items, that these are very high level areas like
15 pretty much around the table, there's alignment that
16 there's benefits of varying degrees to these items.

17 But when they build their tier 3 items and
18 they mold them to what works for the chemistry of
19 their organization, they will turn these a little bit
20 and they have that right to be able to do that,
21 because they know their organization and their leaders
22 should have the right instincts to be able to pull
23 from these to develop the set. So a set at one power
24 plant will not be the exact same set at another power
25 plant because it will be tailored to the chemistry of

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1 that work force and based on their history as well.

2 MEMBER BLEY: Roy, I'd like to see if
3 because we are running out of time, move ahead and
4 talking more about the tier 3. I mean, we've got an
5 umbrella that might be pretty good but we have very
6 little in terms of implementation and we would like to
7 see where it's headed and --

8 MR. ZIMMERMAN: Yes. Sure.

9 MEMBER BLEY: and that's going to be the
10 key to whether this is useful or not in the long term.

11 MS. SIERACKI: And again they were
12 supported by the study and they are general enough so
13 it will allow the different licensees to tailor those
14 traits as they move through the implementation phase.

15 The next slide is simply the wording on
16 the preamble that I talked about previously related to
17 security, and you can see that we recognize that there
18 are primary pillars of the NRC's regulatory mission
19 and that there should be consideration of both,
20 commensurate with their significance as you are moving
21 through this statement of policy.

22 Next slide. The proposed draft final
23 safety culture policy statement and the Commission
24 paper which you have, does have a definition in traits
25 that you just previously saw and they are included in

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1 the statement of policy.

2 Questioning Attitude was added as the
3 ninth, you just saw the preamble that addresses
4 security. Regulated community needs to be mindful of
5 needs to be potential negative effects and that was an
6 issue that had been expressed by the ACRS subcommittee
7 as well and we actually have wording in the policy
8 statement now to that effect, that some monetary
9 incentive or other award programs could work against
10 making a safe decision, or current training programs
11 may not adequately address safety culture and its
12 traits or how those traits apply to day to day work
13 activities.

14 And the identification of both strengths
15 and weaknesses related to safety culture in the
16 regulated community will be helpful in evaluating
17 implementation strategies.

18 So it's right there in the policy
19 statement and our program offices will be working with
20 the stakeholders as they move through to help them to
21 get into that implementation phase.

22 Next steps. We will be providing this
23 Final Statement of Policy to the Commission in early
24 January. There is a briefing scheduled with them on
25 January 24.

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1 We will then wait for Commission direction
2 and then the implementation phase starts. We will have
3 stakeholder involvement and OE, as Roy mentioned
4 earlier, will continue to support those activities
5 and provide some coordination.

6 Let me give you just a flavor of some
7 implementation on the part of some of the program
8 offices. NRR will continue to engage their
9 stakeholders within the ROP self-assessment construct
10 and you heard just a little bit about the industry
11 doing an initiative on their own as well.

12 Incorporate safety culture guidance into
13 the test reactors inspection process, where
14 applicable. NRO, our construction side, will be
15 assessing the need for changes in their manual,
16 chapter 0613 and 2505. 0613 is the construction and
17 test inspections. 2505 is the period assessment of
18 construction inspection program results.

19 And they'll coordinate NRO actions with
20 the ROP changes so I'm guessing you will see some of
21 the same types of programs related to the construction
22 reactors as well.

23 NMSS will address safety culture in
24 broader oversight process evaluations for fuel cycle
25 facilities, ISFSIs, and cask vendors. Outreach to

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1 stakeholders as part of any oversight process
2 revisions and FSME for the material side, medical et
3 cetera, will evaluate ways to incorporate safety
4 culture into on-going NUREG-1556 and manual chapter MC
5 1246 updates.

6 The 1246 is their formal qualification
7 programs for NMSS.

8 MEMBER BLEY: Is there any overall guidance
9 or control on how the individual groups are going to
10 try to pursue this or are you going to wait and see
11 what happens?

12 MS. SIERACKI: We are going to wait for the
13 direction from the Commission but the stakeholders
14 will be involved so each program officer is going to
15 continue to engage those stakeholders like we did
16 before for workshops, those types of things, review
17 processes, so that we can get that input and we can
18 help to guide them.

19 Roy had mentioned doing some of the case
20 studies as well with the Metro et cetera, some of the
21 events that have happened in other industries. We are
22 going to assess those, we are going to put those case
23 studies together around the traits so that we can use
24 those as training materials to show people how, if
25 this trait, if in place, could have potentially

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1 affected this area, those types of things.

2 MR. ZIMMERMAN: I think we have said it
3 before but we don't expect that implementation will
4 occur at the same speed with our licensees and
5 certificate holders. Some that have made major strides
6 are much further along. Others are going to need to
7 have considerably more training and Q&A sessions to
8 really understand what it is we are asking them to do.
9 So for some facilities, it may be a multi-year rollout
10 activity.

11 MEMBER BLEY: Are you coordinating the
12 training that they will get or is that some other --
13 is it up to them to get it?

14 MR. ZIMMERMAN: It's going to switch over
15 to the program offices where NMSS and FSME, NRR, NRO
16 will know what they feel is needed and then we will
17 offer our resources, Diane and others, to be able to
18 assist with some of that work if the offices would
19 like that assistance.

20 CHAIRMAN ABDEL-KHALIK: Where is OE on this
21 list?

22 MR. ZIMMERMAN: OE?

23 MEMBER BLEY: Yes.

24 MEMBER ARMIJO: What are you guys doing on
25 that?

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1 MS. SIERACKI: It's actually on the --

2 MR. SOLORIO: I guess we should have showed
3 you Roy's performance plan which basically has OE as
4 the lead coordinating office for the agency to ensure
5 that we have a coordinated rollout of these
6 activities.

7 MS. SIERACKI: Since we don't work directly
8 with the regulated community, our role is different.
9 The program offices do that. We will though maintain a
10 coordination and a support role because we still want
11 to make sure that, for instance if NRO is going out to
12 do a conferencing, they are going to talk to their
13 folks and NRR wants to do something, perhaps we can
14 coordinate these two. We will keep all the records if
15 you will, kind of the coordination --

16 MR. ZIMMERMAN: What we have working for us
17 is we have been working so closely together through
18 the Working Group and the Steering Committee, that
19 there is great alignment internally in what we are
20 doing, so now it just shifts where the lead is and we
21 move into a support role for the other offices.

22 MS. SIERACKI: Okay, so our key messages
23 today are that we have a two year plus effort with
24 considerable outreach, a safety culture definition and
25 traits that you have seen are supported widely by our

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1 stakeholders. Our stakeholders will remain involved in
2 the implementation phase and we are requesting a
3 letter of recommendation from this group to the
4 Commission.

5 There are some acronyms on the following
6 slides. So we are open to additional questions.

7 MEMBER BLEY: Thank you. Any questions from
8 the Committee? Further issues? If not I guess it's
9 back to you.

10 CHAIRMAN ABDEL-KHALIK: Thank you. At this
11 time our schedule calls for a break so we will take a
12 15-minute break and we will reconvene at 10:15. At
13 that time we will be off the record.

14 (Whereupon, the above-entitled matter went
15 off the record at 9:59 a.m.)
16
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Proposed Final Safety Culture Policy Statement

Diane Sieracki
Sr. Safety Culture Program Manager
Office of Enforcement

ACRS Full Committee
December 3, 2010

Objectives

- Outline development of the safety culture policy statement (SCPS)
 - Background and Commission Direction
 - Outreach Activities
 - Final SCPS and Commission Paper

Background

- 2008 Commission Direction COMGBJ-08-0001
 - Review reactor process (ROP); include materials areas and Agreement States; consider security (one policy statement or two separate policy statements)
- 2009 Commission Paper SECY 09-0075
 - One policy statement incorporating both safety and security
 - ROP is effective; strategy for including materials areas and Agreement States
- 2009 Commission Direction SRM 09-0075
 - Publish one policy statement in FRN; consider vendors/suppliers; comport terminology; engage broad range of stakeholders

Outreach Activities

- November 2009 FRN based on Commission Direction – 120-day comment period
 - **Public comments:** 52 comments having three main issues:
 - Clarify policy statement implementation
 - Don't include "security" in SC definition or traits
 - Implications of a policy statement vs. a regulation
- February 2010 Safety Culture Workshop – 3 days; panel of broad range of stakeholders

Additional Outreach

May - August, 2010

- NRC staff presented SCPS information at various forums:
 - Health Physics Society; Fuel Cycle Information Exchange; Institute of Nuclear Materials Management; National Conference on Radiation Control; NRC workshop on Vendor Oversight, etc.
- Conference call with February workshop panelists and members of the public in July 2010
 - Review results of public comments on the November 2009 FRN
 - Discuss inclusion of security
 - Received continued endorsement of workshop definition and traits

Additional Outreach (continued)

- September 2010 FRN, Revised Draft SCPS – 30-day comment period
 - Included February 2010 workshop SC definition and staff revised workshop traits with the traits included in the Statement of Policy (SOP); “Security” not included in SC definition or traits--did include preamble to address security
 - Indicated applicability to vendors and suppliers of safety-related components
 - Included Commission’s expectation that Agreement States support a positive SC within their regulated communities
 - Asked whether the INPO Validation Study results should be considered

Additional Outreach (continued)

- September 2010 FRN, Revised Draft SCPS
 - **Public comments** – 23 comments having two main issues:
 - Distinction should be made between different types of licensees in the policy statement, and credit given to those with existing SC practices
 - Stakeholders requested continued involvement, through workshops and other outreach methods, during implementation (Tier 3) of the SCPS
- Final one-day Public Meeting held on September 28, 2010

Safety Culture Workshop

February 2010

- Panel of 16 stakeholders with various affiliations (e.g., reactors, OAS, medical facilities, fuel cycle facilities, gauge manufacturers, and members of the public)
- Panelists worked together, in breakout sessions with other attendees, and reached alignment on a definition and 8 traits of a positive SC
- Definition and traits use common terminology

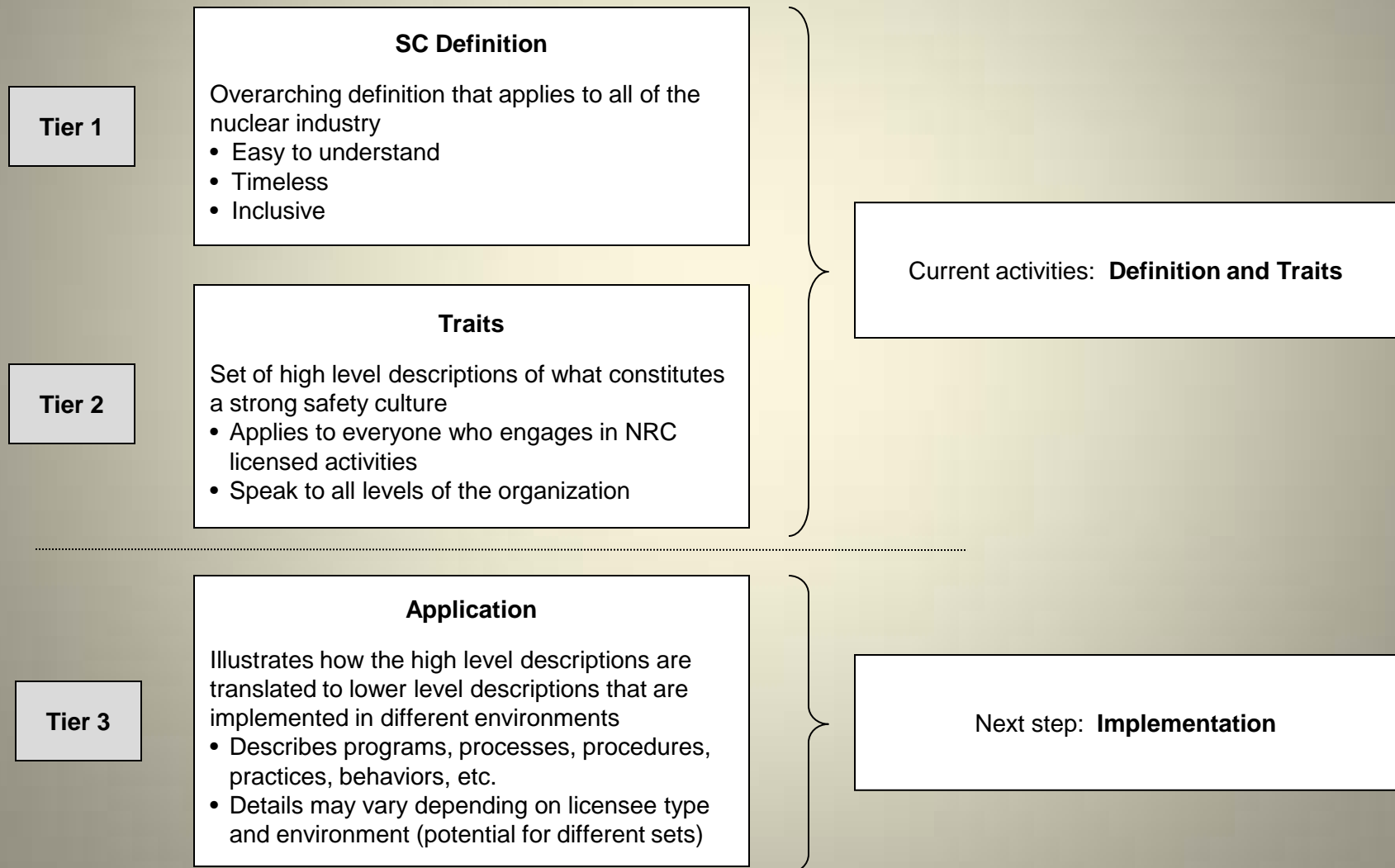
Safety Culture Definition

Nuclear Safety Culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.

Safety Culture Traits

- Leadership Safety Values and Actions
- Personal Accountability
- Work Processes
- Continuous Learning
- Problem Identification and Resolution
- Environment for Raising Concerns
- Effective Safety Communication
- Respectful Work Environment
- Questioning Attitude

Tiers for Development and Implementation of the SCPS



February 2010 Workshop

“Tier 3” Exercise

Example of “Leadership” Activities

- Management is in the field enforcing standards
- Commitment to maintaining equipment
- Resolves conflict
- Rewards safe behavior
- Rewards (incentives) and sanctions used to reinforce desired positive nuclear safety behaviors
- Respects differing opinions
- Actions match words
- Schedules are realistic and do not challenge safety standards

Why These Traits?

- Benchmarked domestic and international terminology/standards – used as a starting point
- Revised/modified with stakeholder input through workshops and public meetings
- Supported by independent (INPO) validation study
- General language allows for tailoring for specific licensees in implementation phase

Preamble

Experience has shown that certain personal and organizational traits are present in a positive safety culture. A trait, in this case, is a pattern of thinking, feeling, and behaving that emphasizes safety, particularly in goal conflict situations, e.g., production vs. safety, schedule vs. safety, and cost of the effort vs. safety. It should be noted that although the term “security” is not expressly included in these traits, safety and security are the primary pillars of the NRC’s regulatory mission. Consequently, consideration of both safety and security issues, commensurate with their significance, is an underlying principle of this Statement of Policy.

Proposed Final Draft SCPS/SECY

- Definition and traits of positive SC included in Statement of Policy
- “Questioning Attitude” added as 9th trait to address complacency
- Preamble addresses security
- Regulated community needs to be mindful of potential negative effects certain programs (i.e., incentive programs) can have on safety
- Recognition of diversity of regulated entities
- Applicable to vendors and suppliers of safety-related components
- Implementation is not directly addressed

Next Steps

- Provide proposed Final Statement of Policy to Commission with Commission Briefing scheduled for January 24, 2011
- Commission Direction
- Implementation Phase
 - Stakeholder involvement with program offices for “Tier 3”
 - OE will continue to work with program offices and support activities during implementation phase

NRC SCPS Implementation (Projected)

- NRR
 - Engage stakeholders within ROP self-assessment construct
 - Incorporate SC guidance into RTR inspection process, where applicable
- NRO
 - Assess need for changes in IMC 0613 and IMC 2505
 - Coordinate NRO actions with ROP changes
- NMSS
 - Address safety culture in broader oversight process evaluations for FC facilities, ISFSIs, cask vendors
 - Outreach to stakeholders as part of any oversight process revisions
- FSME
 - Evaluate ways to incorporate SC into on-going NUREG-1556 and IMC 1246 updates
 - Work with Agreement States to leverage their best practices

Key Messages

- Two year effort with considerable outreach
- SC definition and traits supported by stakeholders
- Stakeholders to remain involved in implementation phase
- Requesting a letter of recommendation from ACRS to the Commission

List of Acronyms

- FC – Fuel Cycle
- FRN – Federal Register Notice
- INPO – Institute of Nuclear Power Operations
- IMC 0613 – Documenting 10 CFR Part 52 Construction and Test Inspections
- IMC 1246 – Formal Qualification Programs in the Nuclear Materials Safety and Safeguards Area
- IMC 2505 – Periodic Assessment of Construction Inspection Program Results

List of Acronyms (continued)

- ISFSI – Independent Spent Fuel Storage Installation
- NUREG-1556 – Consolidated Guidance about Materials Licensees
- ROP – Reactor Oversight Process
- RTR – Research and Test Reactor
- SC – Safety Culture
- SCPS – Safety Culture Policy Statement
- SECY – Synonymous with Commission Paper
- SOP – Statement of Policy