

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards

Docket Number: (n/a)

Location: Rockville, Maryland

Date: Wednesday, October 7, 2015

Work Order No.: NRC-1933

Pages 1-100

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

DISCLAIMER

UNITED STATES NUCLEAR REGULATORY COMMISSION'S
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

The contents of this transcript of the proceeding of the United States Nuclear Regulatory Commission Advisory Committee on Reactor Safeguards, as reported herein, is a record of the discussions recorded at the meeting.

This transcript has not been reviewed, corrected, and edited, and it may contain inaccuracies.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

+ + + + +

628TH MEETING

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

+ + + + +

WEDNESDAY

OCTOBER 7, 2015

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Committee met at the Nuclear
Regulatory Commission, Two White Flint North, Room
T2B1, 11545 Rockville Pike, at 2:00 p.m., John W.
Stetkar, Chairman, presiding.

COMMITTEE MEMBERS:

- JOHN W. STETKAR, Chairman
- DENNIS C. BLEY, Vice Chairman
- MICHAEL L. CORRADINI, Member-at-Large
- RONALD G. BALLINGER, Member
- CHARLES H. BROWN, JR. Member
- DANA A. POWERS, Member
- JOY L. REMPE, Member
- PETER RICCARDELLA, Member

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STEPHEN P. SCHULTZ, Member

GORDON R. SKILLMAN, Member

DESIGNATED FEDERAL OFFICIAL:

DEREK WIDMAYER

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

TABLE OF CONTENTS

Introduction 4

Staff Introduction 6

Briefing and Discussions with NRC Staff
regarding the enhancements to the Reactor
Oversight Process 9

Adjourn

P R O C E E D I N G S

2:01 p.m.

CHAIRMAN STETKAR: The meeting will now come to order.

This is the first day of the 628th meeting of the Advisory Committee on Reactor Safeguards.

During today's meeting, the Committee will consider the following, Reactor Oversight Process Enhancements, Assessment of the Quality and Selected Research Projects and Preparation of ACRS Reports.

This meeting is being 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 to make oral statements from members of the public regarding today's sessions.

There will be a phone bridge line. To preclude interruption of the meeting, the phone will be placed on listen in mode during the presentations and Committee discussions.

A transcript of this meeting is being kept and it's requested that the speakers use one of the microphones, identify themselves and speak with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 sufficient clarity and volume so that they can be
2 readily heard.

3 And, I'll ask everyone to check your
4 communications devices and please turn them off so
5 we're not interrupted.

6 Also, for those of you up front who may
7 not be familiar with our new process here, when you're
8 speaking, please turn on your microphone. There's a
9 little thing at the bottom front facing you that says
10 Push. When you're not speaking, keep it off because
11 they're really sensitive and they -- you can hear
12 rustling papers and it disrupts things. So, try to
13 remember to do that. I'll be nasty and remind you if
14 you don't.

15 And, as a final comment, the Committee
16 would like to welcome Ms. Christiana Liu, a Risk
17 Assessment Engineer, as a permanent addition to our
18 staff. And Dr. Seung Min, I'm terrible at
19 pronunciations, a Materials Engineer, who is on a
20 rotation to our staff. And we welcome you both.

21 Chris stepped out.

22 So, welcome.

23 And, with that, unless any of the Members
24 have anything else that you'd like to mention or add,
25 we'll turn the proceedings over and the first item on

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 our agenda is Enhancements to the Reactor Oversight
2 Process and Dick Skillman will lead us through that
3 session.

4 Dick?

5 MEMBER SKILLMAN: Mr. Chairman, sir, thank
6 you for this opportunity I want to welcome also Nathan
7 Sanfilippo, Chris Regan and Scott Morris before us
8 today.

9 These gentlemen are following up on a
10 presentation that they made to the Subcommittee
11 approximately ten days ago on a very important process
12 within the NRC that is the Revised Oversight Process,
13 the ROP. And, today, we're going to hear about
14 enhancements to the ROP.

15 To those who are not familiar with the
16 operating a plant out in the fleet, it is the ROP that
17 brings the inspectors in on a regular basis to
18 observe, witness, inspect the safeness of the
19 operations and the processes at the nuclear power
20 plants.

21 And, this process has been enforced for
22 about 14 or 15 years. And, two years ago, in 2013,
23 the staff decided to implement enhancements. And we
24 are going to hear about those today.

25 And so, with that opening comment, I

1 welcome the NRC staff and I guess I would ask either
2 Nathan or Chris to please begin.

3 MR. REGAN: Thank you.

4 And, Scott --

5 MR. MORRIS: Actually, if you don't mind,
6 I'm just going to start.

7 MR. REGAN: That's okay.

8 MR. MORRIS: These guys are way more
9 important than our end.

10 CHAIRMAN STETKAR: Didn't the 333 batting
11 average --

12 MEMBER SKILLMAN: Can I make a comment?
13 I respect that Scott was not going to be here for the
14 Subcommittee meeting and he graced us with his
15 presence for the whole meeting, but I was not going to
16 presume upon you.

17 MR. MORRIS: Well, thank you.

18 So, yes, my name's Scott Morris, I'm the
19 Director of the Division of Inspection and Regional
20 Support at NRR where both Chris and Nathan were going,
21 Chris has the Inspection Branch, Nathan the Assessment
22 Branch and they'll dive into a little bit more detail
23 about what they do and what changes they're making to
24 their pieces of the Reactor Oversight Program.

25 I just want to first off that, in fact,

1 and you'll probably see this again in subsequent
2 slides, the ROP, as Mr. Skillman mentioned, has been,
3 in its current form, has been in place since 2000,
4 2001. And, it's a mature and effective program that
5 gets regularly assessed both by internal self-
6 assessments and by external parties.

7 We've made a number of changes to the
8 process over the years. We continue -- it's a very --
9 it's a living program in the sense that there's always
10 feedback from inspectors, from the industry, all over.
11 And so, the program is always changing.

12 But, in its fundamental form, it hasn't
13 changed that much.

14 What we're going to talk about today is
15 the result of, is a committed project, an ROP
16 enhancement project that we pulled together inputs,
17 feedback, from a variety of different sources that we
18 received over the last year to years or so, three
19 years even, that were substantive enough to warrant,
20 you know, sort of a broader, more focused effort on
21 managing how we're going to move through all these
22 changes.

23 And so, what you're going to hear today
24 is, the enhancements that we're making based on the
25 inputs that we received, enhancements that we think

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 are important enough to warrant implementation,
2 particularly in these austere times.

3 And so, again, Chris is going to start us
4 off with the inspection world and then Nathan will
5 talk about the enhancement or the assessment world and
6 then, obviously, we'll take your questions and go from
7 there.

8 So, Chris?

9 MR. REGAN: Thanks.

10 So, my name is Christopher Regan. I'm
11 Chief of the Reactor Inspection Branch in the Division
12 of Inspection and Regional Support at NRR.

13 I've been at the Agency for 25 years.
14 I've been in this position for a little over two and
15 a half years. I've been an inspect out in the field
16 and I've also spent some time, although it is somewhat
17 dated, in our Region V office back in the early '90s.

18 I'm going to speak specifically to the
19 enhancements to the baseline inspection program. But,
20 before I get into that, Nathan's going to provide you,
21 at your request, an overview of the ROP just to give
22 you a little bit of a foundation before we get into
23 some details on what the enhancements are.

24 So, Nathan?

25 MR. SANFILIPPO: All right, thanks, Chris.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 My name is Nathan Sanfilippo. I'm Chief
2 of the Performance Assessment Branch in the Division
3 of Inspection Regional Support.

4 Just a little bit about my background,
5 I've been with the Agency 13 years or so. My current
6 position, I've been in for about a year, although I
7 have inspection experience in the past, have done
8 various inspection program related work including as
9 a staff member in the branch that I currently work in
10 as well as time that I've spent in policy development
11 working in the EDO's office and working for former
12 chairmen.

13 So, I try to blend my policy experience
14 with some inspection program background and have
15 brought that to this enhancement project.

16 So, to get things moving this morning --
17 or this afternoon, we did just want to go over briefly
18 some of the foundational aspects of the ROP and,
19 please, you know, if we need to go into more detail in
20 areas or can skip over it, just let me know.

21 This figure that I believe many of you
22 have probably already seen is the regulatory framework
23 of how we established the Reactor Oversight Process.
24 And, it's really focused around three what we call
25 strategic performance areas and seven safety

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 cornerstones.

2 The strategic performance areas of reactor
3 safety, radiation safety and safeguards and then seven
4 safety cornerstones, initiating events, mitigating
5 systems, barrier integrity, emergency preparedness
6 which all make up the reactor safety cornerstone.
7 Public and occupational radiation safety which make up
8 the radiation safety strategic performance area. And,
9 security, which is part of the safeguards area.

10 These seven safety cornerstones were
11 developed as sort of the foundation of the Reactor
12 Oversight Process. And, in each of those
13 cornerstones, we outlined objectives that, if met,
14 gave us that top overall NRC safety mission that we
15 had assurance that the licensee was, you know,
16 maintaining the public health and safety.

17 So, our ROP is really focused around these
18 seven reactor cornerstones. They're statement
19 cornerstones.

20 The three crosscutting areas at the bottom
21 are also important to note that we also measure
22 performance in the human performance safety conscious
23 work environment and problem identification resolution
24 areas. These are recognized as being crosscutting
25 areas because, you know, performance deficiencies can

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 be related to any of those area that could relate to
2 any cornerstone and a lot of the root causes of
3 performance issues are tied to the areas. So, there
4 were recognized, not as their own cornerstones, but as
5 inputs into all the ROP cornerstones.

6 But, to get more specifically into the
7 workings of the ROP, we take any one individual
8 cornerstone. That cornerstone has safety objectives
9 which we measure one of two ways.

10 The ROP was created based on the idea
11 that, if we could create a performance indicator, an
12 objective, quantitative performance indicator that
13 licensees would collect the data for it and submit to
14 the NRC.

15 That would be the first choice of methods
16 to use because it reduced the burden of direct
17 inspection.

18 So, we have, for all the cornerstones,
19 identified at least one or more performance indicators
20 that are reported to the NRC by the licensees. Those
21 performance indicators are assessed against pre-
22 established significant thresholds and the result of
23 those significant thresholds feeds into our NRC action
24 matrix.

25 The other path on this chart is the

1 baseline inspection program, or really, any inspection
2 result.

3 MEMBER POWERS: We used to, on the
4 Committee get like an annual report of the performance
5 indicators and some trending from that.

6 I wonder -- I don't think I've seen one
7 for the last couple of years.

8 MR. SANFILIPPO: The industry trends
9 program, perhaps is what you're referring to. It is
10 an annual SECY paper that we send to the Commission
11 every year. So, we have issued one every year.

12 MEMBER POWERS: You're just telling me
13 I'm not looking in the right place?

14 MR. SANFILIPPO: It wasn't, you know, the
15 ACRS wasn't the addressee, but certainly is available.

16 MEMBER POWERS: I think it's in -- it's
17 actually useful to look at those trends or the
18 performance indicators and how they're behaving, just
19 for information purposes.

20 CHAIRMAN STETKAR: We've asked to be
21 copied on that over the last year or so and I don't
22 think we got it last year.

23 MEMBER POWERS: I don't remember seeing
24 it.

25 CHAIRMAN STETKAR: I mean 2015, we need to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 be a bit more aggressive sometimes in following up.

2 MR. SANFILIPPO: We can do that, no
3 problem.

4 The inspections -- so, the inspection
5 track of the corner -- from the cornerstone here
6 shows, for the areas where we don't get quantitative
7 performance indicator data, we have outlined an
8 inspection program to look at those cornerstone
9 objectives.

10 Those inspections are carried out by both
11 resident inspectors and regional inspectors. And, any
12 time there are inspection findings related to that
13 inspection procedure, we have to evaluate it with our
14 significance determination process. And, that is the
15 way that we assign how safety significant or risk
16 significant that performance deficiency might be.

17 Those --

18 MEMBER POWERS: You have made the boxes
19 here completely parallel by using the term
20 significance threshold, but there is a difference in
21 the two paths. And the performance indicator path is
22 a prescribed set of thresholds that were derived in
23 mysterious ways from a risk assessment.

24 Whereas, the significance determination
25 process that I interrupted you in, is material to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 whatever the finding is.

2 MR. SANFILIPPO: That's correct.

3 And, the, you know, one thing to note,
4 too, is inspection findings by definition are
5 performance deficiencies that we have identified or
6 that the licensee has itself identified.

7 Where performance indicators, it's a
8 quantitative reporting of data regardless of whether
9 or not there is a licensee performance deficiency, for
10 instance, an unplanned scram. If they have an
11 unplanned scram, that's reported as part of the
12 performance indicator.

13 It doesn't matter whether it was caused by
14 an act of God or whether it was caused by a human
15 performance error. So, that's also an issue that is
16 a difference in how we weight things.

17 The significance thresholds were designed
18 to be roughly equivalent but certainly not identical
19 in any way. And so, that's where you'll see outputs
20 of the program being colored in green, white, yellow
21 and red.

22 Of course, for performance indicator,
23 green means everything is within an acceptable range
24 whereas a green inspection results is still an
25 inspection finding, still is representative of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 deficient performance. So, it's not good in that
2 case. It's just the least safety significant of the
3 four levels.

4 Ultimately, we are looking to make a
5 regulatory response based on licensee performance and
6 that is done via the action matrix. So, the action
7 matrix takes all of the inputs from the inspection
8 program as well as the performance indicator program,
9 consolidates them and guides us in a predictable and
10 repeatable way with respect to what we do from a broad
11 Agency perspective.

12 And, that includes -- that's, of course,
13 the action matrix, plants are in either column one,
14 two, three or four, typically, with increasing
15 severity.

16 With increasing column severity includes
17 additional NRC inspection, higher level of management
18 oversight, engagement with the public, et cetera, and
19 has a significant impact on the licensee's, you know,
20 posture with respect to response and the NRC.

21 MEMBER SKILLMAN: Nathan, before you
22 proceed, since you used the term significance
23 determination process, may I ask you to describe
24 briefly how the SDP and change in risk are connected
25 so my colleagues understand that there is a calculus

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and that there is a logical method to the change from
2 white to green to yellow to red, please.

3 MS. SANFILIPPO: Sure. And, you know, the
4 significance determination process, there's individual
5 SDPs, depending on which reactor or radiation safety
6 or security cornerstone you might find yourself in.

7 So, a number of those cornerstones have
8 SDPs that are more deterministic in nature that are,
9 you know, more, perhaps, qualitative in nature. It
10 just depends on the cornerstone that you're in.

11 With respect to using PRA insights and
12 risk values, that is usually specifically geared
13 towards the first three cornerstones which are
14 initiating events, mitigating systems and barrier
15 integrity. And those are often the ones that, when we
16 perform at power, what we call at power SDPs to
17 evaluate the significance of roughly half of all
18 significant findings in a year come from those more
19 quantitative areas.

20 For instance, if there's issues with the
21 safety equipment at the plant, we would use that SDP.

22 Those color significance thresholds have
23 been defined or outlined using a delta CDF value.
24 Roughly an order of magnitude for each threshold. And
25 those -- so, that's essentially the --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: So, all the SDPs are risk
2 informed but they're not all quantitative, some of
3 them are deterministic and the only ones that are
4 quantitative use quantitative risk assessment tools
5 are the ones that are associated with initiating
6 events, mitigating systems and barrier integrity.

7 So, and we're going to talk more about it
8 because there's some substantive enhancements we have
9 implemented and are planning to implement in that
10 arena.

11 MR. SANFILIPPO: And then, that is -- yes,
12 as we'll talk about later in the presentation and
13 taking a look at, you know, as Scott mentioned, our
14 goal is to be risk informed in all of the cornerstones
15 regardless of whether or not we use quantitative
16 input.

17 And then, one of the questions that's been
18 raised is are we relying too much on the quantitative
19 PRA input for those more quantitative cornerstones?
20 And, are we really risk informed or are we drifting
21 towards a more risk based approach?

22 And, that's something that I'll talk about
23 more when we talk about SDP enhancements.

24 MEMBER REMPE: Before you go on, or if you
25 want to, you can discuss it later, but -- and I missed

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 your Subcommittee meeting, so maybe you discussed it
2 there.

3 But, one of the things you hear about are
4 regional differences in implementing this process.
5 And, I guess I'd be interested in your thoughts on
6 that, are there valid reasons for regional differences
7 in implementation and --

8 MR. MORRIS: Can I take this one?

9 MR. SANFILIPPO: Sure.

10 MR. MORRIS: Sure, there are regional
11 differences. They tend to be in areas that are in the
12 lower significance arenas because once you start
13 identifying and processing things that are more
14 significant, you get a -- there's a moderating factor
15 that's engaged and that's called Headquarters Program
16 Office Staff.

17 So, and what happens is, is once things
18 get elevated in significance, you know, and
19 Headquarters gets involved and, you know, we ask hard
20 questions and things tend to be very aligned once you
21 get the things that are white significance or above.

22 It's really when you get into is an issue
23 even documented at all? Is it minor or more than
24 minor? There's differences in how the guidance is --
25 and I said guidance and I hate -- I slap myself for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that -- but the programmatic requirements can be
2 interpreted in different ways and are interpreted in
3 different ways.

4 Is it minor or is it more than minor?
5 And, you know, and then things about, you know, who
6 identified it and how long? And there's a lot of
7 subtleties and nuances in the -- and regions, over the
8 years, have interpreted these programmatic
9 requirements in different ways.

10 So, we understand that, we recognize it.
11 We accept it to a degree. It's been elevated in
12 significance in recent times in part because of a GAO
13 audit that was conducted. It looked exactly at this
14 issue and pointed out some substantive differences in
15 the way regions implement the ROP requirements.

16 MEMBER POWERS: There is a qualitative
17 aspect to many of these monitoring programs.

18 It seems to me that I would be very
19 tolerant of variations in many of the regions. For
20 the simple reason that you're exploring the best
21 practices.

22 If everybody has the same practice, you're
23 never putting down the best practices. I think you
24 lose the essential element is there be communications
25 in one of the regions with respect to these

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 differences so that you can settle on best practices.

2 MR. MORRIS: It's a great point. And,
3 there is variability and we do have the communications
4 that you talk about. We have counterpart meetings
5 with me and my peers in the regions, Chris and Nathan
6 and their peers in the regions and a variety of other
7 opportunities.

8 But, not but, and, what we probably should
9 have started with in this presentation is the ROP,
10 when it was laid out, was based on a set of
11 fundamental principles. Right? And the principles
12 were risk-informed, performance-based, understandable,
13 repeatable, inscrutable, I hate that word, but it
14 basically means you can see how the Agency made a
15 decision based on the inputs that it had.

16 So, in the case of regional differences --

17 MEMBER POWERS: More importantly, you can
18 anticipate the decision the Agency made based on --

19 MR. MORRIS: Right, right, right. It
20 takes the guess work out it.

21 And so, what the -- ideally, given the
22 same set of facts presented in Region I as in Region
23 III, the Agency would yield the same outcome. Right?
24 And that's not always true. Right?

25 And, but again, it tends to be at these

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 lower level significance things.

2 But, as you'll see throughout the rest of
3 the presentation, we're still very introspective and
4 very interested in identifying best practices.

5 And, you're right, I mean we have learned
6 an awful lot from our experiences and that's really
7 the genesis for most of the changes that we're making
8 and/or are proposing to make.

9 MEMBER POWERS: I think that's an
10 excellent way to go. I mean if you accumulate every
11 once in a while all this experiential data then you
12 make decisions on how to refine the system.

13 MR. MORRIS: In fact, one of the chief --

14 MEMBER POWERS: I think you have to be
15 very tolerant of a certain amount of -- a certain
16 amount, not a huge variability, but a certain amount
17 as long you don't violate this inscrutability
18 objective.

19 MR. MORRIS: One of the chief complaints
20 we get from the regions is we change the program too
21 much and they can't keep up with it.

22 MR. SANFILIPPO: So, it's really a pretty
23 good segue into this next slide. And, as Scott
24 mentioned at the beginning in his remarks is a
25 fundamental fact or conclusion that is drawn by many

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 folks, both internal and external is that the ROP
2 continues to be a mature and effective program.

3 We hear that from the industry, we hear
4 that from even some of our more critical public
5 stakeholders that it is an effective program but,
6 certainly, there are always areas to improve and
7 continuously be critical of.

8 It's remained effective largely due to
9 built-in feedback mechanisms and adjustments that have
10 been made since 2000. It is not a static program by
11 any means.

12 And, as Scott mentioned, and I say here,
13 while its fundamental principles have remained the
14 same such as the predictability, repeatability,
15 scrutability, transparency, we have made changes and
16 adjustments to almost every aspect of the program as
17 we've learned lessons over the past 15 years, and some
18 of those areas are listed on this slide.

19 And, some of those areas are also ones
20 that we're continuing to look at we'll talk about in
21 more detail today.

22 So, the way that we wanted to structure
23 this discussion is first, we will lead in a bit on the
24 next slide and I'll pass it off to Chris to talk about
25 some of the inputs we've been receiving, what it is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that is within scope of this project, this enhancement
2 project that we have been working on and then we'll
3 march through a number of the discrete enhancements
4 and go into more details on each of those.

5 So, Chris?

6 MEMBER POWERS: Just one other thing to
7 interject for the Committee. We need to pay close
8 attention to the crosscutting issues because next
9 month we're going to be asked to comment on
10 crosscutting issues for the facilities inspection
11 program and it's kind of parallel but in development
12 to this reactor -- fuel cycle facilities for this will
13 --

14 You might have had -- they're going to ask
15 us to help them define what a crosscutting issue is so
16 we need to pay attention to what they are here.

17 MR. REGAN: Very good. Thanks, Nathan.

18 So, we've heard the foundation or backdrop
19 to the ROP. You've heard that the ROP has essentially
20 been a living program. Since its inception, there
21 have been revisions, changes to the program over the
22 last decade or so.

23 And, in recent history over the last
24 couple of years, I dare say we've seen a pretty good
25 uptick in the amount of feedback that we've received

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 regarding the program to make the program better.

2 On this slide, it's more a listing of
3 those types of feedback that we've been receiving.
4 Some of the activities, the programmatic self-
5 assessments that we've undertaken plus assessments
6 from external third-parties and from experience and
7 lessons learned from events and activities that we've
8 actually seen in the field.

9 In the way of programmatic reviews, there
10 has been what we defined as the ROP Enhancement
11 Project. And, you'll hear us talk about ROP
12 enhancements in the broad sense. But, there was a
13 dedicated ROP Enhancement Project that I'll talk about
14 on the next slide.

15 But, a result of that project was, we
16 looked at the ROP baseline inspection program
17 enhancement specific to that program to the
18 significance determination process which Nathan will
19 discuss in a little bit more detail for our
20 presentation.

21 We looked at the periodic or annual ROP --
22 I'm sorry, there was a Commission directed ROP
23 Independent Assessment that was initiated a couple
24 years ago with a report issued last year with
25 recommendations on how to improve the program. That's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 been incorporated into our feedback loop.

2 We have an ROP self-assessment. This is
3 the process that every year, the program office will
4 step back and assess its performance and implementing
5 the program and its effectiveness regarding oversight
6 of industry activities at operating reactors.

7 That effort to enhance that self-
8 assessment process was begun a little over a year ago.
9 There was a Commission paper that defined the process
10 for how we were going to undertake the reevaluation of
11 the self-assessment process. And, I believe that is
12 going to be rolled out here or implemented for the
13 first time here at the end of this inspection year
14 with a Commission paper next April.

15 VICE CHAIRMAN BLEY: That bullet has a
16 strange looking title to me on that COMSECY proposed
17 suspension. Can you tell us a little bit about that?

18 MR. SANFILIPPO: Sure. And, I'll go into
19 detail about the new process later on. But, with
20 respect to what we have here, we owe the Commission
21 our self-assessment. It's a commitment that we've
22 made the Commission every year.

23 So, we wanted to -- in order to make
24 fundamental changes to the program, take a year off
25 from its implementation and divert those resources to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 revisions to the program. So, we asked the Commission
2 through this paper last year whether we could suspend
3 the 2014 assessment in order to retool the program
4 which they approved. So, that's the nature.

5 VICE CHAIRMAN BLEY: Oh, just the self-
6 assessment?

7 MR. REGAN: Just the self-assessment,
8 yes.

9 There was so much change ongoing at that
10 time, we felt it prudent to pause on the self-
11 assessment because it essentially would have been a
12 moving target at that point. The Commission agreed to
13 give us a year to redevelop the new process.

14 MR. SANFILIPPO: And, when we get to my
15 slides later, I'll tell you about the new process.

16 MR. REGAN: We also were in receipt of the
17 results of a GAO audit which is the audit that you
18 refer to about differences in implementing the program
19 across the regional offices.

20 We also have several -- the results of
21 several OIG audits. There's only one indicated here
22 specific to support for resident inspectors.

23 We've also received the results of audits
24 on inspection and spent fuel pools, inspection of
25 active aging component aging and active component

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 aging.

2 And, also OIG just begun last month an
3 audit of the baseline inspection program.

4 So, there have been multiple OIG audits
5 feeding into improving our program.

6 We also have --

7 MR. MORRIS: And, oh, by the way, they
8 just kicked off another one.

9 MR. REGAN: On the baseline?

10 MR. MORRIS: I was asleep, sorry.

11 MR. REGAN: We also have feedback from
12 three recent significant events, Brown Ferry for
13 lessons learned, Fort Calhoun inspection results under
14 0350 and the San Onofre Steam Generator II Degradation
15 lessons learned as well.

16 Although these had lessons learned that
17 were farther reaching than just the ROP, there was
18 several key elements or nuggets within those lessons
19 learned that we've been able to glean and are
20 incorporating into our enhancement efforts.

21 Those are the broader programmatic looks
22 where we have recommendations on the program. But, we
23 also have, and this is something we talked about at
24 the Subcommittee meeting, an ongoing living process to
25 solicit feedback from those who have an interest in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the ROP.

2 This is a process where any inspector, any
3 staff, any manager can provide written feedback to the
4 program office on things they believe might enhance or
5 improve the program.

6 They come in all shapes and sizes. It may
7 be minor edits to an inspection procedure. It could
8 be a proposal to change significant portion of the
9 program itself.

10 But, that's a living process. We are
11 continually accepting and dispositioning feedback in
12 that manner and have been doing for many, many years.

13 Currently, we have, just to give you an
14 idea of the magnitude or the amount of feedback we
15 receive, currently in our feedback form process, we
16 have about 250 discrete pieces of feedback. We
17 routinely receive on average about a 100 per year and
18 similarly disposition about a 100 per year, this is
19 just part of our regular routine work process.

20 So, what you see in those two top major
21 bullets is all on top of what we normally do in the
22 way of program improvements.

23 We've also identified experience regarding
24 the resource intensive significance determinations.
25 ANO was one that was discussed previously and, Nathan,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 if you want to talk about that later.

2 MR. SANFILIPPO: Yes, I'll just mention
3 and tee it up a little bit, and this is one of the
4 drivers behind what we're looking at as far as
5 significance determination process enhancements.

6 And, to some extent, the question has been
7 what problem are you trying to solve with these
8 enhancements? And, it's largely to the extent of
9 resource -- time and resource challenges.

10 Certainly, we could spend an undefined
11 amount of time and/or resources in analyzing how
12 significant a past violation a performance deficiency
13 was, but ultimately, we're trying to make a timely
14 regulatory decision to determine what a proper amount
15 of, you know, follow up is for any given licensee and
16 that deficient performance.

17 So, in particular, you know, we've
18 received Commission direction to, quote, streamline
19 the significance determination process. And, I'll
20 talk about that in more detail later on. But, one of
21 the primary drivers behind that is, at least
22 temporarily, when it was issued to us, the Commission
23 directed us to do that shortly after we had issued the
24 violations for the ANO stator drop incident.

25 And, those violations didn't get issued

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 until roughly two years after the stator drop. And,
2 there was a significant, you know, visible question
3 raised as to why something so significant and
4 important to the Agency's follow up and licensee
5 corrective actions would take so long following such
6 a significant event.

7 So, that was really a driver and we'll get
8 into more details when I talk about the significance
9 determination process with respect to how -- what is
10 it that we're trying to reduce from a resource
11 perspective, from a time perspective, et cetera.

12 MR. REGAN: And, the last item there is,
13 obviously, if there are deviations from the program
14 that are justified or taken into account for any
15 reason, we evaluate whether those might necessarily
16 prompt a more global revision to the program or if
17 they are singular isolated incidences or exceptions to
18 the program that are warranted.

19 In addition, I mentioned the number of
20 feedback forms or individual feedback that we have to
21 the program just to illicit or give you -- illustrate
22 the magnitude of the change that we have in front of
23 us, from the above -- from the list on the page plus
24 the other inputs, we have roughly 130 plus inputs to
25 the program to enhance it. Hence, the reason we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 wanted to suspend the self-assessment process for a
2 year.

3 We've developed an internal tracking tool
4 to look at those pieces of feedback to group them into
5 similar areas and to look for efficiencies in how we
6 disposition those.

7 But, it's a sizable amount. We have a lot
8 on our plate. We've been progressively working
9 through them over the last year and over the next year
10 or so, we're also -- we will be addressing them.

11 MEMBER SCHULTZ: Chris, there's a somewhat
12 less formal process than what you have on the slide
13 here for both discussion and feedback that I've
14 observed. And that's the dialogue that happens at the
15 Regulatory Information Conference.

16 Every year, you're both actively engaged
17 with the industry and the licensees both describing,
18 discussing the program and the results of the program.

19 And, I find that to be very useful and I'm
20 sure you find it as a good feedback and communication
21 mechanism.

22 MR. REGAN: Yes, we actually, to kind of
23 piggyback on that, we have a monthly standing meeting
24 with our industry counterparts led by NEI to speak to
25 ROP issues that are on the radar at that point in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 time, to talk about the feedback regarding
2 implementation of the program.

3 It's a widely attended meeting. Usually
4 we have anywhere from 30 to 50 representatives from
5 the public, from industry and from NEI attend those
6 meetings.

7 We've found them very productive in, one,
8 the NRC sharing with industry where we are with
9 respect to certain enhancements, but also NEI has the
10 opportunity to bring to the table things that they've
11 seen.

12 For example, if they are witness to
13 inconsistent implementation of the program from one
14 region to another, they might point out that
15 inconsistency to us.

16 They've also used the opportunity to look
17 for within a fleet, if they see differences in how an
18 inspection may be undertaken at one plant versus
19 another because they're in the same fleet, they have
20 access to that kind of information.

21 So, they share that with us and say,
22 here's what we're seeing.

23 So, we do take advantage of that
24 opportunity to receive that feedback. We're always
25 seeking feedback and -- at least once a month and it's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a two or three hour plus meeting that occurs where
2 that engagement with industry occurs in addition to
3 dialogue that takes place at the regular --

4 MEMBER SCHULTZ: Are you highlighting
5 findings and status of findings in that call?

6 MR. MORRIS: It's not a license -- we
7 don't talk about specific licensee issues there. It's
8 programmatic on, you know, more programmatic.

9 MR. REGAN: Not unless it's indicative of
10 a programmatic issue.

11 MEMBER SCHULTZ: Okay.

12 MR. REGAN: This is more global program
13 type discussion unless it's an example to illustrate
14 an issue.

15 MR. SANFILIPPO: It is also a forum where
16 we discuss what are officially called performance
17 indicator frequently asked questions, or FAQs, when an
18 individual licensee could, if they have a performance
19 indicator reporting question or if one of our
20 inspectors feels that a licensee didn't report
21 something in accordance with the guidance.

22 We also air those discrepancies or
23 questions out amongst that group since the performance
24 indicator guidance that's out with the industry is an
25 NEI document that we endorse. So, we discuss

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 resolution of, you know, conflicts with that guidance
2 collaboratively through that process as well.

3 So, that's -- you know, this monthly
4 public meeting and the FAQ process has been around
5 since the beginning of the ROP and continues to be a
6 valuable opportunity to get that feedback, both
7 formally and informally.

8 MEMBER SCHULTZ: So, that's a very
9 informative discussion. Thank you.

10 MR. REGAN: All right. Most of this on
11 the next slide that's up right now, we've touched
12 upon. But, just to touch on it, the ROP Enhancement
13 Project itself, this is the self-initiated project
14 that the staff took to evaluate the program begun in
15 2013.

16 We wanted to basically set up a framework
17 for a prioritized, organized and efficient way to look
18 at the whole program soup to nuts.

19 We broke the enhancement project down into
20 five discrete areas, the baseline inspection program,
21 the assessment program, self-assessment program,
22 significance determination process and then
23 communications also is a very important element of
24 this that, although it touched on the other four
25 areas, we felt it warranted its own evaluation.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: If I could just add very
2 briefly.

3 So, we have a lot of input. So, this
4 project is an effort to bin all the input we got into
5 discrete categories so we could prioritize it,
6 resource it, hit milestones, manage it.

7 I will say that we're not doing
8 everything. I mean this -- I think I mentioned at the
9 Subcommittee meeting that there's no shortage of good
10 ideas but there is a shortage of resources. So, we
11 have to be judicious about how we spend our time and
12 energy.

13 So, we're not doing everything. And,
14 frankly, some of the input we got conflicted with
15 other input. So, I mean --

16 But the rubric we use to assess the
17 relative significance and import of each of the items
18 that we are going to do was also established and it
19 was based, in part, on, you know, whether it was a
20 Commission directed item, how well it comports with
21 our fundamental principles of the ROP, you know,
22 safety significance and that type of thing.

23 So, there was a logic to how we decided
24 what we were going to do and when we were going to do
25 it.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. REGAN: So, in speaking of those 130
2 items that I mentioned earlier, that's what Scott's
3 alluding to. We did actually go through an effort to
4 prioritize those items and work, first, obviously, on
5 those that were of greatest importance and highest
6 priority.

7 MEMBER SKILLMAN: Chris, would you back up
8 one slide, please?

9 MR. REGAN: Sure.

10 MEMBER SKILLMAN: I would like to make
11 clear, if you look at the third carrot that is major
12 topical areas and the second carrot under major
13 topical areas, assessment, that is really licensee
14 assessment.

15 MR. REGAN: Right.

16 MEMBER SKILLMAN: That's not assessment of
17 the program.

18 MR. REGAN: That's the next one, that's
19 self-assessment.

20 MEMBER SKILLMAN: It is really assessment
21 of the licensees and, hence, if my colleagues don't
22 recognize that then they might miss a very important
23 distinction that you will discuss in a future slide.

24 MR. SANFILIPPO: Yes, it is a subtle
25 difference and, yes, in the title of my branch

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 performance assessment branch, we're talking about
2 assessment of licensee performance.

3 MEMBER SKILLMAN: Thank you. Next slide,
4 please?

5 VICE CHAIRMAN BLEY: Before you go to the
6 next slide, I kind of thought the SDP was an
7 assessment process. So, the assessment in your second
8 bullet, is that what you do after you've looked at the
9 history of the SDP results?

10 MR. SANFILIPPO: Yes, functionally, we
11 consider the assessment program ultimately the action
12 matrix. So, the action matrix is taking inputs from
13 significance determinations of inspection findings.
14 It's taking inputs from thresholds of performance
15 indicators and, you know, rolling out a final
16 assessment, regulatory response based on licensee
17 performance.

18 So, it's kind of the highest tier and it's
19 got a lot of sub-elements.

20 VICE CHAIRMAN BLEY: Thanks.

21 MR. REGAN: Okay, so the first part of the
22 ROP Enhancement Project was undertaken about -- or
23 initiated about two years ago, came to fruition with
24 a final report issued in April 2014. And, this was to
25 look at the baseline inspection program.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 It was an effort to look at revising or
2 enhancing the program based on the current
3 environment. We wanted to look for potential areas
4 where we were duplicating effort or if there was
5 overlap in our inspection areas where we might be able
6 to streamline inspection activities.

7 We wanted to look and see if we were
8 expending our resources most efficiently and basically
9 getting the best -- the most bang for the buck out of
10 the program.

11 And, we also wanted to ensure that there
12 was an appropriate level of flexibility in the program
13 that allowed the inspector in the field to inspect in
14 areas that were most important for, perhaps, that
15 particular facility, but yet, provide specific enough
16 guidance to not allow implementation of the program to
17 create too much inconsistency either across the
18 regions, within the regions from plant to plant, et
19 cetera.

20 So, we looked closely at the amount of
21 flexibility in the program.

22 It was a method we used to validate the
23 basic philosophy of the baseline inspection principles
24 and ensure that the key principles were still
25 applicable. This was going back to the fundamentals

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to what the baseline inspection program was intended
2 to --

3 MR. MORRIS: It may be worth mentioning
4 here, let me -- just to be clear, the baseline
5 inspection program as it's separate and distinct from
6 supplemental inspections and reactive inspections.
7 There are a variety of different kinds of inspections
8 that are all part of the reactor oversight process.

9 What Chris is talking about is that set of
10 inspections that we do at every licensee, irrespective
11 of their performance. Everybody gets it no matter
12 what. That is the baseline. And we move up from
13 there, depending on events that -- should an event
14 occur or if a licensee's performance moves from one
15 column to the next in the action matrix, then we kick
16 in additional. But, that's not what we're talking
17 about here. This is just a baseline.

18 MEMBER POWERS: Your staff is currently
19 sending an excellent one sheet --

20 MR. MORRIS: Correct.

21 MEMBER POWERS: -- description of that.

22 MR. REGAN: So just --

23 MEMBER POWERS: You should probably
24 circulate it with all the members because it gives you
25 soup to nuts.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. REGAN: So just to ensure that -- so,
2 by definition, feeding off of what Scott mentioned,
3 the baseline inspection program is the minimum
4 inspection oversight necessary to monitor all power
5 reactor licensees with a consistent level of defined
6 requirements to indicate whether licensee performance
7 meets the objectives for each ROP cornerstone of
8 safety.

9 So, basically, it's the minimum inspection
10 we need to ensure plant safety.

11 MEMBER POWERS: Very much like the
12 expression in your one sheeter that said it's
13 indicative, it's not diagnostic. That very -- being
14 very clear.

15 MR. MORRIS: The ROP is not intended to be
16 -- the baseline inspection program is indicative. And
17 the ROP, in general, is not predictive. We don't --
18 it's not an attempt to look into the crystal ball and
19 imagine where the licensee might be in six months.
20 It's a look backward in time or looking in real time
21 about what performance currently is or has been. And
22 then, based on that, have a graded approach to
23 regulatory oversight.

24 MR. REGAN: So, we broke down this
25 enhancement project, or at least the focus on the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 baseline inspection program to three areas. They are
2 kind of self-explanatory.

3 We looked -- we analyzed each of the
4 inspection areas. We documented the recommendations
5 and we are currently in the process of revising the
6 procedures that we looked at.

7 There was a significant amount of
8 stakeholder engagement throughout this process. We
9 had several widely attended public meetings, receiving
10 input not only from industry but also from the public.

11 And, that feedback was also incorporated
12 into the staff's analysis of the baseline inspection
13 program enhancements.

14 The report, as I mentioned, was issued in
15 April 2014. We have been incorporating in revisions
16 to the inspection procedures throughout last year and
17 this year with the majority scheduled to be
18 incorporated by the end of this calendar year.

19 But, there are a couple areas where there
20 are some fairly broad enhancements to the program
21 that's taking place and I've listed those areas as
22 focus areas that included engineering design basis
23 inspections. These are CDBIs, the Component Design
24 Basis Inspections.

25 The problem identification and resolution

1 inspections, these are the two largest team
2 inspections that the NRC conducts.

3 They are biannual and triennial
4 inspections that usually include a team of anywhere
5 from a half a dozen to a dozen inspectors to go to a
6 site for several weeks at a time to really dig deep
7 into a licensee's program.

8 So, we felt that given the magnitude of
9 those inspection activities that a more thorough look
10 at those areas warranted, and hence, the more -- the
11 additional time necessary to ensure that the
12 enhancements were appropriate.

13 We also look at incorporating aging
14 management more thoroughly into the baseline
15 inspection program.

16 Not so much from a programmatic
17 standpoint, but to look at each inspection procedure
18 to see if there were elements of an aging management
19 that might be added to essentially the scope that the
20 inspector might look at when he's in the field.

21 Aging effects, activities that may be
22 incorporated into the corrective action program
23 resulting from identified aging management issues,
24 things of that nature.

25 MEMBER POWERS: When we -- when the

1 licensees approaches the issues of the license
2 renewal, they frequently come in here and say, well,
3 I have 64 programs, 48 of them are existing and these
4 other ones are all new. The question always comes up,
5 your staff isn't changing, but you've added 16, 20 new
6 programs. Do you see a factor? I mean you've got the
7 same number of people, but they're asked to do more
8 things.

9 I mean, it seems to me it never seems to
10 fit.

11 Mr. Regan: Well the -- each inspection
12 procedure has a required number of samples that must
13 be taken to satisfy the objective of the inspection
14 procedure, and thus, the overarching objective of the
15 baseline inspection procedure.

16 The samples are risk informed designed to
17 inspect in those areas that are most safety
18 significant.

19 Some element of independence of the
20 inspector in the field determining where he wants to
21 -- where he or she wants to inspect is necessary to
22 pick which samples are most appropriate.

23 And, what we did with respect to the
24 enhancement is add to that list of available samples
25 that the inspector may choose from or select from in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that particular area aging issues.

2 And, often times, perhaps there are other
3 areas under this inspection procedure that are more
4 safety significant such that an aging management
5 sample is not selected.

6 But, it has been included within the scope
7 of samples that an inspector may select from when
8 inspecting in the field.

9 MR. MORRIS: I think you're question was
10 different, though, wasn't it? Yours was are we seeing
11 the impact as our inspection yielding an outcome that
12 would suggest that maybe licensees are, you know,
13 taking on more than their staff can handle. That was
14 kind of my take on the question.

15 MEMBER POWERS: Well, that's my deep
16 seeded question, but I'm not sure you can answer that.
17 I think you gave me the answer I wanted --

18 MR. MORRIS: Okay, good.

19 MEMBER POWERS: -- to hear which was the
20 licensees can now -- I mean the inspectors can now
21 select and they may hit based on their own engineering
22 judgment of what's risk important for this particular
23 installation they're dealing with and there's the
24 potential of finding some effect.

25 MR. MORRIS: Right. But, we don't have an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 inspection procedure that we can go out and implement
2 that says I'm going to go out and look at aging
3 management.

4 MEMBER POWERS: Yes, and I didn't expect
5 you to have that.

6 MR. REGAN: No, not --

7 MEMBER POWERS: I think I got the answer
8 that I wanted. I also got the answer that there
9 you're giving your residents the flexibility to select
10 from a list and use their judgment based on experience
11 with the particular site and which I think is just one
12 of the real strengths of this program that still
13 relying on the guy to know his facility.

14 MR. REGAN: And that was one, you know, we
15 looked very closely at the extent of flexibility in
16 the program. Were we in the right place when it came
17 to flexibility?

18 I will also add that, you know, these are
19 enhancements that have only recently taken place. So,
20 we need a little bit of run time to see whether
21 they've actually been effective and, hence, you know,
22 the self-assessment process to determine whether or
23 not we actually get bang for the buck.

24 And, I think I've covered -- were there
25 any other questions on the baseline inspection program

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 enhancement before I turn it over to Nathan for the
2 next aspect?

3 All right, Nathan?

4 MR. SANFILIPPO: All right, thanks,
5 Chris.

6 The next aspect is the assessment program
7 enhancements. And, there's really two major
8 initiatives as part of the ROP enhancement project
9 that fall into the assessment area. One is complete
10 and one is in process.

11 The first item here, we have the completed
12 major revision to the substantive crosscutting issue
13 process and this is commonly referred to as the SCCI
14 process. It's the way that we take a look at the
15 licensee performance issues and how they relate to
16 those three crosscutting areas that I mentioned
17 earlier, human performance, problem identification
18 resolution and safety conscious work environment.

19 And, we look at whether we're seeing
20 general trends for licensees in those areas as being
21 the, you know, proximate cause of inspection issues.

22 We reckon this process was instituted
23 following Davis-Besse several years later, 2006-ish I
24 believe, and had largely been in place without major
25 change until this change which occurred in April of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 2015.

2 The change to the process took a look at
3 a couple elements. One was the idea that these
4 crosscutting issues were somehow or could be somehow
5 predictive of future degraded safety performance.

6 And we took a look back at the history of
7 plant performance data with respect to whether or not
8 we had defined them as having these substantive
9 crosscutting issues and then what their future safety
10 performance entailed. And, we're not able to draw a
11 definitive conclusion that issues with respect to
12 substantive crosscutting issues, therefore, we're
13 predictive or would lead to degraded safety
14 performance.

15 In some cases, it was true and in some
16 cases it was not. And there was not enough of a
17 correlation to draw that stronger conclusion.

18 The issue, you know, was brought up by
19 industry with respect to are we going about this
20 program in the right way? They have since instituted
21 their own safety culture monitoring program as an
22 industry initiative.

23 And, the question that they posed to us
24 was could we sunset our program and rely solely upon
25 their program to monitor their own safety culture?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 And now, safety culture, of course, is
2 just one element of the broader crosscutting issue
3 process.

4 But, ultimately, we put together a working
5 group, vetted this issue broadly across the Agency and
6 revised the process. And, the major revisions to the
7 process included raising the threshold at which the
8 NRC engages on these crosscutting issues.

9 But, with that raising of the threshold,
10 we also removed the subjectivity in whether or not we
11 pursue it as a regulatory issue. In the old process,
12 the threshold used to be lower, but it would require
13 both the threshold to be crossed and a regional
14 judgment that the licensee did not have a good
15 understanding or control or corrective actions to
16 prevent further decline in that area.

17 And so, that was a question that was
18 consistently the regions had to answer based on
19 crossing this lower threshold.

20 What we did was we raised the threshold a
21 bit, but we made the agency actions objective with
22 respect to when they did cross that threshold which,
23 by our analysis showed was more indicative of, you
24 know, broader issues at the site.

25 We then instituted a number of more

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 objective predictable actions that say the first
2 assessment evaluation where that threshold was
3 crossed, we take action X, the second consecutive
4 time, we take action Y and then, the third time, we
5 take a more fully focused NRC opening of a
6 crosscutting issue as we define it.

7 So, we really tried to take some of the
8 subjectivity out of the process, make sure that it was
9 only engaging in areas where we truly had a
10 significant programmatic concern and had filtered out
11 some of the lower lying issues that were getting
12 tripped by the program.

13 And, we made these changes back in April
14 of 2015, so they're really just getting started.

15 This process is implemented by the NRC
16 during our mid-cycle assessments and our end of cycle
17 assessment which occur in August and February of each
18 year. So, we did just exercise this new process in
19 August during the mid-cycle assessments and, you know,
20 it performed appropriately.

21 We'll see, you know, the real proof will
22 be as to its effectiveness will be in several years
23 once we see and look back how many plants entered this
24 new process versus would have if we'd have kept the
25 old process and do a little analysis to see whether

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we're comfortable with that result.

2 But, you know, this new process took
3 effect in April and it was one of the major aspects of
4 the assessment program enhancement.

5 MEMBER SKILLMAN: Nathan what is the name
6 of the condition that a licensee enters when a
7 substantive crosscutting issue has been identified and
8 verified? What the name of that status?

9 MR. SANFILIPPO: So, under the old
10 process, we would have what we call opened a
11 substantive crosscutting issue, an SCCI.

12 MEMBER SKILLMAN: Okay.

13 MR. SANFILIPPO: And, that would have
14 remained open and we would address it through our
15 plant assessments with that licensee in a public
16 manner until we successfully closed it.

17 And, that closure criteria is one of the
18 areas also. Both the opening and the closure criteria
19 area were somewhat subjective under the old process.
20 And, that was what led to a lot of certainly
21 inconsistency between the regions and how they define
22 that criteria, et cetera.

23 The new process, we removed the term
24 substantive. We're just calling it a crosscutting
25 issue. We're still calling it opening a crosscutting

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 issue or closing a crosscutting issue, but we're
2 applying the more objective criteria to that.

3 It's always been a good question to say,
4 and people have asked, should the presence of that
5 substantive crosscutting issue or crosscutting issue
6 be an input into the action matrix? And, because we
7 associate inputs to the action matrix only to be
8 issues related to actual performance decline at the
9 plant of a more significant nature than green.

10 You know, all the inputs into the action
11 matrix are white, yellow or red. Most of these -- the
12 underlying or findings behind these crosscutting
13 issues are typically green. So, the presence of a
14 crosscutting issue is never input directly into the
15 action matrix. The plant doesn't change column based
16 on having an SCCI or not or a CCI under the new
17 process.

18 So, that's been a question and some have
19 raised to say, well, should it be an input? But, you
20 know, that gets back to the question of whether the
21 ROP is geared towards being, you know, indicative or
22 reflective on past licensee performance versus
23 attempting to be more predictive of what might be
24 future performance.

25 MEMBER SKILLMAN: So, at the current time,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 when a CCI is identified, it becomes a trend until
2 there is more information to confirm that action needs
3 to be taken?

4 MR. SANFILIPPO: So, under the -- and the
5 terminology can get confusing. There's a number of
6 what we call crosscutting aspects that are defined in
7 Inspection Manual Chapter 0310. And, 0310 defines all
8 these aspects and the inspector is tasked with
9 identifying which of those aspects, if any, is the
10 presumed cause of that performance deficiency,
11 something like procedure adherence or error checking
12 tools, things like that.

13 If they collect enough of those
14 crosscutting aspects in that same aspect area,
15 procedure, compliance or adherence, then that creates
16 a trend in that aspect. And we consider a trend under
17 this new program at the number six. Once they reach
18 six over a two year period -- 18 month -- 12 months
19 period.

20 And, once they've tripped that threshold,
21 we used to then apply the judgment to say, well,
22 they've got this theme but is it or is it not a
23 substantive crosscutting issue?

24 Under this new process, if they've cross
25 the theme, we document it in the assessment letter

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and, if they maintain that theme for three consecutive
2 assessments, then we officially open a crosscutting
3 issue.

4 It is a -- it's not a completely
5 straightforward process and you can get tripped up on
6 some of the language, but we talk about themes with
7 respect to the individual elements and then if the
8 theme is present long enough, then it turns into an
9 officially documented crosscutting issue that requires
10 more formal inspection follow up and closure for us to
11 resolve it.

12 MEMBER SKILLMAN: Thank you.

13 MR. SANFILIPPO: All right, the second
14 issue, and one that is currently still being debated
15 is the policy issue regarding definition of degraded
16 cornerstone.

17 This, as I note here, is an issue that the
18 Commission is currently voting on, SECY 2015-108.

19 This issue was one that was raised in a
20 couple of different forums. The question of how many
21 white inputs should constitute a degraded cornerstone
22 or what is the column three entry criteria in the
23 action matrix?

24 It's, as we've defined it currently, it's
25 either two white issues in the same cornerstone or one

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 yellow input constitutes a degraded cornerstone.

2 And, we took a step back and asked the
3 question, is two the right number? What is the right
4 number of inputs that would be roughly equivalent to
5 the yellow that defined what we would consider a
6 degraded cornerstone?

7 We got that feedback in a couple of
8 different angles. Certainly, it's one that the
9 industry has always been interested in. In fact, we
10 have, even in the early days of the ROP, the industry
11 asked this question. It was a question that was hotly
12 debated during the founding establishment of the ROP
13 as to how many whites should get you to column three,
14 whether it's two, three, four or more.

15 Ultimately, the program was created with
16 two whites being the input.

17 Back in 2003 of 2004, after only a few
18 years of evaluation of the ROP, the staff did another
19 evaluation at a fairly high level phase to still the
20 right number. And, at the time, the staff found that
21 there was no indication that two wasn't the right
22 number. There wasn't any real resounding basis as to
23 say that two is specifically the right number, but
24 it's not the wrong number.

25 Fast forward about ten years, the question

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 gets asked again. But, of course, we've got now much
2 more runtime with the ROP. We've had many plants that
3 have moved to column three of the action matrix, some
4 due to two white inputs, some that ultimately
5 accumulated more that would have gotten there, you
6 know, if there was more than two had been the
7 threshold.

8 But, we asked ourselves a question. How
9 many is the right number? It was a question, it was
10 an issue that the ROP Independent Assessment Report
11 that Chris had mentioned earlier also asked us this
12 question. So, it was one that we felt we needed to
13 address.

14 We put together a working group to take a
15 look at this question. Of course, as we mentioned
16 earlier, white inputs come from a number of different
17 places. They could come from performance indicators,
18 the thresholds of performance indicators. They could
19 come from significance determination of inspection
20 finding.

21 Of course, that significance determination
22 from inspection findings could come either from a
23 quantitative more PRA-driven cornerstone or it could
24 come from a more qualitative or deterministic
25 cornerstone like EP or security.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So, ultimately, you know, the action
2 matrix is binning a number of inputs that are roughly
3 equivalent but not, you know, directly relatable.

4 The staff took a look back and did some
5 analysis in the quantitative perspective and found
6 that we felt more comfortable from a staff perspective
7 that three white inputs was more indicative of being
8 similar to a yellow input and indicative of a degraded
9 cornerstone.

10 So, we took that working group report,
11 developed a SECY paper to propose this to the
12 Commission since this is an important policy issue
13 within the ROP. And put forward that recommendation
14 to the Commission. The Commission is currently voting
15 on that action as we speak.

16 There were, as we note here on the slide,
17 many different views among staff with respect to
18 whether two or three is appropriate. You know,
19 Ultimately, this is a policy decision of a somewhat
20 subjective matter as to when should the Agency engage
21 for declining performance? Is it after two or is it
22 after three?

23 So, there is certainly, if we move to an
24 approach with three versus two, we would engage if a
25 licensee were to get a third, it would be later or if

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 they were to improve their performance and not get a
2 third, then we would not have engaged to the level
3 that we would have in the past under this new process.

4 MR. MORRIS: Yes, I'm glad you just added
5 that last little phrase, because we still would
6 engage, right, even on any white input, we would
7 engage. We would do a supplemental inspection,
8 something beyond the baseline inspection, a nominal
9 amount of effort, you know, focused on the issue at
10 hand. We would still do that for every white input.

11 What we're really talking about is a
12 change in a movement in the action matrix itself which
13 would drive a much more substantive NRC response from
14 an inspection, you know, in terms of the scope and
15 breadth of the inspection -- the supplemental
16 inspection.

17 MR. SANFILIPPO: And, we did both a
18 quantitative and a qualitative analysis with respect
19 to this threshold. The staff put together -- took a
20 look at, of course, these SDP findings and performance
21 indicator thresholds have dealt to CDFs related to
22 them.

23 So, we took a look at the history of the
24 white input, where they fell on that range and the
25 relative significance of adding two together versus

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 adding three together to get a result.

2 But, we also took a look qualitatively at
3 all the times where we went back and implemented the
4 more significant inspection procedure, 95220, related
5 to column three of the action matrix to see where
6 these, you know, in retrospect, recognizing that that
7 report wasn't -- you know, those inspectors weren't
8 asking the question in the way that we are today.

9 Is there something about what the
10 inspectors found during that inspection indicative of
11 broader performance issues? Did it result in a lot of
12 additional inspection findings? Were there, you know,
13 was there a more fundamental programmatic tie between
14 these two, three issues that we wouldn't have
15 uncovered if we'd have looked at the issues in
16 isolation and not done this broader programmatic
17 evaluation?

18 So, you know, to some extent, this is a
19 question of resources. This is more resource
20 intensive for both the Agency and the licensee when
21 they move to column three. And, the question was,
22 does that level of resource expenditure, is it
23 warranted based on the relative safety performance of
24 that licensee?

25 So, ultimately, it's a policy decision

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that is looking at, you know, gauging the what's the
2 right amount of resources for the, you know,
3 commensurate degradation and licensee performance.
4 And, also, you know, it's temporal, as we mentioned,
5 in that, you know, some of these licensees would have
6 gotten, you know, they got a third white so, even
7 under a new process, they would have gotten there
8 eventually. Others were able to arrest their
9 declining performance and ended up moving back to
10 column one of the action matrix and never would have
11 gotten this increased effort.

12 So, there's a lot of different views among
13 staff as far as, you know, what's the problem
14 statement here? What we've been doing has worked, you
15 know, there's no compelling reason to change.

16 You know, we took a look back certainly at
17 the history of the origins of the ROPs to why it was
18 arrived at to originally. There was not much --
19 there's certainly plenty of anecdotal evidence and
20 personal experience that has been expressed as far as
21 why folks, you know, why two was the number versus
22 three or others. There's not a lot of documented
23 basis with respect to why two was chosen.

24 You know, our understanding is that
25 numbers anywhere from two to five were considered

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 during the original, you know, consideration of the
2 ROP. Ultimately, it was a decision between two and
3 three, the group, you know, had a consensus around
4 two. There wasn't a whole lot of documented evidence
5 as far as why they, you know, two was the right answer
6 at the time.

7 VICE CHAIRMAN BLEY: Can I interrupt you
8 and just term this a little bit?

9 Did you go back and look at the cases
10 where, when used to degenerate and look at the cases
11 over time, see if -- I mean, was there a concern that
12 you were pulling things up as issues that weren't
13 really significant enough yet? What led to this whole
14 process?

15 I mean, you had a case where it was the
16 judgment of the people doing it, now we have another
17 case where it's the judgment of the people doing it.

18 Is there anything in the way we were
19 assigning them that led to raising questions about the
20 way we were doing it?

21 MS. SANFILIPPO: You know, I think one of
22 the questions that was raised, too, is that, and I
23 think we feel that the threshold for whites, yellows,
24 reds has remained relatively stable. I mean it hasn't
25 changed in definition. It's application has remained

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 stable over the years.

2 So, you know, some folks have said, well,
3 you know, we had, you know, more whites back then or
4 we were applying a different standard or we gave less
5 credit to licensees for recovery actions and PRA space
6 back then. So, you know, we're comparing a different
7 paradigm now that perhaps what existed back then.

8 I'm not sure that we really feel that
9 that's really indicative of the program. But --

10 MR. MORRIS: Yes, I mean -- let me weigh
11 in here.

12 So, you know, the reason we undertook
13 this effort this most recent time was principally
14 because the independent assessment that was done made
15 a recommendation that said we need to go back and look
16 at this again. Right?

17 Now that the ROP has been in place for 13
18 or 14 or 15 years, go back and take another look at
19 it. So, we did and, you know, there was a lot more
20 rigor involved in the analytical work not only from a,
21 you know, looking at how the PRA numbers add up and
22 all that, but also from a more subjective view in
23 establishing a set of criteria to go back and look at
24 supplemental inspection reports from when a licensee
25 went into the degraded cornerstone column and try to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 define, you know, was that really the right answer or
2 not?

3 And, so that's how we wound up -- and we
4 had public meetings. Of course, the industry is in
5 favor of moving to three, you know, which shouldn't be
6 a surprise. And they have a lot --

7 VICE CHAIRMAN BLEY: I don't really
8 remember in the action matrix what it means to me if
9 you change me from a white to a yellow. I know it
10 makes things harder.

11 MR. MORRIS: So --

12 VICE CHAIRMAN BLEY: I don't remember
13 what.

14 MR. MORRIS: So, if you're in the column
15 one is licensee response bin which basically means
16 you're getting the baseline inspection and that's
17 really it. Right?

18 If you get one white now, today, and we're
19 not proposing the changes, if you get one white input,
20 you move to column two which is regulatory response
21 bin which means you get a 40-hour supplemental
22 inspection that's targeted at whatever the anomaly or
23 the issue was that drove you there. Right?

24 And then, the next column is the degraded
25 cornerstone column which means you've got one of your

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 cornerstones under the current structure, one
2 cornerstone either has two white inputs or one yellow.

3 And so, all we really did was look at that
4 definition. Is that -- we're not -- we didn't look at
5 yellow, we just looked at how many whites should
6 really equal a yellow. You know, and there's only
7 three of the seven cornerstones that lend themselves
8 to a quantitative analysis and that's the three under
9 reactor safety. The other four are, as I said,
10 deterministic.

11 So, you know, it's -- you know, we made a
12 recommendation at the staff level that said that we
13 think three's the right number. Right? And, we have
14 a rationale for that. It's the details of which are
15 captured in the paper in a detailed working group
16 report behind the paper.

17 But, at the end of the day, as Nathan
18 said, it's a policy issue.

19 MEMBER POWERS: Right. It is also true
20 that when these -- this calculus was originally sent
21 up really had very, very little information to go on.
22 And we've done most of them by just pure unadulterated
23 engineering judgment and there was the anticipation
24 that, with experience, that calculus would have --
25 could be adjusted. There's nothing surprising about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 this.

2 And, it's -- I mean it's a totally
3 expected thing and it doesn't change the essence of
4 the program of being scrupulative.

5 MR. SANFILIPPO: Yes, it's really just a
6 question of, you know, when is the right level to, you
7 know, increase NRC engagement and, you know, for those
8 in taking a look back, the question that comes up is,
9 well, for those plants that only had two white inputs
10 never got a third so they would never have tripped
11 perhaps under this proposed approach.

12 Was there something about that increased
13 level of NRC engagement that prevented future, you
14 know, helped ensure that they corrected their problems
15 more completely and didn't see decline in performance?

16 MR. MORRIS: It's pretty hard to measure
17 that.

18 MR. SANFILIPPO: And, it's very hard to
19 measure, you know, the preventive --

20 MR. MORRIS: What's the deterrent effect
21 of, you know, establishing two versus three? I mean
22 --

23 MR. SANFILIPPO: I mean, ultimately, on
24 one hand, and I don't think we articulated in quite so
25 many words in the paper, but, you know, the question

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 is, the action matrix is defined to be graded
2 approach. Column one is safe and we define column
3 four licensee is still safe to operate, but, you know,
4 having degraded performance.

5 The idea is that, as they move across the
6 action matrix, the NRC engagement increases in order
7 to help, you know, encourage their recover and prevent
8 in going to an unacceptable place where, you know, we
9 would have to shut them down.

10 VICE CHAIRMAN BLEY: I kind of follow
11 this. I was kind of hoping you'd be able to say, gee,
12 we looked back at the cases where they had two and we
13 switched them and we couldn't see, but we did much to
14 affect the situation.

15 MR. SANFILIPPO: And, we did that from a
16 qualitative standpoint. It's hard to --

17 MR. MORRIS: It's hard to --

18 MR. SANFILIPPO: -- you know,
19 specifically. Because the inspection wasn't geared
20 toward asking that question specifically to say, well,
21 should they really be here? So, it wasn't written
22 about in so many words.

23 But, we did look at are there -- were
24 there additional significant findings that came out of
25 that inspection? So, that it shows that that level of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 effort was, you know, found more things, that there
2 was more there.

3 In many cases, we didn't find more
4 significant issues. So, that could be indicative of
5 the fact that there wasn't a broader issue.

6 MR. MORRIS: The practical manifestation
7 of all of the action matrices is, if you move the
8 column from one to two, you're going to get a 40-hour
9 supplemental inspection nominally.

10 If you move from two to three, you're
11 going to get a 200-hour inspection.

12 If you move from three to four, you know,
13 now you're in the 2,000 range.

14 VICE CHAIRMAN BLEY: You're living there.

15 MR. MORRIS: Right.

16 CHAIRMAN STETKAR: Did you look at all,
17 when you looked -- did this sort of retrospective
18 examination, did you look at all to see if there was
19 much evidence of, for lack of a better term,
20 gamesmanship going on?

21 In other words, when a white finding was
22 evaluated, the people worked really hard and resolved
23 that. And, the next inspection, they had another
24 white finding, you know, so that you saw, in effect,
25 the effect of a deterrent where you started to see

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 repetitions of single white findings which could be an
2 indication that people are doing the gamesmanship.
3 They're doing just enough to resolve that single white
4 one to avoid the second -- yes, to whack-a-mole, if
5 you will.

6 Did you look at that? I mean you can see
7 that in principle on an individual by licensee looking
8 at historical trend of white findings -- the single
9 white findings.

10 MR. SANFILIPPO: You know, I don't think
11 we looked at specifically from that angle. But, you
12 know, we don't, at least in my experience, and I'll
13 Chris or others to weigh in, I don't we've seen, you
14 know, repeat issues that are of that --

15 CHAIRMAN STETKAR: Well, I wasn't even
16 talking about repeat issues because, within a single
17 cornerstone, it could be two different issues.

18 MR. SANFILIPPO: Okay.

19 CHAIRMAN STETKAR: There enough to trip a
20 white finding. So, what I'm -- and I'm not as
21 familiar as you are with the inspections as I should
22 be -- but, you know, it's like not following
23 procedures in one inspection trips you into white and
24 inadequate safety system availability, you know, can
25 trip you into white under the same cornerstone.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 They aren't necessarily repeat of not
2 following procedures, it's just the gamesmanship of
3 trying to get away from that, too.

4 MEMBER POWERS: I think what he's
5 concerned about is if you put all of your resources in
6 one area so you don't get a second white finding --

7 CHAIRMAN STETKAR: Exactly.

8 MEMBER POWERS: -- at the expense of now
9 incurring one under a different cornerstone.

10 MR. SANFILIPPO: Yes, and the way the
11 current action matrix --

12 MR. MORRIS: I don't -- I mean I just --
13 I don't -- I'd be surprised if -- I guess maybe I'm
14 naive, but I'd be surprised if licensees would go to
15 the length to try to manage things.

16 MEMBER POWERS: Well, I think you just
17 don't get enough white findings to ever to tell.

18 CHAIRMAN STETKAR: I mean that might be
19 part of the answer.

20 MEMBER SKILLMAN: I think that there's
21 another very important piece here and that is your
22 residents. And, your residents know --

23 MR. MORRIS: Yes, that's true.

24 MEMBER SKILLMAN: -- when the licensee is
25 trying to game the system. And, they're going to be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the first ones to point out, wait a minute, you've
2 whacked this mole but you're letting that one grow
3 and, guess what, it appears as though this is a kind
4 of, at least in my experience, for many years is the
5 inspectors are calling them on that.

6 And so, there's no free pass here. If
7 you're playing that game, the residents are pretty
8 sharp, at least my experience is they'll call you on
9 it.

10 MR. SANFILIPPO: And, there is another
11 threshold here that we haven't brought up, but there
12 has always been a column three action matrix special
13 that says three white in the -- it doesn't have to be
14 in the same cornerstone, but three in the strategic
15 performance area, such as reactor safety, also gets
16 you there.

17 So, that, to some extent, captures if they
18 pop up in other cornerstones. The threshold has
19 always been three. We just had the threshold of two
20 if they're both in the same cornerstone.

21 So, you know, this approach would be going
22 just applying the three threshold and not looking at
23 it in isolation.

24 VICE CHAIRMAN BLEY: You probably didn't
25 expect to spend this much time on this one. I just

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 have one last question.

2 Did you give any thought, I mean you were
3 struggling with this, this was pretty hard to figure
4 out what you do and you came up an approach.

5 And, as Dana said, you always expected
6 things to evolve and they have and now you're at this.

7 Did you give any thought to, is there
8 anything you could put in the inspection process to
9 help answer this in five or ten years when it comes up
10 again?

11 MR. SANFILIPPO: Well, we have a couple,
12 you know, it certainly is part of the self-assessment
13 process. In fact, the new self-assessment process
14 which I'll talk about in a few slides is a specific
15 check back exactly to take a look at recent changes to
16 the ROP, recent meaning, you know, in the past two,
17 three, four years, once we've had enough runtime to
18 gather some insight as far as is this being as
19 effective or are we seeing the outcomes that we
20 expected when we implemented it and to build in that
21 feedback loop that is more specific to say are we
22 realizing what we intended to realize based on these
23 changes or do we need to revisit it because we're not
24 -- it's not been effective.

25 MEMBER SKILLMAN: I would like to suggest

1 this for full disclosure to my colleagues you
2 communicate that there is a DPO -- was a DPO on this
3 specific item. There is resolution of that, but this
4 was not fully and completely accepted by the staff.

5 There was at least one individual that had
6 very strong concerns about this.

7 MR. SANFILIPPO: So, there are two --
8 actually two issues.

9 The DPO itself was on a -- the official
10 DPO was on a previous change to the action matrix
11 threshold where we -- for a column four movement with
12 respect to you had to have inputs for four consecutive
13 quarters versus five quarters.

14 And, that was a change that we made
15 probably about a year ago and that received an
16 official DPO that has since been, you know, resolved
17 by the Office Director who recommended some, you know,
18 we haven't -- we didn't make a change to that outcome,
19 but we're taking a few additional actions.

20 But, that's not to say as we know here,
21 there also were significant differing views on this
22 paper as well that did not manifest in a specific non-
23 concurrence because we really attempted to include all
24 different viewpoints in the paper itself versus, you
25 know, couching it as a separate, here's what the staff

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 is recommended versus here's a non-concurring
2 position.

3 But, there are those significant views
4 that we discuss in the paper and that is certainly
5 controversial as well.

6 CHAIRMAN STETKAR: But, Nathan, just for
7 clarity, because I was at the Subcommittee meeting.

8 MR. SANFILIPPO: Yes.

9 CHAIRMAN STETKAR: What I'm hearing is,
10 on this particular SECY paper, there is no outstanding
11 non-concurrence, is that correct?

12 MR. SANFILIPPO: Correct.

13 The next topic and another substantive one
14 is the significance determination process
15 enhancements.

16 And, as I mentioned earlier, I had done a
17 little, you know, teeing this one up, SECY SRM-
18 COMSECY-14-0030. The Commission directed us to
19 streamline the SDP. And this was largely coming off
20 of the ANO experience where the Agency action was very
21 separate in time from the initiating event and asked
22 us to take a look back at the timeliness metrics of
23 how we measure success in our program with respect to
24 significance determination, et cetera.

25 So, we took a step back and the Commission

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 asked us to, you know, streamline the SDP but provide
2 us a plan of how you expect to go about doing this by
3 June of this year, which we did. And, I note here,
4 the CA Note that was issued on June 30th that outlined
5 the staff's plan for how we plan to move forward.

6 It should note, however, that the
7 significance determination process enhancements have
8 always been part of the enhancement project, even
9 before this Commission direction.

10 We had conducted a business process
11 improvement of the current process which really looked
12 for efficiencies within the current process, how we
13 currently do business.

14 And, we've already identified a number of
15 those. We've made those changes to the program and
16 updated those changes.

17 But, that's really with the expectation
18 that the current program is an acceptable way that,
19 well, you know, the timeliness and the effectiveness
20 of the current program is acceptable.

21 So, the Phase II as we're calling it, is
22 really this more holistic step back to take a look at
23 the significance determination process and whether the
24 way that we go about making decisions is done in the
25 most integrated risk-informed method that we can.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 And, we've had a number of indications
2 such as the ANO case and others that we can very
3 quickly and easily get bogged down in analysis both
4 from, you know, largely from a quantitative
5 perspective, but from a decision making perspective in
6 general.

7 So, this new approach, and it's something
8 that we're currently working with the regional
9 offices, working with all internal stakeholders to
10 outline what are ways that we can move more towards a
11 risk-informed decision making process.

12 And, what we mean by that is really to
13 take a look back. We're using Reg Guide 1.174 as a
14 guide and, using -- making sure that the quantitative
15 input into these SDP results that we have a -- that
16 we, I guess I should say, that we vary the degree of
17 reliance we placed on that quantitative input based
18 largely on the uncertainty associated with that input.

19 For situations where the quantitative
20 input, the PRA results have large bands of uncertainty
21 that we consider a wider range of additional inputs
22 into our final Agency decision.

23 In areas where the PRA result has very low
24 bands of uncertainty that we align very well on
25 assumptions that go into the models, then we do

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 continue to place the emphasis on that result.

2 But, what we found is largely from a
3 decision making behavior that we have moved to a point
4 that has become more risk based and has been, you
5 know, geared around finding the singular right number
6 in a situation and to continue to sharpen the pencil
7 to reduce levels of uncertainty to ensure that we
8 align on that number. And that continued analysis, in
9 many cases, has resulted in hundreds of staff hours,
10 hundreds of licensee hours and months and months of
11 the schedule and has caused us to, you know, miss a
12 number of these timeliness areas.

13 So, what we're broadly doing in this
14 effort is taking a step back to say, how much
15 information is enough to make a sufficiently risk-
16 informed regulatory decision? Because, ultimately,
17 the end product of the SDP is a color and that color
18 drives an Agency response.

19 And, you know, we want that response to be
20 timely within a reasonable amount of time from the
21 event that caused -- that was the initiator of that
22 finding or violation. And, with the appropriate
23 amount of resources on both sides from the licensee
24 and from the NRC.

25 And, you know, there's a balance to be had

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 behind being efficient and effective and how much
2 analysis, you know, you could possibly do to continue
3 to refine inputs into that significance determination.

4 So, from a very high level, we're taking
5 a step back and trying to look at ways that we can
6 gear the decision making process and ways that we can
7 improve the way that we interact with licensees early
8 and throughout that process to get information from
9 them to reach more timely decisions.

10 And, our initial goal is a metric that the
11 preliminary significance determination on an issue is
12 issued to a licensee a 150 days -- within a 150 days
13 of discovery of that issue.

14 And, that's almost, you know, what, five
15 months or so? To some, may still seem even and
16 extended period of time.

17 CHAIRMAN STETKAR: That seems like an
18 awfully long time.

19 MR. SANFILIPPO: And to some people's
20 responses, that still seems like a long time, but that
21 is a significant improvement from our current average
22 which is 270 days or so.

23 CHAIRMAN STETKAR: Why so long, though?
24 I mean --

25 MR. MORRIS: Let me try to answer that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SANFILIPPO: There's a lot of reasons.

2 MR. MORRIS: There are many reasons.

3 First of all, there's often a challenge
4 that the region has in just establishing what the
5 performance deficiency is. And what do I mean that?

6 In the whole -- how you start the whole
7 process is, you have to have documented a performance
8 deficiency, a licensee performance deficiency.

9 So, often, what happens is, particularly
10 in the significant issues is, there is a -- we wait
11 until the licensee completes their root cause
12 assessment, right, before we even, you know, begin to
13 do the analytical work to assess the significance of
14 that development.

15 So, there is a piece there just
16 establishing -- there's a period of time to establish
17 what the performance deficiency is. And then, after
18 that, depending on the --

19 CHAIRMAN STETKAR: Scott, let me stop you
20 there because I know that the industry has been kind
21 of critical of this.

22 They own that -- have they been critical
23 of you waiting for them to finish their root cause
24 analysis?

25 MR. MORRIS: Those no incentive for them

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to complete it in a timely manner so that we can do
2 our --

3 CHAIRMAN STETKAR: No, but what I'm asking
4 is, that's what I'm hearing is that if they want to
5 spend, you know, 12 years doing their root cause
6 analysis, you decided that you need to wait for that
7 12 year period?

8 Have the licensees indicated that you
9 ought to make your significance determination finding
10 before they finish their root cause analysis?

11 MR. MORRIS: I haven't heard that.

12 MR. SANFILIPPO: Well, in fact, our
13 procedure is direct inspectors to do it based on
14 approximate cause, not on the root cause.

15 MR. MORRIS: Right. So some of this is
16 just behavior in implementing established guidance,
17 established requirements of our program.

18 CHAIRMAN STETKAR: I mean, you know, if
19 we're reexamining --

20 MR. MORRIS: But, nobody ever wants to be
21 wrong and so, we want to wait and, you know, so
22 there's a -- there's been a reluctance to make a
23 decision because, you know, there's always, if I wait
24 just one more day, I'll get better information. You
25 know?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Or, if I do a little bit more work or a
2 little bit more data gathering, you know.

3 MR. SANFILIPPO: And so, the licensee --

4 CHAIRMAN STETKAR: I interrupted you.

5 MR. MORRIS: No, no, it's okay.

6 CHAIRMAN STETKAR: I'll let you --

7 MR. MORRIS: That's fine. But so,
8 there's this --

9 CHAIRMAN STETKAR: I just wanted to find
10 out where the sensitivities are.

11 MR. MORRIS: So, there's the establishing
12 the performance deficiency and then there is the
13 analytical work, particularly for the quantitative
14 significance determination processes where we're using
15 SPAR models and then you're comparing those results
16 with the industry's model and then you're reconciling
17 differences and then that leads to more questions.

18 And then -- I'm sorry, you wanted to --

19 CHAIRMAN STETKAR: Yes. And, let me ask
20 you about that. Is a lot of that process due to the
21 need to determine that the mean core damage -- delta
22 core damage frequency is 9.997 times 10^5 versus 1.403
23 times 10^4 ?

24 MR. MORRIS: There is that which, as you
25 know --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Or --

2 MR. MORRIS: Which, you know, that's the
3 exact same number. You know that.

4 CHAIRMAN STETKAR: That's right. Or, is
5 it pretty easy to agree that it's around ten percent?

6 MR. MORRIS: So --

7 CHAIRMAN STETKAR: If my baseline is
8 nominal 10^5 or something like that?

9 MR. MORRIS: We spend an awful lot of time
10 on that issue, an awful lot of time.

11 MR. SANFILIPPO: Being close to the
12 threshold, sharpening the pencil.

13 MR. MORRIS: And so, what we're trying to
14 do is change behaviors to say those two numbers are
15 essentially the same, right?

16 CHAIRMAN STETKAR: I mean, obviously --

17 MR. MORRIS: And so, let's bring in some
18 other factors to determine is it on this side of the
19 threshold or that side of the threshold?

20 CHAIRMAN STETKAR: I mean, obviously, the
21 order of, you know, factors --

22 MR. MORRIS: Yes.

23 CHAIRMAN STETKAR: -- under eight or --

24 MR. MORRIS: Then there's another
25 problem.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: -- a whole difference.
2 But, typically, that ought to be easily reconciled
3 about, you know, why is that largely there?

4 MR. MORRIS: You know, you say that, you
5 say that and it turns out that that's not even true a
6 lot of the times because what happens is, you have --
7 first of all, you have to agree on what the underlying
8 assumptions they are using and making when you run the
9 model to begin with. Right?

10 So, often there's disagreement on what's
11 the initiating event frequency? So, if you're looking
12 at, you know, I don't know, a flooding issue, how, you
13 know, how likely is it -- what's the frequency of
14 getting the thousand year rainstorm, you know? And,
15 it should be one in a thousand, but that was a factor
16 -- that was a really bad example. But you get my
17 point.

18 You have to agree on what the initiating
19 event frequency is and that's -- we often don't,
20 right? Well, I'll bring my expert, well, I'll bring
21 in my expert.

22 CHAIRMAN STETKAR: You often don't add a
23 very precise value, but if you're getting different in
24 terms of an order of magnitude, it's usually -- well,
25 I don't know.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: Well, it's -- I'd have to
2 bring in some real case studies and show you what we
3 went through. But, you know, like the ANO case that
4 Nathan mentioned where it took us two years, I mean,
5 if you back and deconstruct that whole thing, you'll
6 see where the delays were and the reasons.

7 And, there's a logic to all of it, but
8 when you add it all up, you say, wait a minute. Two
9 years? Is that a timely regulatory decision? I mean,
10 you know, and, oh, by the way, those yellows backdate
11 two years and you have to look what other -- what
12 colors were in there and two years ago and what's the,
13 you know, it gets weird.

14 So, there's a motivation for us to go back
15 to the first principles and say, let's use an
16 integrated risk-informed decision making process. We
17 know that the SPDs aren't perfect, particularly the
18 quantitative ones. We know that there are inherent
19 uncertainties in the models.

20 We know that there are different
21 assumptions that get made in each of the, you know, in
22 the facts -- the fact pattern for each case is
23 different and people can interpret them in different
24 ways.

25 So, we know all that. So, let's use that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 -- let that quantitative tool give us an outcome and
2 let's put that into the mix with everything else we
3 know about that case and make a integrated risk-
4 informed decision.

5 Now, some would say, well, that's, you
6 know, that's introducing more uncertainties into the
7 process because now, you know, they're subjectivity
8 being added.

9 And, my answer to that is, so long as we
10 -- as long as we have a rational basis -- as long as
11 we have a set of guidelines and principles that we're
12 going to follow when we do this work and that we've
13 documented our basis for the outcome that we made,
14 that should be good enough.

15 And, the licensees, if they don't like it,
16 there's an opportunity to appeal it. That process
17 exists.

18 So, we think by doing that, we'll get a
19 much more timely -- we'll yield a much more timely
20 outcome on these decisions which will add efficiency
21 to our overall process and increase our credibility as
22 a regulator.

23 My personal opinion, I think that's one
24 that's shared by many. There are those who disagree.
25 You know, it would be real nice to have a tool that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 could, you know, you could just put a number in and it
2 would give you point estimate.

3 But, it's really the outcome of these
4 quantitative analysis is the distribution. And,
5 depending on the uncertainties, you might cross -- you
6 might start in the green and it winds up in the red.
7 You know, then the mean is somewhere between yellow
8 and white.

9 CHAIRMAN STETKAR: There's the uncertainty
10 issue, but there's also completeness of the tools in
11 both the SPAR model tools and the industry's tools.
12 So, it's that trying to have a very precise -- the
13 illusion of a very precise numerical value.

14 Let's even say it is -- we know the
15 uncertainty is precisely and it is exactly the mean
16 value of the distribution that we calculated. But, if
17 that distribution is calculated from an incomplete
18 assessment because the models don't account for the
19 effects of whatever the deficiency is on fires, they
20 don't count for the effects on seismic events. They
21 don't account for the effects during shutdown modes.

22 Then, having a very precise --

23 MR. MORRIS: Or some mode in between.

24 CHAIRMAN STETKAR: -- result is simply an
25 illusion. I mean that's my whole point is that the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 people who want very precise results from incomplete
2 evaluations are just, you know, supporting the
3 illusion of --

4 MR. MORRIS: Right. And we fundamentally
5 don't believe -- we in the program office
6 fundamentally don't believe that an over reliance on
7 this illusion, this tool, is the right answer.
8 Because we are basically taking away what we know to
9 be true about other things and we're sitting that all
10 on a shelf and we're putting it all on the shoulders
11 of an SRA, a GG13, 14 SRA, what's the answer? Oh,
12 well, that's what we're going to do.

13 I mean, to me, that's a loser.

14 CHAIRMAN STETKAR: The tool is useful, I
15 think, in my opinion, that it allows you -- I think
16 with some facility to develop a reasonable ballpark
17 estimate, it's 10^5 -ish rather than 10^6 -ish --

18 MR. MORRIS: Right.

19 CHAIRMAN STETKAR: -- recognizing that
20 it's not very likely to be lower than either of those
21 numbers because you know you're missing stuff.

22 MR. MORRIS: That's right.

23 CHAIRMAN STETKAR: And, that's useful
24 information.

25 MR. MORRIS: It is. It's great

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 information, but it's not all the information that we
2 believe is needed to make a timely and effective
3 regulatory decision.

4 MEMBER SKILLMAN: Speaking of timely and
5 effective I would like to suggest we move on soon --

6 MR. MORRIS: Sure, okay.

7 MEMBER SKILLMAN: -- because you have
8 other business to get.

9 MR. MORRIS: Well, we can -- I think we
10 can cover the next two slides pretty quickly.

11 MEMBER SKILLMAN: Thank you.

12 MR. SANFILIPPO: And, you know, just to
13 wrap this up, next steps, what you'll see moving
14 forward, we're working on developing what we might
15 pilot as far as changes to this process.

16 It will largely look like something where,
17 early on when we identify a performance deficiency,
18 we'll meet to determine how likely are we to get a
19 very, you know, timely and effective quantitative
20 result, assign a certain amount of time and resources
21 that we're willing to spend to the issue, investigate
22 what other qualitative factors, what other important
23 judgment that we might use, other risk-informed
24 processes from Reg Guide 1.174 and use that to help
25 make a decision.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: Let me just leave with one
2 little factoid or maybe it's not a factoid exactly,
3 but I think it's helpful.

4 We often spend hundreds of hours of staff
5 time, technical staff time and management time, to
6 determine whether or not we need to do a 40-hour
7 supplemental inspection.

8 Now, I leave it to the Committee to
9 determine whether that's an effective use of NRC
10 resources.

11 MR. SANFILIPPO: Yes, six, seven, eight
12 hundred hours perhaps.

13 But, of course, the licensees will argue
14 that that's time well spent because the impacts of
15 column movement go far beyond the 40-hour or 200-hour
16 inspection that they get because of other influences.

17 The next item is communications. This was
18 an area that Chris mentioned is kind of a crosscutting
19 issue with respect to our enhancement project. A lot
20 of items throughout the project have communication
21 elements.

22 We took a step back and tried to more
23 completely focus the way we address communications at
24 the ROP.

25 We've created a specific technical expert

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 within our division that is responsible for
2 coordination and promulgation of RFP communications
3 initiatives. This helps to ensure consistency and
4 effectiveness and also priority in moving these
5 enhancements forward.

6 You know, certainly in the past, it was
7 always easy for someone to get bogged down in more
8 technical programmatic changes and make communications
9 enhancements lower priority on their plate.

10 And so, this effort is really broad
11 communication enhancements to a higher priority to
12 make sure that they are being made -- we're in the
13 process of major revisions to our ROP public website,
14 our internal website that's used by our inspection
15 community, both with respect to availability of
16 information, searchability of information, plain
17 language with respect the public website.

18 We're developing new communication tools
19 such as a new NUREG that's going to focus on commonly
20 asked questions to be sort of knowledge management
21 tool for both internal and external audiences.

22 We're developing a new training program or
23 a new training course to offer folks at the NRC that
24 would value, you know, one day's worth of training in
25 the ROP that may not, you know, need a more in depth

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 knowledge, but need enough to be familiar with the
2 terminology.

3 So, a lot of things going on in the
4 communications world to help the program become more
5 efficient and effective.

6 Lastly, we have the self-assessment
7 program and we've referred to a number of times
8 throughout the presentation.

9 As I noted that the self-assessment
10 program has been around since the beginning of the
11 ROP. It was really designed to be that check and
12 adjust opportunity with respect to a new program, one
13 that we had no particular experience with and we
14 recognize that we didn't see whether it was being
15 effective and whether it needed to be adjusted based
16 on the inputs that we were seeing.

17 The program has worked, you know, well.
18 We've produced an annual Commission paper in which we
19 evaluate every piece of the ROP at a high level and
20 recommend any potential changes to the ROP.

21 But, we recognize that the sort of, you
22 know, inch deep and mile wide approach to the self-
23 assessment wasn't yielding a lot of real meaningful
24 program enhancements. So, we were essentially
25 confirming that the program was working pretty well,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 but we weren't going into such depth in any one area
2 to root out a lot of these issues which --

3 MR. MORRIS: So, said another way, if the
4 old program was really working effectively, we
5 wouldn't have had 130 plus inputs from all these other
6 sources, you know, telling us why the program needed
7 to be better. So, that's why we said we've got to
8 change what we're doing here. So, that's new process,
9 I think, scratches that itch.

10 MR. SANFILIPPO: So, as we noted here, we
11 took a year off from the self-assessment after the
12 Commission approved that request and we are finalizing
13 development of a new process.

14 And, the new process consists of three
15 major elements.

16 The first element is actually fairly
17 similar to one of the old elements and that's metrics,
18 performance metrics to assess compliance with and
19 drive accountability to the program.

20 But, we have significantly refreshed those
21 metrics to ensure that we're measuring things that
22 are, you know, outcome oriented and not output
23 oriented and that we've organized those metrics around
24 the five principles of good regulation.

25 MR. MORRIS: Somebody asked about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 gamesmanship. If you want to see gamesmanship in
2 action, we look at how we, ourselves, you know,
3 measure our performance against our own metrics. So,
4 we're fixing that.

5 MR. SANFILIPPO: I think the one liner is
6 that the two year ANO experience actually met all of
7 our metrics which shows --

8 MR. MORRIS: We met all of our -- believe
9 it or not, we met all of our SDP timeliness metrics
10 for the last several years. Never missed one. It's
11 amazing.

12 MR. SANFILIPPO: So, the first piece of
13 the new self-assessment process is refreshed and
14 improved objective metrics.

15 The second and third piece are the more
16 substantive pieces. And, the second piece I have
17 here, evaluate efficacy of recent program changes.
18 It's what I mentioned earlier with respect to taking
19 a look back at the changes we made two, three, four
20 years prior and determining whether or not we're
21 realizing the outcomes that we intended back when we
22 made those program changes.

23 MR. MORRIS: That's a significant new
24 element.

25 MR. SANFILIPPO: It also will include a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 discussion to the Commission of all of the changes we
2 made in the past 12 months for an awareness
3 perspective because, certainly, the Commission has
4 always been interested in all of things that we do
5 with respect to the ROP.

6 The third area is the most in depth and
7 most new of the areas. And here, we have performed
8 targeted in depth assessments. But, there's really
9 two elements to this third piece.

10 The first element is we will pick each
11 year one program aspect to do a deep dive in whether
12 that be a specific performance indicator, a specific
13 inspection procedure, a specific area of the program,
14 during that calendar year, we will do a deep dive in
15 that one area with the intent of identifying
16 enhancements.

17 The other piece of it is the more
18 interesting or, you know, potentially helpful area is
19 we plan to do a regional peer review or audit each
20 year. And, the idea being each year, we will visit a
21 different region and evaluate how they are
22 implementing the program with the intent of getting at
23 a number of consistency issues.

24 MR. MORRIS: Yes, this gets back to your
25 question about regional reliability. This is -- the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 answer -- the short answer to the question is, you get
2 what you inspect not what you expect. And so, we're
3 going to inspect, audit, whatever you want to call it
4 and have added an accountability measure to it so
5 that, you know, when we see variances from the
6 programmatic requirements, there will be some
7 opportunity to share that with some senior folks to
8 ensure that gets corrected.

9 MR. REGAN: And, one nuance to this also,
10 I think we should add also is that the peer review or
11 peer evaluation that Nathan's alluding to is not one
12 of headquarters evaluating a region. This is a
13 collective of headquarters, the three other regions
14 peer reviewing the one region in question.

15 MR. MORRIS: Right.

16 MR. REGAN: So, you get that cross
17 pollination of experience across the three --

18 MR. MORRIS: And you get the best
19 practices. Well, why are you doing it that way?
20 We're doing it this -- oh, that makes a lot more
21 sense.

22 MR. SANFILIPPO: So, Certainly, the output
23 is not only areas where there's potential
24 inconsistencies, there's best practices that we intend
25 to identify. And, the idea, too, is that after we've

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 done this review in a given region, the other regions
2 take that report and assess whether there's some
3 extent of condition of that same issue broadly within
4 the Agency so that we fix it one time rather than
5 fixing it on a piecemeal basis which will lead to more
6 regional inconsistency.

7 So, you know, it's really a good program.
8 We're finalizing the changes to that program. We have
9 promised the Commission an information paper that
10 summarizes the changes we've made and why, really sort
11 of closing the loop from having asked permission to
12 we'll go the previous self-assessment and develop a
13 new process. So, we'll be issuing that information
14 SECY before the end of this calendar year, probably in
15 late November, early December.

16 MR. MORRIS: So, let me wrap it up since
17 we're way over time.

18 So, there's a lot of other things we're
19 doing, component design basis inspections, we changing
20 that around. We're piloting a new component design
21 basis inspection procedure beginning next month.
22 We're going to do it in two sites in every region over
23 the next year or so, collect feedback and then --

24 This was a big sore spot for a lot of
25 folks. It's a huge resource impact on the licensees

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 but it's a very valuable inspection. So, we're trying
2 to be responsive to the feedback but at the same time,
3 ensuring that we get the good inspections.

4 So, that's going on and a whole bunch of
5 other things that we didn't talk about today. And,
6 I'll sort of leave you with just a couple of thoughts.

7 One is, you know, these are somewhat
8 austere times, as you well know. The ROP is about, I
9 don't know, 380, 400 FTE. It's pretty substantial.
10 You know, it's a significant part of the Agency.

11 And so, as part of the ongoing re-
12 baselining initiative under Project Aim, you know,
13 we're doing our thing and we're assessing all the
14 products and subproducts and pieces and parts and
15 binning them consistent with the rubric that's been
16 provided to us as has the same rubric that's been
17 provided to everybody in the Agency.

18 And, you know, we're finding a couple of
19 things where, you know, we're kind of in the bottom
20 tier and maybe we don't need to do them anymore.

21 So, we're going to -- that's ongoing today
22 and that's a very real conversation we've been having
23 over the last couple weeks and we have a deliverable
24 due, I think, at the end of this month. So this --

25 MR. SANFILIPPO: The business line.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: Yes, so for our business
2 line. So, that's a very substantial thing. And,
3 that'll have impact on the ROP at some level in some
4 way.

5 And then, I guess finally, I just wanted
6 to mention that there is some other somewhat
7 innovative things that we're thinking about that we
8 didn't really go into today. But, they could include,
9 you know -- right now, a finding or an input of white,
10 yellow, red input stays on the action matrix nominally
11 for four quarters.

12 We're looking at maybe is there a way that
13 we could incentivize licensee performance, improve
14 licensee performance by offering an opportunity to
15 pull the finding off the action matrix sooner than
16 four quarters if they present to us, hey, we're ready
17 for that supplemental inspection and we go in and do
18 it and we're happy with it, you know, maybe we can
19 pull that off the action matrix sooner.

20 I think these are some of the more
21 creative things we're thinking about as we move
22 forward that would have probably wind up being a
23 Commission policy decision as well.

24 But, it's very dynamic is the point and
25 there's a lot of interested parties in what we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 doing.

2 So, with that, I thank you for your time
3 and if there's any other questions, we'll be happy to
4 answer them.

5 VICE CHAIRMAN BLEY: No, but I'd like to
6 say that people present parts of this to me in the
7 past and this is the first time I've seen the
8 inspections and the whole process tied together this
9 coherently. So, I like what you guys have been up to.

10 MR. MORRIS: Well, thank you. Like I
11 said, we've had a lot of years of runtime. I mean I,
12 myself, was a senior resident inspector at a couple
13 different plants and actually had the opportunity to
14 be on the working group to develop this beast multiple
15 years ago and then implement it at a pilot site. So,
16 I've had a lot of runtime with this.

17 VICE CHAIRMAN BLEY: I'm sorry, we're just
18 laughing we're saying it's too --

19 (Simultaneous speaking.)

20 MR. MORRIS: That was a different working
21 group.

22 VICE CHAIRMAN BLEY: Oh, okay.

23 MEMBER SKILLMAN: I'd like to invite my
24 colleagues to ask any questions that they may have of
25 Scott and Chris and Nathan, please?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MORRIS: We wore you out.

2 MEMBER SKILLMAN: Gentlemen, thank you
3 very much.

4 MR. MORRIS: Thank you.

5 MEMBER SKILLMAN: You've done this two
6 times in about 13 days.

7 MR. MORRIS: Good, enjoyed it.

8 MEMBER SKILLMAN: Excellent presentation.
9 Thank you very much.

10 MR. MORRIS: Thank you very much.

11 MR. SANFILIPPO: Thanks.

12 MEMBER SKILLMAN: With that, Mr. Chairman,
13 back to you, sir.

14 CHAIRMAN STETKAR: Okay, something -- is
15 there -- I'd like to ask for public comments, so get
16 the bridge line open first and if there's anyone in
17 the room who would like to make a comment, please come
18 up the microphone, identify yourself and do so.

19 And, it'll take us a couple of minutes
20 here to get the bridge line open.

21 I've been told -- yes, it's starting to
22 pop and crackle. If there is anyone on the bridge
23 line who would like to make a comment, please identify
24 yourself and do so.

25 Hearing nothing is sometimes a danger. If

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 there's anyone out there, do me a favor and just say
2 hello because that's the only way we have actual
3 confirmation that the bridge line is open.

4 OPERATOR: Hello.

5 CHAIRMAN STETKAR: Thank you very much.

6 So, having silence on a number of
7 comments, I will assume that no member of the public
8 would like to make a comment.

9 And, with that, again, I'd like to thank
10 the staff for -- it was a really good presentation.
11 Dick, thanks for leading us through it.

12 And, we are recessed and off the record
13 for today.

14 (Whereupon, the above-entitled matter went
15 off the record at 3:57 p.m.)

16

17

18

19

20

21

22

23

24

25

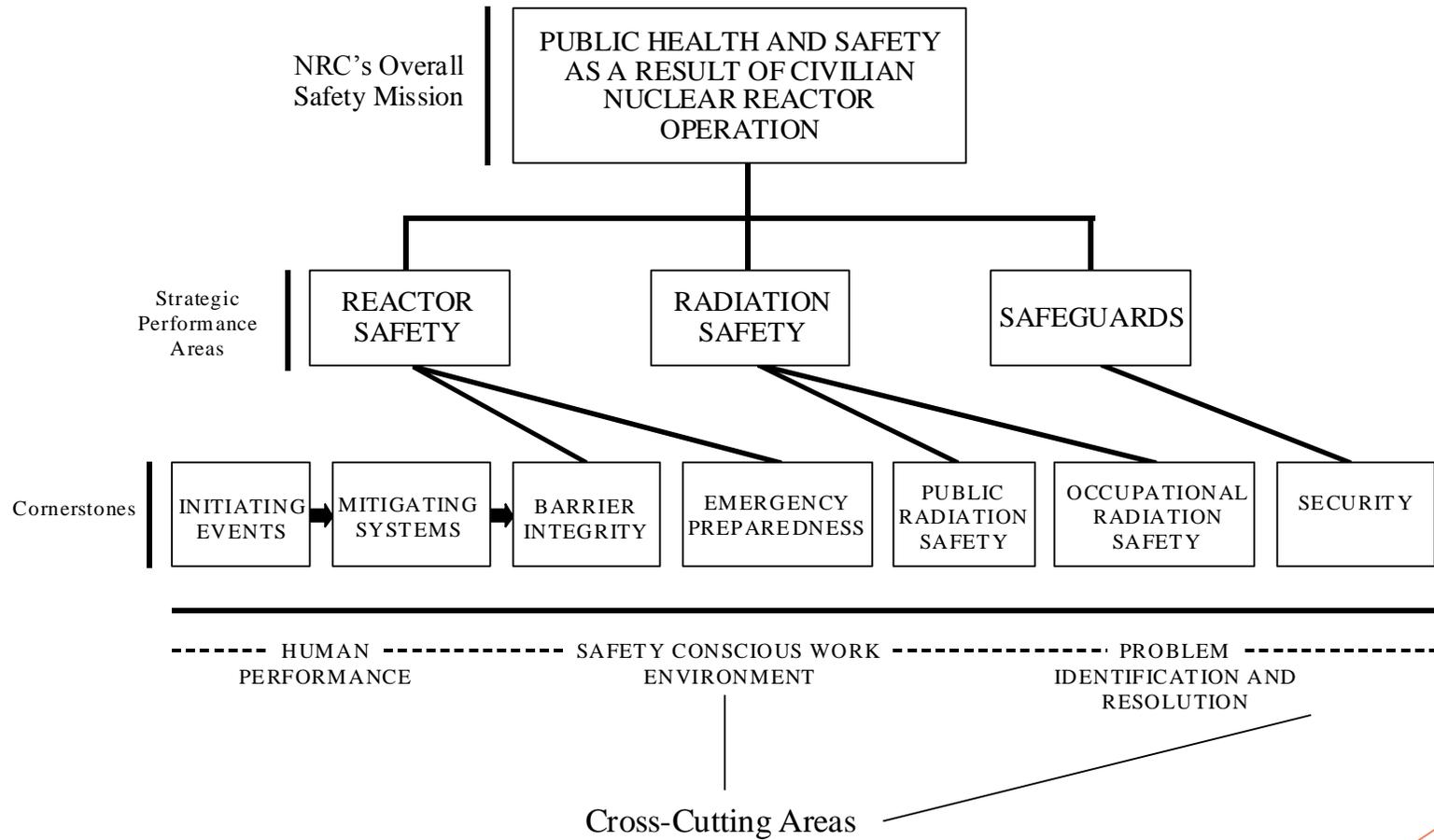
Reactor Oversight Process Enhancements

Christopher Regan and Nathan Sanfilippo

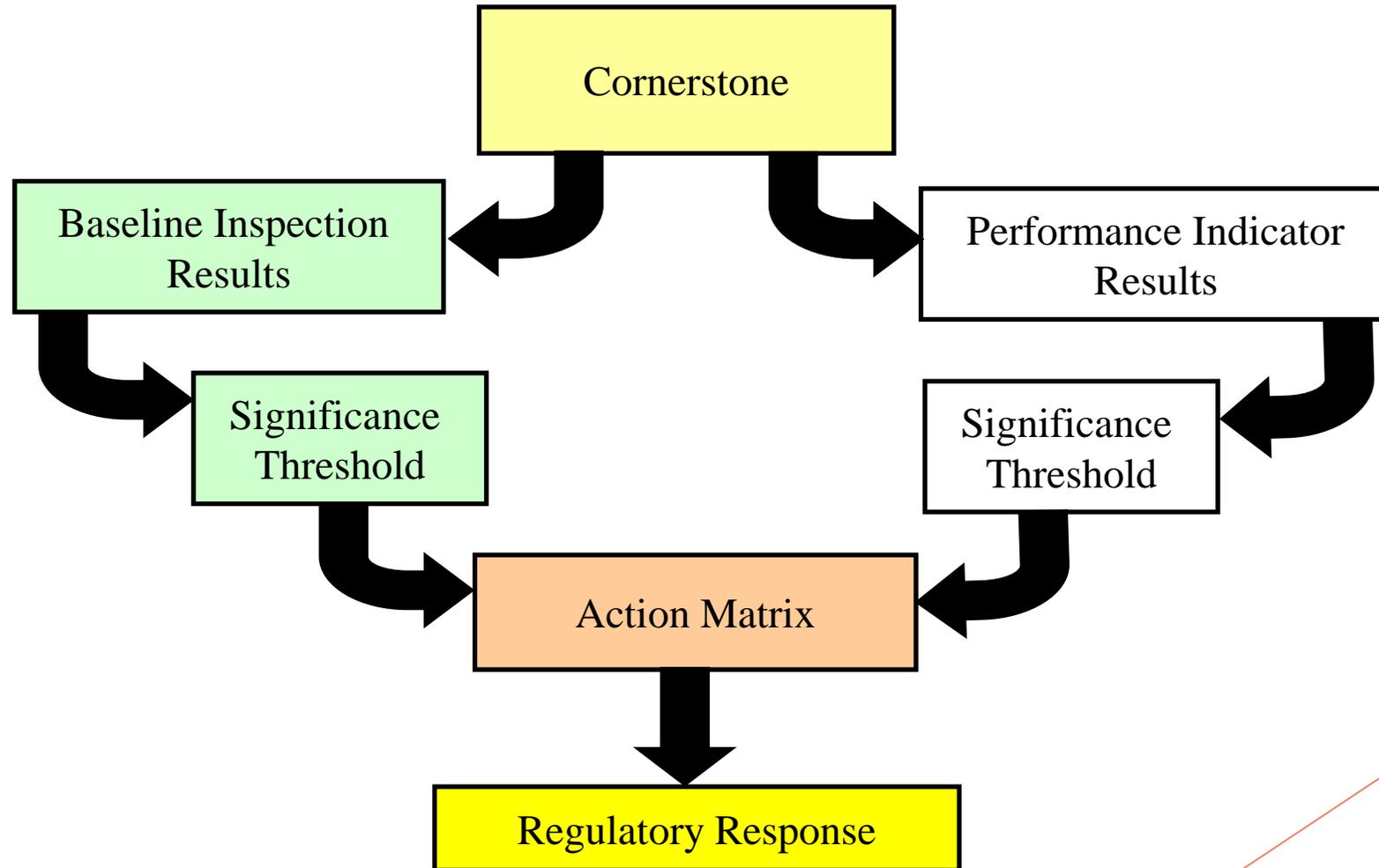
ACRS Briefing

October 7, 2015

ROP Regulatory Framework



Safety Performance Drives Regulatory Response



The ROP continues to be a mature and effective program

- ▶ It's remained effective due to continuous feedback and adjustments made to the program since its inception in 2000
- ▶ While its fundamental principles have remained the same, changes have been made to:
 - ▶ Baseline inspection procedures
 - ▶ Inspection scopes and focuses
 - ▶ Performance indicators
 - ▶ Action Matrix
 - ▶ Significance determination methods
 - ▶ Safety culture and cross-cutting issues

Inputs, Experience, Feedback

▶ Programmatic Reviews

- ▶ ROP Baseline Inspection Program enhancement (self-initiated)
- ▶ Significance Determination Process enhancement report (self-initiated)
- ▶ ROP Independent Assessment (Commission-directed)
- ▶ ROP self-assessment process enhancement as proposed in COMSECY-14-0030, “Proposed Suspension of the Reactor Oversight Process Self-Assessment for Calendar Year 2014” (self-initiated)
- ▶ GAO-13-743, “Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight”
- ▶ OIG-14-A-12, “Survey of NRC’s Support Provided to Resident Inspectors”

▶ Lessons-Learned Activities

- ▶ Browns Ferry Column 4 lessons learned (self-initiated)
- ▶ Fort Calhoun Inspection Manual Chapter 0350 lessons learned (self-initiated)
- ▶ San Onofre steam generator tube degradation lessons learned (self-initiated)

▶ ROP experiences

- ▶ Feedback Form Process
- ▶ Challenging and resource-intensive significance determinations
- ▶ Deviations

▶ 130+ inputs from multiple sources

ROP Enhancement Project Scope

- ▶ Self-initiated in 2013 to take a fresh look at the ROP
- ▶ Goal
 - ▶ To continuously improve the ROP using a framework to accomplish the various ongoing programmatic improvement activities in a prioritized, organized, and efficient manner
- ▶ Major topical areas
 - ▶ Baseline inspection
 - ▶ Assessment
 - ▶ Self-assessment
 - ▶ Significance determination process
 - ▶ Communications

Baseline Inspection Program Enhancements

- ▶ Enhance BIP to:
 - ▶ Incorporate needed inspection areas for the current environment
 - ▶ Eliminate redundant areas
 - ▶ Ensure efficient and effective use of agency resources
 - ▶ Incorporate flexibility where appropriate
- ▶ Focus areas of enhancement
 - ▶ Engineering Design Basis Inspections
 - ▶ PI&R inspections
 - ▶ Aging management
 - ▶ Effective knowledge transfer in some programmatic areas
- ▶ Provide for validation of the current basic philosophy and key principles of the BIP
- ▶ 3 phases - analysis of inspection areas, documentation of recommendations, and procedure revision
- ▶ Stakeholder engagement
- ▶ Completion of majority of enhancements by end of CY2015

Assessment Program Enhancements

- ▶ Completed major revision to “substantive cross-cutting issue” process
 - ▶ Revised “cross-cutting issue” process issued in April 2015
 - ▶ First application of new guidelines will be during mid-cycle assessments in August
- ▶ Policy issue regarding definition of “degraded cornerstone”
 - ▶ Working group evaluated how many White inputs should be considered equivalent to 1 Yellow input for the purposes of the definition of “degraded cornerstone”
 - ▶ Working group found no compelling technical basis for the current value of 2 White inputs
 - ▶ Working group recommended change to 3 White inputs
 - ▶ Many differing views among staff whether 2 or 3 is appropriate
 - ▶ Commission currently voting on SECY-15-0108

Significance Determination Process Enhancements

- ▶ Response to SRM-COMSECY-14-0030 to “Streamline the SDP”
- ▶ Phase 1 - Completed “Business Process Improvement” on existing process
- ▶ CA Note issued on June 30, 2015 outlining staff’s plan for Phase 2
 - ▶ Address overall timeliness from issue discovery to regulatory action
 - ▶ Default approach will continue to use quantitative data if timely and uncertainty is acceptably low
 - ▶ Seeking to ensure:
 - ▶ Decisions are risk-informed
 - ▶ Analyses are targeted towards decision-making, not open-ended data gathering
 - ▶ Agency actions are more timely
 - ▶ Agency resources are better managed and balanced
 - ▶ Unnecessary regulatory burden is minimized
 - ▶ Regulatory independence is maintained

Communications Enhancements

- ▶ A number of recommendations have focused on various aspects of ROP communications (including plain language)
- ▶ Staff has a central point of contact for all ROP communications initiatives (previously fragmented)
- ▶ Strong momentum towards enhancements and positive feedback from regions
- ▶ Refining language used in all public ROP communications (i.e., assessment letters, final significance determination letters, inspection reports)
- ▶ Developing new knowledge management-style NUREG on ROP Commonly Asked Questions
- ▶ ROP external and internal webpage redesign
- ▶ New and better ways of obtaining internal and external stakeholder feedback

Self-Assessment Program Enhancements

- ▶ Commission approved request to forgo 2014 self-assessment to:
 - ▶ Develop new self-assessment process
 - ▶ Implement ROP enhancements
- ▶ Staff finalizing development of new process comprised of 3 major elements
 - ▶ Metrics to assess compliance with and drive accountability to ROP governance
 - ▶ Evaluate efficacy of recent program changes
 - ▶ Perform targeted, in-depth assessment(s)
- ▶ Staff will transmit the new process to the Commission this fall via Info SECY
- ▶ Plan to implement new process for CY 2015 (without an in-depth assessment since ROP enhancements are still ongoing)
 - ▶ Next Self-Assessment Information SECY due in April 2016

Background Slide

CDBI Revisions

- ▶ Reviewed engineering inspections as part of the ROP enhancement project and considered input provided by the industry
- ▶ Several public meetings with industry and other public stakeholders on proposed CDBI revisions
- ▶ Developing pilot Engineering Design Inspections that will be performed in lieu of CDBI inspections at two sites in each region from November 2015 to June 2016
- ▶ Two parts:
 - ▶ 2-week onsite inspection similar to current CDBI, but with a reduced inspection samples
 - ▶ 1-week onsite inspection will focus on implementation of a licensee's engineering program
- ▶ Motivation behind changes
 - ▶ Reduce any unnecessary regulatory burden on the licensee while retaining Agency's ability to independently verify that the licensees are maintaining their licensed design basis.
- ▶ Finalized new engineering inspection will be implemented at all sites starting in CY 2017 after lessons-learned from the pilot inspections are incorporated