

U.S. DEPARTMENT OF TRANSPORTATION

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PIPELINE AND HAZARDOUS MATERIALS
SAFETY ADMINISTRATION

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GAS PIPELINE ADVISORY COMMITTEE
TECHNICAL PIPELINE SAFETY
STANDARDS COMMITTEE

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THURSDAY

DECEMBER 13, 2012

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The Advisory Committee met in the Edison Room at the Alexandria Westin, 400 Courthouse Square, Alexandria, Virginia, at 9:00 a.m., the Honorable Wayne Gardner, Committee Chairperson, presiding.

PRESENT

WAYNE GARDNER, Chairperson

JEFF WIESE, Associate Administrator for
Pipeline Safety

DENISE M. BEACH, National Fire Protection
Association

MICHAEL BELLMAN, City of Richmond

RICHARD E. FEIGEL, Hartford Steam Boiler

SUSAN L. FLECK, National Grid

GERALD P. ROSENDAHL, Minnesota Department
of Public Safety

DONALD J. STURSMA, Iowa Utilities Board

RICHARD H. WORSINGER, City of Rocky Mount

JEFF C. WRIGHT, Federal Energy Regulatory

Commission

CHAD J. ZAMARIN, NiSource Gas Transmission
& Storage

ALSO PRESENT

TIMOTHY BUTTERS

LINDA DAUGHERTY

JOHN GALE

SAM HALL

MAX KIEBA

PATRICK LANDON

ALAN MAYBERRY

DANA REGISTER

CAMERON SATTERTHWAITE

CHERYL WHETSEL

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

2 (9:04 a.m.)

3 MR. WIESE: Good morning,
4 everyone. Hope you had a good time last
5 night. Everybody probably slept well. Couple
6 people told me they were actually tired when
7 they went back to their room. Good. We like
8 to work people; get our money's worth out
9 here. After all, we're paying so much to have
10 most of you here, right?

11 We'll start the official meeting
12 in just a second. I got a couple quick
13 reminders and just a welcoming, opening
14 comments. Today is a meeting of the Gas
15 Pipeline Advisory Committee, formerly known as
16 the Technical Pipeline Safety Standards
17 Committee, TPSSC.

18 Today we're going to have the
19 privilege of serving with Commissioner Wayne
20 Gardner, who will be taking over in just one
21 second, but thought that it might be
22 appropriate, before we begin the official part

1 of the meeting, to just do a round of
2 introductions. It also allows us to get it on
3 the record.

4 So why don't we start with Gene
5 and we'll just run around the table really
6 quickly and introduce ourselves, including the
7 PHMSA staff. Your mic.

8 DR. FEIGEL: I'm sorry.

9 MR. WIESE: I can hear you, Gene.

10 DR. FEIGEL: I'm Gene Feigel. I'm
11 Vice President of Corporate Risk Analysis at
12 the Hartford Steam Boiler Inspection and
13 Insurance Company.

14 MR. STURSMA: Don Stursma, Highway
15 Utilities Board; Manager of Safety and
16 Engineering there.

17 MR. ROSENDAHL: Jerry Rosendahl,
18 Minnesota State Fire Marshall; public.

19 MS. BEACH: Denise Beach, NFPA.

20 MS. WHETSEL: Cheryl Whetsel,
21 PHMSA.

22 CHAIRPERSON GARDNER: Wayne

1 Gardner, Pennsylvania Public Utility
2 Commission.

3 MR. WIESE: Jeff Wiese, Office of
4 Pipeline Safety.

5 MS. REGISTER: Dana Register,
6 PHMSA.

7 MR. GALE: John Gale, PHMSA.

8 MR. BELLMAN: Mike Bellman, City
9 of Richmond Municipal Gas.

10 MS. FLECK: Sue Fleck, National
11 Grid.

12 MR. WRIGHT: Jeff Wright, Federal
13 Energy Regulatory Commission.

14 MR. WORSINGER: Rich Worsinger,
15 City of Rocky Mount, North Carolina.

16 MR. ZAMARIN: Chad Zamarin,
17 NiSource Gas Transmission and Storage,
18 NiSource Midstream Services.

19 MR. WIESE: Great. Thank you,
20 everyone. Just a couple of quick housekeeping
21 notes and then we'll move into the meeting.
22 Today is going to be an easier day than

1 yesterday; certainly. Although, you know, I'm
2 pleased to say that I talked to some of the
3 members offline and they actually said, you
4 know, I was sort of apologizing because some
5 people take it painful, and they said, no, no,
6 I like that, you know?

7 A lot of good discussion, could be
8 painful how much time we spent on a couple of
9 issues, and some procedural things that we
10 need to work out before we do another vote,
11 but that said, I thought there was a lot of
12 good discussion. I want to thank you for your
13 participation yesterday.

14 Today, we will just have a series
15 of briefings. You can see these on -- these
16 are really, as I was trying to explain, with
17 the exception of fitness for service, and I
18 think that, as I explained previously, relates
19 to this broader effort about integrity
20 management 2.0.

21 The other matters that we're going
22 to be getting briefed on today really relate

1 to Congressional mandates. We're moving
2 through that list of 37 mandates very slowly
3 to check them off and get them done. We want
4 to approach re-authorization in three year's
5 time, you know, with most of that done. It's
6 not good to walk into that with a lot of
7 undone mandates.

8 I will remind you that the meeting
9 today is being recorded, so when you have
10 comments, and we encourage you, please jump
11 in, we want to hear from you, that's the
12 purpose of meeting with you, to just say your
13 name, you know, so that the court reporter can
14 get that in the transcript that he is
15 preparing for us, will be accurately
16 attributed to you.

17 We may be doing live tweeting
18 today. Darius is back there, so I'm not sure
19 how that's all working out. As I said, it's
20 new for me, being tweeted as I speak. I'll
21 have to be more careful in the future.

22 The record from the meeting will

1 be posted in the docket at regulations.gov.
2 The docket number is PHMSA-2009-0203. The
3 last few things, administrative, for comfort,
4 I will say, we'll do a break at some point.
5 If you want to get coffee, if you haven't
6 figured out by now, we won't be providing
7 that, but there is a Starbucks around the
8 corner as well as the restaurant in the hotel.

9 Restrooms, I think you know by
10 now, they're around that direction on both
11 sides of the hall, and fire exits would be
12 down the hall, down the stairs, and out the
13 door, maybe convene in the park. So I think
14 with that, I will turn to Commissioner Gardner
15 and call the meeting to order.

16 CHAIRPERSON GARDNER: Good
17 morning, everyone. And thank you all for
18 actually coming back. I'm really surprised to
19 see so many of us here today because it was
20 somewhat painful. And I'll guarantee you
21 today that there will be no need at all for
22 anyone to find their Robert's Rules.

1 As Jeff has indicated, we have
2 more of an informative agenda for today and I
3 hope no debate on the presentations that are
4 being made to us. I should note, okay, first
5 of all, I'm told here that I need to
6 officially call this meeting to order.

7 My name is Wayne Gardner and I am
8 a Commissioner with the Pennsylvania Public
9 Utility Commission. A few additional
10 housekeeping items that I'm sure you're all
11 aware of, and that is, turn off your
12 cellphones. If you wish to speak, use your
13 name card, of course, state your name before
14 you speak for the record, and that'll be about
15 it.

16 If you have any copies of
17 statements that you would like to be
18 introduced into the record, please make sure
19 that Cheryl gets it, Cheryl is right here, so
20 that we can get a copy to the court reporter.
21 And with that, I think we can move right to
22 Agenda Item 1 and that would be a presentation

1 by Max Kieba and Pat Landon.

2 MR. KIEBA: Thanks, everyone. Is
3 this okay with you? Okay. Making sure you
4 can hear. I am Max Kieba with PHMSA's
5 Pipeline Office of Engineering and Research.
6 I will just be giving you an update of where
7 we are with the leak study, and then after me
8 will be Pat Landon on valves.

9 This is the same presentation that
10 the liquid committee got, so there may be some
11 liquid topics in here. I'll try to keep this
12 one, obviously, focused on gas. Next slide,
13 please. So a little bit about the outline of
14 where I'm going. A little bit of background
15 drivers of the study; where these really came
16 from. A little bit about our other initiative
17 this year.

18 A lot of focus has kind of been on
19 this study, but I think we did a lot of great
20 things this year. I think everyone, really,
21 public, industry, government, got together on
22 some of these initiatives this year.

1 A little bit about scope of this
2 particular study from Kiefner & Associates,
3 Applus RTD. Summary of some of the comments
4 we received from the draft report and also,
5 some responses and changes that have been made
6 to the report based on some of those comments.

7 And finally, some observations
8 from Kiefner's perspective that were listed in
9 the report. Next slide, please. Is this
10 thing working or do I need to go on this side?
11 Yes. So once again, I'd like to reiterate, so
12 I think most people know who Kiefner is, in
13 generally, but these are the folks that
14 actually worked on this particular study.

15 David Shaw was the lead author of
16 this effort. I think a lot may know David,
17 but he has a lot of LDS, lead detection
18 system, experience, 30 plus years in oil and
19 gas, and also, Martin Phillips was the overall
20 project manage of this effort, and many other
21 team members they had, in particular, Ron
22 Baker and Christine Mayernik did a lot on our

1 incident review portion of this study, and
2 then also, other team members from Kiefner.
3 There we go.

4 So a little bit about where these
5 came from. One was certainly the
6 Congressional mandate and this was focused on
7 liquid, but the areas I highlighted there in
8 bold are kind of the primary items of the
9 scope, and particularly, we needed to do a
10 technical analysis of leak detection systems,
11 ability to detect ruptures and small leaks
12 that are ongoing or intermittent, so we did
13 look across the board at everything.

14 I should say Kiefner looked across
15 the board at everything. Analysis of the
16 technical, operation, and economic feasibility
17 aspect. So again, that was the nature of the
18 study.

19 These other areas that aren't
20 highlighted, they are in a mandate. To an
21 extent, Kiefner did look at them, but in our
22 comment period, a lot of folks indicated,

1 which is probably true, the contractors
2 shouldn't be going too much into that area.
3 It kind of gets a little bit more into a
4 policy arena, per se, but certainly they
5 looked, to an extent, into those areas.

6 More directly related to gas, this
7 was from San Bruno, but P1110 talks about
8 natural gas transmission and distribution
9 equipping our SCADA systems with tools to
10 assist in recognizing and pinpointing leaks
11 across the board. So again, from the gas
12 side, this is more of the focus area of what
13 was done.

14 So let's go back a little bit to
15 earlier this year. We had a March workshop,
16 improving pipeline leak detection system
17 effectiveness, and it was designed to provide
18 an open forum for, really, all of our
19 stakeholders to get together. Very similar to
20 most of our workshops.

21 I would say, overall, very good
22 exchange of information, both on the

1 capabilities of LDS, let's talk about the
2 positives, but also, let's also talk about the
3 challenges, and I think everyone from
4 different stakeholder groups brought some of
5 those challenges forward.

6 We do have a meeting Web site, for
7 those that aren't aware, and the summary
8 report is out there, so you can certainly go
9 out there for more information. The
10 contractors were at that workshop and
11 information from that workshop was also used
12 for this study.

13 And also, at the same time, we
14 actually did a public notice to get some input
15 on the scope of the study. And in middle of
16 July, July 18th, 19th, we had a research and
17 development forum. We covered a whole range
18 of topics, many topics, but among those, we
19 did have a working group focused specifically
20 on leaks; leak detection and mitigation.

21 Some of those gaps up there were
22 identified by the working group as some

1 leading gaps that were out there. And again,
2 generally based on consensus with who was
3 there at the meetings. Contractor personnel
4 were also at that meeting and I'll talk about
5 some of these, but you might start seeing
6 there's a common theme with all of these.

7 Now, we can agree or disagree with
8 some certain aspects of individual efforts,
9 but at the end of the day, and we'll talk
10 about this at the end of my presentation, but
11 it was good to see at least common themes that
12 we all agree need to be addressed.

13 Now, how exactly they get
14 addressed, we could all talk about that, but
15 among those were reducing false alarms,
16 improvements needed for both new and existing
17 systems, the whole retrofit dilemma, what was
18 said, and also, what's called Smart System
19 development from the R&D forum.

20 And that's kind of like, can we
21 add more sensors to the line in different
22 spots, almost like a smart health check of

1 your system of sorts? And again, summary
2 report presentations are out there.

3 And since then, we've had an R&D
4 solicitation and what happens, we take that
5 input from the R&D forum and then put them
6 into an actual solicitation. So these are all
7 the topics that did go out there with our
8 announcement that went out earlier this year,
9 very recently, pretty much in all those areas.

10 The solicitation is now closed.
11 We are currently reviewing those white papers,
12 but I will say, a fair amount, we got upwards
13 of, I want to say, over 90 white papers total,
14 at least over 20 of those were in leak
15 detection specifically.

16 And let's put LDS into context
17 because I will say, I keep getting questions,
18 in general too, the contractors did as well,
19 but so much focus on the technology, but
20 conceptually, with LDS, it involves
21 technology, people, environment, process, and
22 procedures, right?

1 And there are multiple layers of
2 defense intended at different aspects of
3 these, so it's good and bad. Yes, it does
4 make for a more complex system overall.
5 Certainly, if you add the human element, it
6 gets more complex. At the same time, we can't
7 say it's overly complicated. You can design
8 your overall system, understanding, if you
9 focus too much on discrete elements, but not
10 looking at the system as a whole, you might
11 have issues.

12 But at the same time, it is
13 definitely complicated. The whole, no one-
14 size-fits-all, we've been saying all year, it
15 is a true statement. And there are also
16 multiple layers of defense, in general, and
17 LDS specifically intended to help address
18 these gaps.

19 So let's talk about the scope of
20 the study that Kiefner did, or KAI is what
21 I'll probably call it mostly, but they did a
22 review of pipeline incidents. Let's just

1 learn something from the last three years
2 based on the data, and they chose to do
3 January 2010 through July 2012. That was what
4 they chose for their review period.

5 They also looked at the technical
6 feasibility aspects, namely, let's review
7 currently installed and available LDS
8 technologies, along with benefits, drawbacks,
9 and retrofit applicability.

10 They also looked at the
11 operational feasibility aspects. Let's review
12 the current LDSs being used by the industry.
13 A little bit about economic feasibility and we
14 all know cost/benefit analysis can be sliced
15 and diced in a number of different ways, there
16 are a number of opinions out there, but
17 Kiefner presented their take on it.

18 And they did a standards review.
19 What standards are out there, both guidance
20 and regulations that are out there, just
21 again, what is the industry currently using or
22 what's out there?

1 They did interviews with operators
2 and technology suppliers that should be noted
3 and it has been in comments that they only did
4 a certain slice of the industry, but in their
5 opinion, it was a good representation of it.

6 So we have this effort. We had an
7 October 5th webinar and it was a public
8 webinar, we presented the draft reports, and
9 we had a public comment period through October
10 26th of this year. As part of that, we got --
11 well, nine individual commenters, or
12 organizations, I should say, but many of them
13 certainly had multiple comments.

14 Out of those comments, over 100 of
15 those comments were considered technically
16 substantive, directly related to the ports,
17 and appropriate for some kind of response, and
18 many were similar to one another. And from
19 there, what's in my next slides are just a
20 summary of some of those comments.

21 I'm not going to go over every
22 single one of the 100, but I will go over a

1 general summary of that. And those comments
2 are what resulted in a change to the draft
3 report.

4 I'll have this link at the end,
5 but all comments received, in their entirety,
6 are also out there on the public Web site as
7 well as the draft report.

8 So among those comments we got,
9 the executive summary should briefly recap
10 some of the observations, such as inserting
11 the summary table from the incidents,
12 understanding, I lost count, but it's upwards
13 of close to a 300-page report total. So
14 understanding, most people probably won't get
15 past the executive summary, so we did move
16 that table up just to, again, that's your
17 snapshot of what goes into your report.

18 A number of commenters raised this
19 issue, and particularly on the gas side, that
20 there was some general statements at the top
21 in a summary that certain aspects of leak
22 detection requirements, regulations, in part

1 185 apply equally well to gas.

2 There's a lot of discussion in the
3 report itself, and still is, on what exactly
4 they mean, particularly from a simple SCADA
5 CPM metering aspect of it, that there are some
6 common principles between the two, but the
7 authors agreed that, by itself as a statement,
8 it could be misleading, so they did decide to
9 take it out.

10 As a punchline of the summary,
11 again, however, language also in the report
12 that talks about some of the commonalities
13 between these stays in there.

14 Some suggestions in general, just
15 to remove, or I should say modify, some
16 absolute language, such as immediate
17 detection, to something more like quickly
18 detect. Some more definitive statements like,
19 well, this is more on the liquid side, but if
20 refined products are liquids inside a
21 pipeline, they will remain liquids, just
22 changing that to usually.

1 And other what were considered
2 fact statements that the contractors put out
3 there. To make it more clear, it's in their
4 opinion or in general. So they did make those
5 changes. Here's just some examples, but they
6 did agree with that.

7 There were some disagreements or
8 errors that were pointed out with some of the
9 case studies. In cases where it was pretty
10 clear from the data submitted that there was
11 an error in the report, those were changed.
12 In other cases where, perhaps, some agreed or
13 disagreed with the notion of what it was
14 saying, or also, for instance, if it came in
15 a supplemental report after that review
16 period, those were not changed, because they
17 were very clear, here's our review period.

18 There were some comments of
19 missing references from the bibliography.
20 Other references for the basis of some of the
21 sensitivity levels they put in the report.
22 The contractors did agree with that and they

1 added some language to update those references
2 as well some new references in the report
3 itself.

4 This next one is certainly
5 relevant to this committee, potentially, and
6 gas industry in general. There were comments
7 that certain sections of the report implied
8 they were addressing all gas systems, all leak
9 detection systems, but in reality, they didn't
10 go into a lot of detail, which were considered
11 lower pressure systems, but particularly, I
12 would call it more simple leak detection
13 systems that don't involve some kind of SCADA
14 or SCADA-like system.

15 So generally, if you just have
16 some metering out there or flow meters that an
17 individual is looking at it, particularly from
18 some of your smaller systems, the contractors
19 agreed that it's not directly addressed in
20 that report, so they did acknowledge that.

21 So again, that was just a summary.
22 There's several more comments we got in. A

1 document was developed that provides a summary
2 of some of those comments and some of those
3 responses. So from there, let's talk about
4 some of the observations that came out of the
5 KAI study.

6 I will say, in general, and they
7 did break it out with these different
8 segments, and some of their percentages are
9 different, but for all segments, hazardous
10 liquid gas transmission and gas distribution,
11 from the incident review for that 30-month
12 period, an emergency responder or member of
13 the public was more likely to detect an
14 incident or a release than, I should say,
15 detect and identify a release, than air
16 patrollers, if applicable, operator, ground
17 crew, and contractors.

18 The next step is air patrol,
19 operator, ground crew, and contractors were
20 more likely to identify than a pipeline
21 control or a control room. And finally, the
22 last one, it is clear, at least from the data,

1 that pipeline control or a control room was
2 the least like to detect and identify a
3 release.

4 Some other observations, they, in
5 their opinion, recommended best practices for
6 leak detection for gas pipelines are lacking,
7 as are best practices in general for external
8 sensor-based leak detection.

9 They did point out, unlike most
10 subsystems used on a pipeline, LDS does not
11 necessarily have a nameplate certification,
12 rate of performance measures, et cetera,
13 universally across all pipelines. Yes,
14 vendors will tell you, you know, what our
15 sensor can do in our opinion, some other
16 performance measures, but in general, there's
17 not really a rated system like there might be
18 for some other segments of components or
19 aspects used on pipeline, which can be good or
20 bad, right?

21 And again, they go into a little
22 bit more detail on this in the report, but you

1 can't just take something off-the-shelf and
2 assume it's automatically going to fit with
3 your system. You do need some aspects of
4 reviewing some of these to see if it'll work.

5 And in their opinion, there is no
6 technical reason why several leak detection
7 methods cannot be implemented at the same
8 time. In fact, a basic engineering robust
9 principle calls for at least two methods that
10 rely on entirely different physical
11 principles.

12 Many performance measures do
13 present conflicting objectives. And this
14 particular gets into a lot of concerns out
15 there with false alarms. So, you know, leak
16 detection systems that are highly sensitive to
17 small amounts of loss of hydrocarbons. They
18 are also naturally prone to false alarms.

19 At the same time, and it also
20 talked in the report, there is some, again,
21 engineering assessment that has to go in with
22 your alarm methodologies; things like that.

1 In a cost/benefit analysis, again, they have
2 a whole section of the report that goes into
3 cost/benefit, different scenarios, but
4 objectively, from their opinion, the largest
5 cost element in any LDS is investment in
6 personnel who understand, manage, and plan for
7 all that within a pipeline company.

8 Any leak detection technology
9 beyond the most simple systems does require
10 some expertise to not only design for your
11 system, but also implement it.

12 In their opinion, most recommended
13 practices for internal LDS contain principles
14 that are valuable for external systems as
15 well. And once again, in their opinion,
16 equivalent standards for external systems
17 would be very useful.

18 And general bullets, certain
19 standards and regulations review expand in
20 several useful ways, including setting
21 measurable performance standards for leak
22 detection. We got this question on the liquid

1 committee, but what they're talking about
2 there is they looked at the CSA Z662 standard
3 in Canada.

4 In their opinion, they saw some
5 other measurable performance standards. They
6 also looked at, it's the German TRFL that also
7 implemented upwards of six to seven different
8 methods, and they also looked at a UKDTI
9 standard that's primarily used for offshore,
10 so that's kind of where they're going at, but
11 again, in the report itself, it talks in more
12 detail.

13 So once again, the draft final
14 report and comments received by the comment
15 deadline are available on the Web site. Kind
16 of, where we are from here, we got that
17 question on Tuesday. The final report is not
18 out there. Jeff can certainly expand if
19 needed, but the intention right now, or the
20 belief, is it's likely that it won't go out
21 publicly until it goes to Congress, because we
22 do have to report to Congress, and after that

1 point, we anticipate the final report, based
2 on comments, will go out publicly.

3 Another question that came up on
4 Tuesday was, will there be another round of
5 comments? And the answer is no. We're going
6 to go to final report and that's where it's
7 going to be. I believe that's it, at least on
8 all the comments we got from Tuesday, so with
9 that, I'll certainly take some questions.

10 CHAIRPERSON GARDNER: Could you --

11 MR. KIEBA: Yes, certainly. And
12 this presentation is certainly publicly with
13 the rest of them.

14 CHAIRPERSON GARDNER: And Max has
15 some handouts that were made available so you
16 can get it right off of there if your eyesight
17 isn't that great; like mine. Is it in the
18 handbook?

19 MS. WHETSEL: It's not in the
20 handout, but I will send it.

21 CHAIRPERSON GARDNER: Okay.

22 MR. KIEBA: We printed some, I

1 don't know if we have enough, but we printed
2 out some handouts with the slides too.

3 MR. WIESE: Wayne, actually, just
4 a quick question to help Gene. I think these
5 were posted already, weren't they?

6 MR. KIEBA: Yes.

7 MR. WIESE: So these are on the
8 PHMSA Web site now.

9 MR. KIEBA: Oh, yes. The
10 presentations, they're already out there on
11 the Web site.

12 MR. WIESE: Yes. So I'm just
13 trying to save Gene the time so you can --

14 MR. KIEBA: Yes, yes, they're all
15 out there.

16 MR. WIESE: -- download them from
17 the committee Web site.

18 CHAIRPERSON GARDNER: Thank you
19 very much, Max, and we'll now open the floor
20 for questions from the committee and once
21 we've exhausted questions from the committee,
22 we'll also take a couple from the public. By

1 the way, I have to be out of here at 12
2 o'clock.

3 MR. WIESE: We're with you on that
4 one.

5 CHAIRPERSON GARDNER: All right.
6 So we'll go first with Don.

7 MR. STURSMA: I'd just like you to
8 describe what aerial systems were used for
9 leak detection.

10 MR. KIEBA: What?

11 MR. STURSMA: Were they primarily
12 visual or do they have some of these new
13 infrared sensing devices, you know, just what
14 was examined in terms of the aerial detection.

15 MR. KIEBA: Oh, they used a
16 number. I mean, it's all detailed in the
17 report, but yes, they used a number of
18 different concepts they looked at; certainly.
19 And worthy of pointing out, there are
20 certainly a number of efforts underway. To an
21 extent, they talked about it in the report,
22 but also, there's a lot of research going on.

1 That was talked a lot about in our
2 R&D forum too about some of the field testing
3 that has been done on these, but also,
4 different platforms that are continuing to
5 improve upon, understanding, again, this is
6 from the R&D forum, but we're not there yet,
7 but some work continues need to be done.

8 A lot of people mentioned PRCI is
9 doing a lot of work in that area. It came up
10 in R&D forum too. Another area, just
11 continues to work on some of those platforms
12 and the different sensors used.

13 CHAIRPERSON GARDNER: Okay. So
14 now we're going to go with Jeff and then Sue.

15 DR. FEIGEL: One final question?

16 CHAIRPERSON GARDNER: Sure.

17 DR. FEIGEL: I apologize. I
18 admit, having not read Kiefner's report, but
19 I'm curious about what kind of general
20 analytical structure they used for probability
21 of detection. I mean, you've got all kinds of
22 different methods and different empirical

1 methods of measuring those. I mean, there's
2 got to be some way of, sort of, normalizing
3 all this, if you will, and just curious what
4 they did.

5 MR. KIEBA: There's probably about
6 a 100 pages worth of -- yes, and I will say,
7 they did point out, in cases where they did do
8 an analysis, the basis of their analysis
9 methods used. They did acknowledge some
10 limitations that, I will say, a number of
11 comments, people wanted them to go even
12 further to looking into some of these, and
13 they acknowledge, in the time period
14 available, the resources available, they could
15 only go so far, but they used a number of
16 methods used.

17 And they went as far, I would say,
18 as just, you know, here are the methods,
19 here's, generally, what's out there and
20 currently being used. They didn't go,
21 obviously, to another level, maybe if people
22 wanted, that would actually verify some of

1 these methods or the actual performance of
2 these, but again, it was just primarily based
3 on the facts and the data is what they went
4 with.

5 DR. FEIGEL: I'll just make one
6 comment, and I don't purport to be an expert
7 in this, but we've looked a lot at what the
8 medical researchers and field have done in
9 terms of probability of detection. And I
10 think, granted, it's a totally different
11 domain, but my personal opinion is that
12 they're well-ahead of most of the engineering
13 studies in this.

14 And some cross-disciplinary looks
15 at some of this kind of stuff, at some point
16 in the future, might be useful.

17 MR. KIEBA: Yes, and that's a
18 little outside the scope of this specific
19 report, but I can also say, those things came
20 up in our R&D forum. We had folks from NASA
21 there, or contractors from NASA, talk about
22 some of the other things out there and I think

1 there was a general acknowledgment of folks
2 that were at the R&D forum that say, yes,
3 there might be some benefit to looking at
4 that, but also at the same time, you have to
5 look at the reasonability of costs,
6 reliability, you know, retrofitting to your
7 system.

8 Yes, the core technologies
9 themselves, you know, are good, but, you know,
10 the operational aspects that go into pipeline
11 systems, things like that, can differ, but
12 certainly, in the R&D forum, that was
13 discussed for sure.

14 DR. FEIGEL: Well, my point was
15 not so much directed at any particular
16 technical application, it's sort of the
17 analytical structure about how we're judging
18 the reliability and accuracy of this; that was
19 my point.

20 CHAIRPERSON GARDNER: Again, we're
21 going to move on and you'll be able to take
22 that up with a sidebar with Max. Jeff.

1 MR. WRIGHT: Thank you. Jeff
2 Wright from FERC. I had just, maybe, a couple
3 thoughts and maybe like Gene, this may get out
4 of the scope of this study, but the leak
5 detection systems, they work with compressor
6 stations as well?

7 MR. KIEBA: I would say that's a
8 fair comment. I would say, in general,
9 understanding there are different aspects for
10 a compressor station, two different aspects
11 along your line, but yes.

12 MR. WRIGHT: I mean, I would say,
13 outside of a catastrophic accident, your
14 natural leaks are right at the seals of
15 compressor stations and this is where I get
16 into the point, it may be outside the scope to
17 this study, but maybe, somehow, it needs to be
18 looked at. I know there are better seals out
19 there, if you will, between the compressor
20 stations and pipes, and that is, you know, the
21 synergy between the environmental arena where
22 pure methane is your worst greenhouse gas.

1 The vast majority of it comes from
2 leaks at compressor stations that are
3 naturally occurring because of the quality of
4 the seals. So my thought was, going forward,
5 and like I said, maybe not in the scope of
6 this study, but somewhere else, if there's any
7 thought about requiring a more stringent
8 standard for seals at compressor stations.
9 That could eliminate a lot of what they call
10 fugitive methane.

11 MR. KIEBA: Yes, I could say, what
12 was discussed in this study and looked at was,
13 they didn't really go to the level of why did
14 the leak occur. If a leak occurs, let's
15 detect it or how can you detect it
16 effectively?

17 MR. WRIGHT: I mean, so this is
18 more of a reactionary kind of, if something
19 happens, we know where it happened, or if it's
20 on the verge of happening? I guess my
21 thoughts were more on a preventive kind of
22 scale before you get to that point.

1 MR. WIESE: Just to help Max out
2 for two seconds, yours is a good idea. Well,
3 I will admit that we were being slavishly
4 responsive to the Hill and because there were
5 37 of them, we really didn't -- very much at
6 it, we're just taking care of their mandate,
7 and that was it, take a look at the
8 technologies.

9 MS. FLECK: Thank you. Sue Fleck
10 from National Grid representing distribution
11 companies. First off, I wanted to say thank
12 you. AGA filed complaints, or filed comments,
13 did I say that? You know, it's early.

14 MR. KIEBA: When it's AGA and
15 others, it's usually passionate discussion.
16 That's the word I use; passionate discussion.

17 MS. FLECK: So AGA filed
18 passionate discussion points on October 26th,
19 the gist of which was all about how we didn't
20 believe there was enough distribution company
21 involvement in the study, and as a result, you
22 know, the distribution issues really didn't

1 apply, and it sounds like you've put some text
2 in there to make that point so it covers most
3 of the issues.

4 Now, if we could go to Slide 15, I
5 did have one other observation that goes
6 beyond what we talked about in the letter on
7 the 26th.

8 MR. KIEBA: Dana, could you help
9 me out; Slide 15? Oh, there we go.

10 MS. FLECK: There we go.

11 MR. KIEBA: Thank you. Slide 15.
12 All right.

13 MS. FLECK: Okay. And is this the
14 one? Yes, this is where you make some
15 conclusions based on analysis you've done on,
16 I assume, serious incidents that have been
17 reported.

18 MR. KIEBA: And let's be clear,
19 they made observations. They didn't go as far
20 as making conclusions, recommendations, but
21 observations.

22 MS. FLECK: Okay. Observations.

1 MR. KIEBA: Yes, based on the data
2 that was submitted.

3 MS. FLECK: And I make two
4 comments here. The first off is, this is
5 precisely why we odorize gas so that people
6 notice leaks and report them, and they get
7 fixed, so this kind of validates the whole
8 reason for odorization, which is a good thing,
9 but it is a little bit misleading because, if
10 you only take a look at, you know, the
11 incidents that have been reported, you're kind
12 of missing all the Grade-1 leaks that are
13 found by company employees that are, you know,
14 hazardous situations that could pose immediate
15 hazard to public, and a lot of those are found
16 by company employees.

17 So if you looked at all the Grade-
18 1 leaks along with the reports that were, you
19 know, reported in to DOT, you might have a
20 different conclusion, you may not, but I think
21 that's a body of data that's missing from this
22 analysis. I think your people, your operator

1 ground crews, your air patrols, and your
2 contractors are finding a lot of those Grade-
3 1, you know, potentially serious hazard
4 conditions, you know, right there on the
5 ground.

6 MR. KIEBA: Yes, I think that's a
7 good point in general. And even, I would say,
8 the liquid, if I'm not mistaken, API/AOPL also
9 said, you know, there's a bunch of other
10 datasets out there that could potentially be
11 used. And I will say, the authors did
12 acknowledge that point. We would have loved
13 to have a huge dataset, but at the same time,
14 understanding limited nature of the scope and
15 the time period they had to conduct it.

16 But those comments are noted,
17 certainly noted out there publicly, and are
18 presented.

19 MR. WIESE: I just wanted to add,
20 one of the other points of discussion that
21 came up in relation to this slide, so I
22 actually thought somebody was going to ask it,

1 it's a logical point is, well, it seemed like
2 that to some, and I think not to most of us
3 who do this, it seems counterintuitive, but in
4 fact, it's extremely intuitive.

5 The vast majority of leaks are
6 very small. So in the distribution end, it's
7 going to be odor that's going to pick it up,
8 right? The control room is only going to pick
9 it up when it's catastrophic, you know, or
10 very large, you know, I won't say
11 catastrophic, but very large.

12 The sensitivity of that equipment
13 is just not going to pick up these smaller
14 leaks, so your point about all the ones that
15 are being picked up by ground crews and
16 contractors, you know, is highly relevant. I
17 think if an when we get into a regulatory
18 posture on things like this, I think we will
19 have to do more on that stuff.

20 MS. FLECK: Because, basically, if
21 you think about it, that Grade-1 leak that's
22 picked up by the company crew, it might just

1 be a matter of a few moments before that
2 becomes a reportable incident if it wasn't
3 found. So, you know, it can just be a little
4 time frame thing. So you're getting all this
5 great data from your walking surveys and your
6 mobile surveys.

7 And for a fully comprehensive look
8 at leak detection systems, you're going to
9 need to factor that in at some point, which,
10 it sounds like you are. You have that
11 planned.

12 MR. WIESE: And I'm thinking that
13 since AGA was so passionate about their
14 comments, they'd be glad to gather that data
15 for us, right?

16 MS. FLECK: I see Christina taking
17 notes.

18 MR. WIESE: She's shaking her
19 head, yes, love to do that.

20 MR. KIEBA: And I do want to point
21 out, APGA was also passionate in their
22 comments. So, yes, they kind of went this

1 area and also into their stakeholders as well.
2 And I will say, in general, it was
3 appreciative, understanding, you had two big
4 reports, 300 pages each, that you had to
5 review in 15 days. So, in general, I would
6 say it's appreciative that people did make the
7 effort to comment on these and give a lot of
8 comments.

9 There was, certainly, a lot of
10 resources involved with attempting to do that.
11 A lot of folks said they would love to even
12 comment further and provide more analysis, but
13 to the extent they did, it was definitely
14 appreciative from our standpoint.

15 CHAIRPERSON GARDNER: Thank you.
16 Rich.

17 MR. WORSINGER: Rich Worsinger,
18 Rocky Mount. Jeff, I just want to acknowledge
19 your realization that, on distribution, a
20 SCADA system is not going to be able to detect
21 most leaks. And I just want to acknowledge
22 that, that you obviously have a grasp of this

1 and that is important to point out.

2 Rocky Mount has 500 miles of
3 distribution pipe and we probably have about
4 ten pressure monitoring points. We're not
5 going to detect that dig-in that results in a
6 cut 2-inch line. You're just not going to see
7 it. You would need pressure monitoring
8 points, probably, on every street, and that's
9 just, obviously, not practical or feasible,
10 but kudos to you.

11 CHAIRPERSON GARDNER: Other
12 questions from the committee? There being no
13 further questions from the committee, we will
14 open the floor for questions from the public.
15 And if there are no --

16 MR. KIEBA: Oh, sorry. I got the
17 mic.

18 MR. WIESE: Keep it.

19 MR. KIEBA: I'm used to doing both
20 anyways, so here you go. Any comments?

21 MR. BENNETT: Just one quick
22 question and I actually wrote some of the

1 comments and we did complain about a few
2 things, so Sue was pretty accurate. Phil
3 Bennett with the American Gas Association and
4 really, one quick question.

5 The report was long, very
6 comprehensive, looked at transmission, a
7 little bit of distribution, a lot of liquids,
8 the Pipeline Safety Act actually ordered,
9 well, mandated, that DOT look at, let me read
10 it to be accurate, "Update a report on leak
11 detection systems utilized by operators of
12 hazardous liquid pipelines and transportation
13 related to flow lines."

14 So Congress was really just
15 looking at liquid lines. They weren't looking
16 at other types of pipelines. When you write
17 your report to Congress, are you going to
18 include all liquid sectors, because that was
19 part of our concern. It was very confusing in
20 the report because the sectors are very
21 different when you look at transmission,
22 distribution, and liquids.

1 They have completely different
2 detection systems. Is PHMSA going to give
3 Congress information that they didn't ask for
4 or are you going to stick strictly to liquid
5 lines like Congress asked?

6 MR. WIESE: Phil, I had opening in
7 my counsel's office, if you'd like to, but as
8 we brought up the NTSB recommendations, say,
9 since Congress gave us 37 plus mandates, not
10 to mention all these things from the NTSB, and
11 no money, by the way, we took our liberty to
12 join a couple of related things together to
13 try to dispose of them.

14 We just aren't going to get
15 through them if we don't combine some of
16 these. So your comment about gathering lines
17 is probably relevant, but, you know, we
18 certainly have the discretion to combine
19 these, which is what we chose to do. There's
20 only so much we're going to get done if we
21 don't, you know, add some things together.

22 So I'm not trying to be a smart

1 alec, it's just Phil, and I usually give him
2 a hard time. So thanks, Phil.

3 CHAIRPERSON GARDNER: If there are
4 no further questions from the public, then we
5 will move on to Agenda Item 2, and that would
6 be an update and briefing from Steve Fisher.

7 MR. WIESE: I think we're going to
8 do Pat Landon on the valve study.

9 CHAIRPERSON GARDNER: All right.
10 Who gave me this agenda?

11 MR. WIESE: It does say --

12 CHAIRPERSON GARDNER: Okay, Pat.
13 Sorry.

14 MR. LANDON: Thank you, Chairman.
15 My name is Pat Landon and today I'll be
16 briefing the Oak Ridge National Laboratory
17 Automatic Shutdown and Remote Control Valve
18 Study. I'd like to thank the Gas Pipeline
19 Advisory Committee for allowing time for a
20 briefing on Oak Ridge's study.

21 In March 2012, PHMSA contracted
22 Oak Ridge to conduct the Automatic Shutdown

1 and Remote Control Valve Study that assessed
2 the effectiveness of blocked valve closure
3 swiftness in mitigating the consequences of --

4 CHAIRPERSON GARDNER: Pat, excuse
5 me a second.

6 MR. LANDON: Sure.

7 CHAIRPERSON GARDNER: For the
8 record, we're still on Agenda Item 1, the
9 second half of Agenda Item 1, Valve Study.
10 Thank you.

11 MR. LANDON: So the study was to
12 address the effectiveness of blocked valve
13 closure and swiftness in mitigating
14 consequences of natural gas and hazardous
15 liquid transmission pipeline releases on the
16 public and environmental safety.

17 Oak Ridge's study evaluated the
18 technical, operational, and economic
19 feasibility, and potential cost benefits of
20 installing ASVs and RCVs in newly-constructed
21 and fully-replaced transmission pipeline.
22 Let's see, I got the clicker.

1 Who is Oak Ridge National
2 Laboratory? Oak Ridge was established in 1943
3 as an integral part of the Manhattan Project.
4 Today, Oak Ridge is the Department of Energy's
5 largest science and energy laboratory who is
6 managed by a limited liability partnership
7 between the University of Texas and Battelle
8 Memorial Institute, known as UT-Battelle,
9 consists of 4400 staff, of that staff, 1600
10 are scientists and engineers.

11 It has an annual budget of \$1.65
12 billion and is home to several of the world's
13 top supercomputers. Oak Ridge operates nine
14 user facilities that draw thousands of
15 research scientists and visitors each year.
16 To that impact of this study were the National
17 Center of Computational Sciences as well as
18 the National Transportation Research Center.

19 Background to the study, a
20 Congressional mandate from the Pipeline
21 Safety, Regulatory Certainty, and Job Creation
22 Act of 2011 Section 4 requires that the

1 Department of Transportation require, by
2 regulation, the use of automatic or remotely
3 controlled shutoff valves, or equivalent
4 technology, where it is economically,
5 technically, and operationally feasible on
6 hazardous liquid and natural gas transmission
7 facilities, newly-constructed or entirely
8 replaced.

9 The Act also mandates that the
10 Government Accountability Office conduct a
11 study on the ability of transmission pipeline
12 facility operators to respond to a release
13 from pipeline segments located within a high
14 consequence area.

15 The GAO must consider the
16 swiftness of leak detection and pipeline
17 shutdown capabilities, the location of the
18 nearest response personnel, cost, risk, and
19 benefits of installing ASVs and RCVs.

20 Let's see, the NTSB in its
21 accident report for the San Bruno accident
22 made recommendation P1111, which direct PHMSA

1 to amend Title 49 CFR 192.935(c) to directly
2 require the automatic valves, or remote
3 control valves, be installed in high-
4 consequence areas, Class-III and Class-IV
5 locations, and spaced at intervals that
6 consider population.

7 On March 28th, 2012, the workshop
8 understanding the application of automatic
9 control and remote control valves was
10 conducted to discuss the practical
11 considerations involved with installing,
12 operating, and maintaining automatic and
13 remote control valves by the public, federal
14 state regulators, agencies, and transmission -
15 - oh, discussion with the federal and state
16 agencies as well as the public and
17 transmission pipeline operators.

18 Identify constraints with
19 deploying these types of systems on existing
20 versus newly-constructed pipelines and to
21 collect input that would help guide the Oak
22 Ridge study. Presentation, transcript of the

1 workshop, and a summary report can be found on
2 this Web site; on the meeting Web site.

3 The scope of the Oak Ridge
4 national study was published to the federal
5 register for comments, and you can find that
6 on regulations.gov under the announcement,
7 PHMSA 2012-0021.

8 On July 18th and 19th, 2012,
9 government and industry pipeline research and
10 development, R&D forum, was conducted. The
11 working group that worked on valves found that
12 automatic valve reliability poses a potential
13 technology gap. The project has sought to
14 study more accurate line break detection
15 systems to minimize unintended valve closures.

16 The R&D forum report out can be
17 found on this Web site as well, and the
18 research announcement can be found on the R&D
19 Web site. Solicitation for the white papers
20 has closed and the white papers are being
21 reviewed.

22 On October 5th, 2012, Oak Ridge

1 presented, in a webinar, their draft for the
2 study of requirements of automatic and remote-
3 controlled shutoff valves on hazardous liquids
4 and natural gas pipelines with respect to
5 public and environmental safety.

6 Comments were received from
7 October 5th to October 26th. There were seven
8 commenters that submitted in the posted time
9 for comments and Oak Ridge determined that
10 there were 42 technical comments, some of
11 which changed their study. Some of these
12 comments will be discussed in the next slide.

13 Oak Ridge draft, final report and
14 submitted comments can be found on the October
15 5th meeting site. Now, for the comments. One
16 of the first comments was, inadvertent valve
17 closures were not addressed Oak Ridge's study.
18 Oak Ridge changed one of the sections of the
19 studies, which now discusses these
20 consequences.

21 For the hazardous liquid side,
22 we'll discuss this since we're discussing both

1 sides of transmission pipelines, the hazardous
2 liquid cases, 7 and 8, as well as the 90-
3 minute shutdown for 8A were an unrealistic
4 number. The modeling was changed by Oak Ridge
5 to that of what is required of liquid
6 operators in 194.105 as well as the volume
7 calculation of 194.105(b)(1).

8 Use of the word leak should be
9 changed to rupture where high rates of mass
10 release associated with pipeline failure are
11 appropriate. Oak Ridge made this
12 clarification within Section 1.3 of their
13 report. And as Max has indicated in his last
14 study, the use of the word detect should
15 expand beyond a CPM or SCADA system. Oak
16 Ridge did change that part of the study to be
17 more comprehensive of all types of leak
18 detection.

19 Let's see, the next slide. Did I
20 go backwards? Right. Flow rate on hazardous
21 lines can exceed normal pipeline flow. The
22 computational model was also changed to

1 address this. And then the last one that is
2 more relevant to this session, the proposed
3 hazardous model is based on an extremely
4 conservative and inappropriate approach to
5 pipeline outflow estimates and fire radiation
6 model that ignored significant source of
7 conservatism inherent in using a point-source
8 radiation model.

9 Oak Ridge made a response, and a
10 change to the study as well, to address this
11 comment, and several similar comments. And
12 the model used in the Oak Ridge study to
13 estimate pipeline outflow and fire radiation
14 for natural gas pipeline releases were
15 developed as a tool for identifying
16 differences in release scenarios and for
17 quantifying the effectiveness of blocked valve
18 closure swiftness in mitigating fire damage.

19 Simplifying assumptions and
20 limitations of the models used to estimate the
21 time-dependent pipeline outflow and thermal
22 radiant intensity resulting from fire produced

1 by combustion of the release of natural gases
2 are discussed within Oak Ridge's study.

3 These models are not intended to
4 be an exact solution to these complex
5 engineering problems. As for the study, Oak
6 Ridge categorized the potential effects of
7 unintended releases from natural gas and
8 hazardous liquid pipelines on public and
9 environmental safety as personal injuries and
10 fatalities, property damage and environmental
11 impacts, the scope and magnitude of these
12 effects depend on the type and the amount of
13 product released, the exact sequence of the
14 event, and the site-specific factors, such as
15 separation distance between an individual or
16 building, and the release point, building type
17 and construction, terrain features, and
18 atmospheric conditions.

19 Oak Ridge's study assessed the
20 effectiveness of blocked valve closure
21 swiftness in mitigating the consequence of
22 natural gas and hazardous liquid pipeline

1 releases on public and environmental safety.
2 Rapid blocked valve closure was evaluated on
3 gas transmission lines with ignition of the
4 product, hazardous liquid transmission lines
5 with ignition of the product, and hazardous
6 liquid transmission lines without ignition of
7 the products.

8 The technical, operational, and
9 economic feasibility, and potential
10 cost/benefit of ASVs and RCVs in newly-
11 constructed and full-replaced transmission
12 lines was evaluated with the following; fire
13 modeling was used to establish metrics for
14 analyzing response time for transmission lines
15 with ignition, and the basic oil spill cost
16 estimation model used by the EPA on oil was
17 used to model response time for hazardous
18 liquid transmission lines without ignition.

19 The scope of Oak Ridge's study was
20 limited to only consider worst-case pipeline
21 release scenarios and HCAs involving
22 guillotine breaks rather than other more

1 common breaks, such as punctures and through-
2 wall cracks.

3 Although ignition of the released
4 product following a rupture is not ensured,
5 Oak Ridge's study only modeled release
6 scenarios for natural gas and hazardous liquid
7 transmission pipelines that result in an
8 immediate ignition of the released product at
9 the break location.

10 Oak Ridge's study observations;
11 hypothetical pipeline releases studied show
12 that ASVs and RCV installations in newly-
13 constructed and fully-replaced gas and
14 transmission pipelines are technically,
15 operationally, and economically feasible, and
16 provide a positive cost/benefit.

17 However, blocked valve closure has
18 no effect on preventing pipeline failure or
19 stopping product that remains inside the
20 isolated pipeline segment from escaping into
21 the environment, decreasing the total volume
22 of the released product reduces overall

1 impacts on public and environmental safety,
2 installing ASVs and RCVs can potentially be an
3 effective strategy to mitigate consequences of
4 unintended pipeline releases.

5 Blocked valve closure swiftness is
6 most effective in mitigating damage resulting
7 from a pipeline release, and subsequent fire,
8 when damaged pipeline segment is isolated and
9 thermal radiation produced by the fire
10 declines in time to enable emergency
11 responders to safely start firefighting
12 activities immediately upon arrival.

13 If the damaged pipeline segment is
14 not isolated within 20 minutes after the
15 break, firefighting activities may evolve from
16 controlling fire damage to preventing fire
17 spread. Positive effects of rapid blocked
18 valve closure are only realized through
19 combined efforts of pipeline operators and
20 emergency responders.

21 Similar to this, the avoided cost
22 of socioeconomic and environmental damage for

1 hazardous liquid pipeline releases without
2 ignition increase as time required to isolate
3 the damaged pipeline segment decreases. The
4 modeling is dependent on a case-by-case
5 analysis of each transmission pipeline system
6 due to the complexity location, response
7 capability, pipeline configuration, and
8 resources.

9 Summarize the briefing, the Oak
10 Ridge study was commissioned on March 2012 by
11 PHMSA to address Congressional mandates,
12 recommendations from the NTSB, inputs from
13 valve and workshop, and R&D forum.
14 Transparency was maintained during the
15 development of the scope of the study through
16 public comment, and the final draft was
17 presented in a webinar and comments were used
18 by Oak Ridge to develop their final study.

19 Oak Ridge's study indicates that
20 ASVs and RCV installation on newly-
21 constructed, fully-replaced, gas and liquid
22 transmission pipelines are technically,

1 operationally, and economically feasible, and
2 provide a positive cost/benefit in a case-by-
3 base basis. Thank you. Now I'll take
4 questions.

5 CHAIRPERSON GARDNER: Thank you
6 very much, Pat.

7 MR. LANDON: Thank you.

8 CHAIRPERSON GARDNER: We'll now
9 open the floor for questions from the
10 committee. Don.

11 MR. STURSMA: Don Stursma, Iowa,
12 setting aside, for a moment, the P.R. value of
13 how long it takes to get the gas shutoff, I'm
14 trying to remember the case, but I remember
15 seeing some recent filings, or articles, that
16 contend that, for natural gas, the vast
17 majority of damage occurs in the first few
18 minutes and the incremental benefits of a
19 quick shutoff are pretty minor because the
20 damage is, basically, already done.

21 Did this study examine that
22 contention?

1 MR. LANDON: Oak Ridge, in their
2 study, did take into that consideration and
3 there have been different numbers thrown
4 around, but the most familiar one is, within
5 30 seconds, all damage is seen, or potentially
6 seen, at a gas release.

7 In reviewing the previous work
8 that had determined this number, as well as
9 this statement, Oak Ridge modeled that and
10 looked at radiant heat flux intensities and
11 tried to determine, is there a potential
12 benefit to having first responders get in
13 after that initial instantaneous radiant heat
14 flux?

15 And within the study, it does show
16 that they are able to mitigate some of that as
17 long as certain conditions are met.

18 MR. STURSMA: I had a second
19 question too, and that is, did I understand
20 correctly that for liquid pipelines where
21 ignition occurs, it's assumed that ignition
22 occurs almost immediately upon rupture?

1 MR. LANDON: That was part of
2 their scope in the study.

3 MR. STURSMAN: Okay. I guess I
4 point out, that's not necessarily a realistic
5 assumption. I know we've had instances where,
6 you know, basically a propane leak filled up
7 a small valley with, you know, propane gas,
8 which subsequently ignited. We've had, like,
9 gasoline leaks where the gasoline runs
10 downhill, pools up in places, and again, does
11 not ignite immediately, so I'm not certain if
12 basing a study on the assumption that it
13 ignites immediately reflects full reality.

14 MR. LANDON: Part of the study,
15 and we'd have to look into it, but it was
16 modeled after a propane release and pooling
17 models were used as part of the analysis.

18 CHAIRPERSON GARDNER: Sue.

19 MS. FLECK: Thank you. Sue Fleck,
20 National Grid, representing the AGA's
21 comments. Similarly, to my comments on the
22 last study, AGA filed extensive comments on

1 October 26th, and I believe they're in the
2 record. I had a few questions. I guess the
3 first one is, is there any acknowledgment
4 within this report of the other studies that
5 disagree with the conclusion that this is
6 technically, operationally, and economically
7 feasible because the other studies didn't come
8 to that conclusion. They came to the
9 conclusion that they weren't.

10 And my second question is, have
11 you taken into consideration, and I don't see
12 it anywhere in here, the bits of transmission
13 within distribution systems, within
14 distribution companies, where there may be
15 small sections of transmission main, what's
16 classified as transmission main, and how the
17 imposition of putting these valves in those
18 systems would create a lot of problems for the
19 distribution companies to be able to deliver
20 product to their customers.

21 The issues are very different
22 because these systems are fully-integrated and

1 you'd have more customer outages and supply
2 interruptions to hospitals and, you know,
3 critical care facilities, and those kind of
4 things. I just want to know if that was
5 considered different from the, you know, long-
6 line gas transmission pipelines?

7 MR. LANDON: Okay. To answer the
8 second question first is, the scope of the
9 study was very broad. There were some
10 considerations, but not to the specific detail
11 of modeling distribution systems within the
12 study. It was to a transmission pipeline and
13 certain parameters for release.

14 And the review of previous studies
15 was conducted by Oak Ridge and they were
16 incorporated into the report, but there was
17 not a point contrast between the past
18 research, but the researchers at Oak Ridge did
19 consider previous reports and there are parts
20 of those reports that were adopted into the
21 study.

22 CHAIRPERSON GARDNER: Jeff, before

1 you jump in, I'd like to kind of add on to
2 Sue's question if I can, because being
3 responsible for natural gas distribution
4 companies, I know that that was probably
5 beyond the scope of the Congressional mandate,
6 but the high-impact areas tend to be around
7 the gas distribution companies, and is there
8 some way that this study can either be
9 extended to incorporate more of the natural
10 gas distribution companies or do we need to
11 petition, perhaps, to have the study expanded
12 to include more of the natural gas
13 distribution companies?

14 MR. WIESE: Actually, I'll be
15 honest with you, I really don't remember, I
16 can consult with Phil on the exact wording of
17 the mandate. You know, I don't remember. I
18 know that the -- sorry, Phil. It wouldn't be
19 any fun if we didn't do this. So is the
20 mandate up there? I think the focus on this
21 one was really on transmission.

22 Now, transmission associated with

1 distribution, you know, operations, we
2 understand that -- you know, about petitioning
3 to expand it, you know, honestly, in this
4 particular case, we will, again, slavishly
5 address the mandate and kick this study out.

6 You know, whether additional work
7 needs to be done, that I don't doubt, but I
8 reiterate for people, this is not a regulatory
9 proposal. It's just taking care of a mandate.
10 If we get into a regulatory proposal, there
11 will have to be additional work done, and
12 certainly, around the impacts that Sue was
13 highlighting, and other things.

14 I would also highlight though, and
15 just the points I wanted to make in relation
16 to both of yours and Don's questions about
17 prior studies is, I'm trying to remember,
18 actually, the one, it was like '99 or 2000,
19 like that. I want to say it was New Jersey
20 Institute of Technology. I can't remember.

21 I remember the one you're talking
22 about, or whether it was Battelle or whomever,

1 I forget, but that was dealing with all, and
2 I think in our mandate in this particular
3 care, remember, is entirely on new or, you
4 know, entirely replaced. We weren't trying to
5 answer questions related to retrofitting
6 pipelines.

7 So it was a really weird mandate
8 when this came out. I remember, why did they
9 give that to GAO, you know, and give this part
10 to us? They probably would have been better
11 to give the whole question to one or the
12 other.

13 So clearly, your points are
14 legitimate. And, Don, I always remembered
15 that myself, you know, that issue that's
16 mitigated a little bit by our experience with
17 San Bruno, and some of these other places,
18 where, you know, the inability to shut that
19 down not only caused secondary damage, pretty
20 widespread, but it prevented the emergency
21 responders from getting in and doing anything.

22 So again, I don't think we're

1 trying to solve world hunger with this report.
2 We're trying to address their mandate. I
3 understand that it is a piece of evidence on
4 the record, but it's not trying to solve all
5 of those problems.

6 CHAIRPERSON GARDNER: Thank you,
7 Jeff. Any other questions from the committee?
8 Oh, sorry, Don.

9 MR. STURMSMA: I'd just point out
10 that, in San Bruno, we did an overlay of
11 potential impact radius versus the area of
12 damage, and it's pretty obvious that, in a
13 situation like that where you have, you know,
14 houses close together, damage spreads outside
15 the potential impact radius, not because the
16 PIR is wrong, but because fire spreads.

17 And to the extent that the damage
18 within the potential impact radius, you know,
19 probably occurred very quickly, you can argue
20 about whether a faster shutoff would have done
21 any good, but you can also agree that if first
22 responders and fire departments had had better

1 access to the area, they may have been able to
2 minimize the spread of the fire from inside
3 that zone and reduce the number of damages
4 that way.

5 So you're going to get that
6 argument, you know, within the potential
7 impact radius as a rough approximation, you
8 know, how much good are you going to do, but
9 if you can prevent the spread of fire outside
10 of that area, then time becomes a factor.

11 CHAIRPERSON GARDNER: If there are
12 no further comments from the committee,
13 questions from the committee, then we'll open
14 up the floor for questions from the AGA; I
15 mean, the public.

16 MR. WIESE: They'll be subject to
17 abuse of course.

18 MR. KUPREWICZ: Richard Kuprewicz.
19 I'm part of various committees, including some
20 serious discussions and information related to
21 San Bruno, some of it I cannot discuss, others
22 I can that are clearly in a public domain.

1 Let me be very clear here, the fire department
2 that responded to the San Bruno event was
3 roughly, approximately, 300 yards down the
4 road, so they knew they had a problem, they
5 just don't know why.

6 There wasn't a goddamn thing they
7 could do in the many 90 minutes of that
8 release to save lives. The new information
9 provided in this report that I think that's
10 relevant is that, for, I think, one of the
11 most important first times, the input from the
12 first responders that have to deal with these
13 tragedies is being inputted into this process.
14 We need to learn from it.

15 The CPC and their decision process
16 as they're moving forward on the San Bruno
17 learning tragedy, has mandated the requirement
18 that first responders will be able to at least
19 start triage within 30 minutes of a rupture,
20 a gas transmission rupture. Once you set that
21 parameter, whether you agree with that time,
22 all kinds of physical things come into play.

1 And there's no doubt, if you'll
2 play the videos on the San Bruno event,
3 shutting off those valves, even if they
4 manually had been closed, would have saved
5 lives. You're welcome to plot where they
6 recovered the parts of some of the victims in
7 proximity to the rupture to understand that.

8 There's also been recent testimony
9 and an ALGA decision that, based on the CPC
10 driving of 30 minutes, that in her proposed
11 decision, there'll be an additional 228 valves
12 going into the PG&E gas systems on their
13 transmission system. And the question is,
14 that's a whole lot of valves, and if you knew
15 more about the PG&E system, a lot of those
16 valves aren't going to make any difference; a
17 lot of those valves will make the difference.

18 One of the big battles going on in
19 that state right now is whether or not they
20 ought to be remote controlled or automatic.
21 PG&E already has valves with automatic shutoff
22 capability. Now, I think people, from a

1 perspective of the public, we ought to be able
2 to work out a solution to this problem, and
3 it's time. Anyway, sorry for the long speech.

4 CHAIRPERSON GARDNER: But I'd
5 prefer if you told us how you really felt.

6 MR. KUPREWICZ: Thank you.

7 CHAIRPERSON GARDNER: Are there
8 any other questions from the audience? I'm
9 sorry, from the public. One of these days
10 I'll get this whole Chairman thing right. If
11 there are no further questions from the
12 public, the committee will now move to Agenda
13 Item 2, Emergency Response. Did I get it
14 right? Okay. Steve Fisher.

15 MR. WIESE: It's going to be Sam
16 Hall.

17 CHAIRPERSON GARDNER: It's going
18 to be Sam?

19 MR. WIESE: Yes. Commissioner,
20 can I ask that we let him break his
21 presentation into three parts and then we'll
22 stop and talk about each part ad nauseam at

1 the end.

2 MR. HALL: I understand that we
3 nearly achieved the record for the longest
4 discussion over a rulemaking, the longest vote
5 discussion, so I hope that we won't go as long
6 on this.

7 MR. WIESE: Yes, not all records
8 are worth having.

9 CHAIRPERSON GARDNER: I did say we
10 were going to leave at about noon?

11 MR. WIESE: Yes.

12 MR. HALL: Well, good morning.
13 I'm Sam Hall. I work in program development
14 in the Office of Pipeline Safety and my
15 presentation this morning is on some efforts
16 that we've undertaken to improve pipeline
17 emergency response. This is for your
18 information and it does not cover the entire
19 breadth of what is being done in this field of
20 trying to improve pipeline emergency response,
21 so I would welcome input from the committee
22 members on any topics that you think would be

1 of value to the rest of the committee.

2 Our goal at PHMSA in pipeline
3 emergency response is to reduce the
4 consequences of pipeline failures by
5 strengthening the capabilities of local
6 emergency responders, by institutionalizing
7 pipeline awareness within the emergency
8 response community, and in this sense,
9 institutionalizing is a term of art that I
10 think I use more than most perhaps.

11 The idea is to try to make sure
12 that pipeline awareness is a matter of course
13 for emergency responders, just as other issues
14 are a matter of course for emergency
15 responders; vehicle incidents, structure
16 fires, tanker truck rollovers, you know, other
17 hazmat incidents that are commonly encountered
18 are a matter of course for emergency
19 responders and pipeline incidents and pipeline
20 awareness should also be a matter of course.

21 So our goals here are to try to
22 institutionalize pipeline awareness in the

1 emergency response community. And to do that,
2 we've undertaken a variety of initiatives and
3 activities. The first, we really began with,
4 and we continue with, educating ourselves and
5 the emergency response community by hosting
6 and participating in pipeline emergency
7 response forums. I'll talk about some of
8 that.

9 We're also looking to build
10 partnerships. PHMSA is a small agency and
11 certain cannot hope to address all of the
12 challenges in pipeline emergency response
13 alone. There are some excellent organizations
14 that exist and that are represented in this
15 committee and also in the liquid committee
16 that can help us achieve our goals.

17 We're actively communicating with
18 the emergency response community through
19 presentations at conferences, we're hosting
20 booths, we're writing articles for publication
21 in emergency responder trade publications,
22 magazines and so forth, and we are looking to

1 either create or enhance existing resources
2 that can serve emergency responders, and
3 specifically for pipeline emergency response.

4 So a bit about educating ourselves
5 and the emergency response community. In
6 September of 2011, Spectra Energy hosted an
7 industry-sponsored forum, or meeting, in
8 Houston where a lot of pipeline emergency
9 response issues were discussed.

10 We followed that in December of
11 2011 with our own emergency response forum at
12 PHMSA headquarters, and most recently, the
13 organizers of the HOTZONE conference down in
14 Houston helped us pull together a pipeline
15 emergency response focus group, that was in
16 October of 2012.

17 We've learned a lot through these
18 forums, meetings, and I've listed two key
19 lessons that we learned in these meetings
20 here, certainly, this isn't all we've learned,
21 but I think these are some key lessons
22 learned.

1 First is that, we need to leverage
2 existing resources to improve pipeline
3 emergency response. We don't need to recreate
4 the wheel when it comes to dealing with
5 pipeline emergency response. There are
6 resources and systems available, currently, to
7 assist in dealing with other hazardous
8 materials incidents. In many ways, pipeline
9 emergencies are hazardous materials incidents.

10 A pipeline is a container for
11 hazardous materials. Pipeline incidents have
12 unique characteristics, certainly, we've
13 talked about some of those in the previous
14 presentation and the discussion, so it's not
15 to say that pipelines are just like any other
16 container, but they are another container for
17 hazardous materials.

18 We can learn from what other
19 industries have done and use, or leverage, the
20 resources that other industries, like the
21 chemical industry and other modes of
22 transportation, currently use to help prepare

1 emergency responders to deal with pipeline
2 incidents.

3 The other key lesson that we've
4 learned is that we need to ensure continuity
5 of the solutions that we recreate. We don't
6 want to standup something that will take a lot
7 of care and feeding, in a separate sense, from
8 what is already being done. And again, my
9 term of art there is institutionalize. We
10 need to institutionalize pipeline safety just
11 as other emergency response topics are
12 institutionalized in the ER community.

13 A bit about building partnerships.
14 I think these partnerships go a long way to
15 institutionalizing pipeline emergencies or
16 pipeline awareness within the emergency
17 response community. The first of these is a
18 longstanding partnership that we've had with
19 the National Association of State Fire
20 Marshals.

21 Since early-2000s, I believe the
22 our cooperation started in 2002, we worked

1 together to produce a training curriculum
2 called Pipeline Emergencies. It's a very
3 comprehensive training curriculum. I'm sure
4 you've all seen it or are at least aware of
5 it. You can view it at
6 www.pipelineemergencies.com.

7 We've also partnered, very
8 recently, with the Transportation Community
9 Awareness and Emergency Response Team, the
10 acronym there is TRANSCAER. TRANSCAER is a
11 voluntary national effort that helps
12 communities prepare for hazardous materials
13 transportation incidents.

14 Now, they've focused in the past
15 on modes of transportation other than
16 pipelines, they look at rail, they look at
17 tanker trucks, and they are very interested in
18 working on pipeline incidents and
19 understanding how they can contribute to
20 training emergency responders to deal with the
21 pipeline incidents.

22 I believe we are referred to as a

1 partner representative there and TRANSCAER is
2 actively seeking pipeline operators to serve
3 on both their national task group and also as
4 state and regional coordinators. Their Web
5 site is transcaer.org, or .com, one or the
6 other.

7 We are also considering how we
8 might work with emergency management groups,
9 the Emergency Management Institute, the
10 National Emergency Management Association, to
11 help drive emergency responders to better
12 consider pipelines in their hazard mitigation
13 plans at the local level.

14 If that happens, we really do
15 stand a chance of institutionalizing pipeline
16 emergency response at the local level. The
17 National Fire Academy has also been a huge
18 supporter of our efforts and stands ready to
19 help deliver training and communications to
20 the emergency responders that they serve all
21 across the country.

22 We've stood up a pipeline

1 emergency response working group. I'll show
2 a slide on that here in a minute, and talk
3 more about that, and we've also conducted a
4 couple of pilot projects in the State of
5 Georgia and the State of Virginia, that I'll
6 talk about in more detail in the coming
7 slides.

8 The Pipeline Emergency Response
9 Working Group was stood up in June of 2012.
10 The goals of the group are to, they're listed
11 here; serve as a platform and a voice for
12 pipeline industry and emergency responders on
13 a strategic level, at a national level, again,
14 the goal being to institutionalize pipeline
15 awareness in the emergency response community;
16 serve as a platform for collaboration on
17 identifying and facilitating solutions, how
18 can we get this done?

19 A lot of folks on that team,
20 you'll see a list in a moment, they're plugged
21 into every organization that stands a chance
22 of contributing to this effort, so I think

1 there's a real opportunity there for that
2 collaboration.

3 One item that we want to focus on
4 is creating an inventory of existing resources
5 that can be used to help institutionalize
6 pipelines in the emergency response community.
7 So we know that we need to leverage existing
8 resources. What are those resources and which
9 ones can best serve our mutual goals?

10 And then, of course, we want to
11 address gaps in those resources and see how we
12 can update those to better serve pipeline
13 emergency response. Here are the members of
14 the Emergency Response Working Group. We have
15 every representation from the pipeline
16 industry, from emergency responders, and from
17 government.

18 I want to mention that, Jerry
19 Rosendahl, who's on this committee, is a
20 member of the working group, Lanny Armstrong,
21 who is on the liquids committee, is a member
22 of the working group, and I did also bold

1 Larry Jhalmarson's name from Williams Gas
2 Pipeline. He represents INGAA and is retiring
3 from Williams, and it's unfortunate. He's one
4 of the co-chairs, along with Lanny Armstrong,
5 of the working group and brings a wonderful
6 perspective to the team, and we're sorry to
7 see him go.

8 So we need to deal with his
9 departure and find another co-chair from the
10 industry that can represent industry's
11 concerns.

12 The next topic that I wanted to
13 mention is the Georgia pilot. I have to admit
14 that I have not personally been involved in
15 the Georgia pilot, so I don't have much to say
16 about it. It's led by PHMSA's southern
17 region. Mike Khayata is the primary lead
18 there in the southern region.

19 It's a working group of pipeline
20 operators, emergency responders, and
21 regulators, very similar to the National
22 Pipeline Emergency Response Working Group, but

1 focused, really, on issues in Georgia. And
2 their goals are to establish and sustain
3 effective communication between emergency
4 responders and pipeline operators, develop
5 training specific to Georgia firefighters, and
6 develop a model, then, that's transferrable to
7 other states.

8 I hope we can give you some more
9 information about that Georgia pilot in the
10 future.

11 Generally, we're trying to
12 communicate with the emergency response
13 community. We've been at multiple conferences
14 and meetings over the last year. We went to
15 the HOTZONE conference down in Houston, a
16 major hazmat conference. We went to the
17 International Association of Fire Chief's
18 hazmat conference in Baltimore, hosted a booth
19 there and provided a presentation.

20 We did the same thing at the Fire
21 Department Instructors Conference, although we
22 didn't present there, it's very difficult to

1 get on the agenda there, we did host a booth
2 and delivered many thousands of brochures to
3 local emergency responders there that talked
4 about our programs and tried to educate
5 firefighters about pipeline safety.

6 The Continuing Challenge

7 Conference out in Sacramento and the Midwest
8 Hazmat Conference. We've attended both of
9 those as well. We also published, I believe
10 now, three articles, or it may only be two
11 articles, in fire service publications. One
12 was in Fire Chief Magazine and the other one
13 was in Fire Rescue, I believe.

14 And we have a host of resources
15 that are managed by PHMSA that I think can,
16 maybe not managed by PHMSA, but are at least
17 integral to the work we do, that we can
18 leverage in helping to improve pipeline
19 safety.

20 The first, obviously, is the
21 National Pipeline Mapping System. It's a
22 great resource for emergency responders to

1 understand where pipelines are in their
2 communities. I think one of the biggest
3 challenges now is that pipelines are
4 underground, they're out of sight, they're out
5 of mind, pipeline incidents are rare, and when
6 they do happen, are catastrophic.

7 We constantly talk about the fact
8 that pipeline incidents are very low risk,
9 very high consequence, and because of that,
10 these low-risk, high-consequence issues often
11 don't get the kind of attention that other
12 issues do within the emergency response
13 community, so that awareness is key, and the
14 Pipeline Mapping System can at least show
15 folks where the pipelines are in their
16 communities.

17 Some changes can be made to that
18 system to improve its utility for emergency
19 responders, including adding emergency
20 response contact information for pipeline
21 operators, those kinds of things, and those
22 are all issues that are under discussion.

1 We have the Pipeline Emergencies
2 Training Curriculum, produced in partnership
3 with the National Association of State Fire
4 Marshals. Very, very comprehensive training
5 material. I've been told by many emergency
6 responders that it's too comprehensive, it's
7 too much, it needs to be pared down and broken
8 into digestible segments that are relevant to
9 emergency responders, and so there's some
10 discussion there around how to break up
11 training to make it more digestible and
12 relevant.

13 The Emergency Response Guidebook
14 was recently updated in 2012 and it now
15 includes updated and expanded pipeline pages
16 in the white pages of the ERG. Industry
17 contributed to that. Susan Waller, in
18 particular, from Spectra and INGAA, was
19 instrumental in helping us update those pages.

20 It discusses the basics of
21 pipeline emergencies; how to acknowledge or
22 recognize a pipeline release. You see gas

1 blowing out of the ground, you see water
2 bubbling, you know, odor of gas, those kinds
3 of things, and then the initial steps that
4 emergency responders need to take to ensure
5 public safety in a pipeline incident.

6 I actually got some feedback
7 recently that some additional changes could be
8 made in future iterations of the ERG, and
9 certainly, that's always possible.

10 PIPA, the Pipelines and Informed
11 Planning Alliance, you know, building around
12 pipelines increases the potential consequences
13 of pipeline incidents. We all know that and
14 land use is a big deal in the vicinity of
15 pipelines. And PIPA does have some
16 recommended practices that address, directly,
17 the impacts of pipeline incidents and how
18 those potential consequences can be mitigated
19 with smart land use planning.

20 Call Before You Dig, obviously, if
21 you want to avoid a pipeline incident, don't
22 hit it with a backhoe. Technical assistance

1 grants, we offer \$1.5 million a year to
2 communities for a variety of technical
3 projects related to pipeline safety and one
4 eligible activity under the TAG program is
5 improving emergency Response at the local
6 level.

7 To do that, we've given multiple
8 grants to communities to create mapping
9 systems, improve their mapping data,
10 certainly, mapping data can be invaluable for
11 both planning and responding to pipeline
12 emergencies.

13 Our community assistance and
14 technical services managers are always
15 available to help coordinate and communicate.
16 Our stakeholder communications Web site and
17 other Web sites are fairly comprehensive and
18 describe a host of things that we're working
19 on right now. We've recently updated those.

20 And the last bullet here speaks to
21 a project that we are funding through the
22 Hazardous Materials Cooperative Research

1 Program, the money and project are being
2 administered by the Transportation Research
3 Board, and that project, HM15, if you go to
4 trb.org and look up HM15, you'll see the
5 description of the project.

6 The outcome of that project will
7 be a guide that will describe how pipeline
8 operators and emergency responders can best
9 communicate about pipeline emergencies. It
10 will address how information should flow
11 between operators and emergency responders,
12 and also how information should flow within
13 the emergency response community at a local
14 level to ensure that the right people know
15 what they need to do for pipeline emergencies
16 to respond effectively.

17 I also mentioned that NENA has
18 just stood up. NENA is the National Emergency
19 Numbers Association. They represent public
20 safety access points; 9-1-1 centers. They've
21 just stood up an application that helps
22 pipeline operators communicate directly with

1 the 9-1-1 centers in the communities they
2 traverse if there's an incident, and that was
3 the subject of a recent advisory bulletin from
4 PHMSA.

5 I think it's a fee-for-service
6 application. I don't know much about it, but
7 it's just something for your information. I
8 also know that there are lots of other
9 initiatives out there, API/AOPL has been very
10 active in emergency response, INGAA has been
11 very active in emergency response.

12 I haven't covered those things
13 because I'm not the expert on those, but, you
14 know, I hope that this has been at least a
15 good exposure to some of the things that we're
16 concerned about and working on.

17 CHAIRPERSON GARDNER: Thank you.
18 Do we have any questions or comments? Well,
19 obviously, Gene?

20 DR. FEIGEL: Sam, this is an area
21 I know next to nothing about. I'm just
22 curious. I mean, in terms of geographical

1 cover, and if not population cover, I've got
2 to assume that volunteer fire departments are
3 the first responders in a big chunk of the
4 country. I mean, I know they are where I
5 live.

6 How much uniformity and training,
7 typically, is there within a region, or a
8 state, in that regard? I guess my point being
9 is, if you could come to Connecticut, where I
10 live, and convince the State Association of
11 Fire Chiefs that you've got a module that's
12 important in their training, would it very
13 likely trickle down fairly uniformly?

14 MR. HALL: I appreciate your
15 question. I think Jerry may be able to best
16 respond to that, if I can put him on the spot.

17 MR. ROSENDAHL: I promised myself
18 I wasn't going to talk today, since this is my
19 first meeting, however, Gerry Rosendahl from
20 Minnesota, and from the fire area, the last
21 thing in the world I want to do here is
22 represent the fire service badly, or put any

1 kind of a, you know, bad, whatever, image on
2 them, but that's a very real question, and a
3 very good one, and in Minnesota, it's 90
4 percent of 20,000 firefighters are volunteer.

5 The number overall in very small -
6 - we have 785 fire departments just in
7 Minnesota and the actuality is, there is
8 uniform training, NFPA 1001 is the firefighter
9 1, 2 hazmat level training. It's all out
10 there, but the ability of all of those fire
11 departments to get all the training that's
12 needed down to every firefighter is just a
13 massive kind of a project.

14 As Sam said, a firefighter could
15 go through their entire career, volunteer or
16 career, without ever going to a serious
17 pipeline incident. And therefore, it's such
18 a low-risk, you know, low-frequency kind of a
19 situation, and how much time do the fire
20 department, in their training program, some of
21 which are, you know, they meet once a month
22 for an hour, or two, or three, to get the

1 basic training, and they're going to train on
2 the things that they respond to, which are
3 medicals.

4 You know, a very, very high
5 percentage of fire department's responses are
6 rescues, medical emergencies, whatever.
7 Thankfully, the actual trend on actual
8 structure fires is downward. It has been for
9 years, so that's the issue.

10 I made a couple of notes, Sam,
11 just, I think, that relate to this. I hope
12 they do. You know, we talk about awareness of
13 pipeline emergencies and certainly, there's
14 need, as you said, to break this down into
15 specifics, but I think we put together a
16 program and then it covers, you know, from
17 soup to nuts, on pipeline emergencies,
18 response, and everything you need to know
19 from, probably, the awareness level, to an
20 operational level, to a technician level, to
21 a specialist level, you know, how the hazmat
22 is divided up.

1 And, you know, you have people
2 that are there for the first night to learn
3 anything about it all the way to the 20-year
4 veteran, maybe in a career department, so it's
5 difficult.

6 The key here is to get it into the
7 small fire stations, to the individual
8 firefighters, and to give them enough of an
9 understanding of what they need, and it's a
10 very tough issue. We have a group in
11 Minnesota that does pipeline industry, does a
12 great job of going all over the state, putting
13 on workshops, you know, providing information
14 on their companies, their products, through
15 the care organization that we have in
16 Minnesota.

17 And number one, how to get the
18 firefighters to attend; the responders to
19 attend? Well, we've got one, kind of a, theme
20 in Minnesota; feed them and they will come.

21 MR. HALL: That's universal.

22 MR. ROSENDAHL: Works in Iowa too.

1 But even that, and they do that year-to-year,
2 we get the same people that are there, and the
3 ones we miss, we still miss a lot of them.
4 This is a huge effort, need, whatever, and
5 it's just very difficult. So I think you just
6 have to be persistent with a consistent
7 message and that's, you know, what we need to
8 do. So that's my comment on that. Thank you.

9 CHAIRPERSON GARDNER: Jeff.

10 MR. WIESE: Well, first of all,
11 thank you, and no need to be a shrinking
12 violet here, I don't think anybody either
13 expects and/or wants that, so appreciate your
14 comments any time you make them and thank you
15 for being here.

16 Would just add, you know, we've
17 been in alignment with NASR for a long time on
18 this and we did work, and I think the chiefs
19 were involved, maybe the volunteers, on the
20 development of pipeline emergencies. There is
21 no one answer to this issue. I mean, Gene,
22 you raised a, you know, very relevant point.

1 I think everybody understands it. That's why
2 I think you hear Sam saying that we were
3 trying to get into established mechanisms for
4 delivering this stuff.

5 We used to think, at one point in
6 time, maybe in 2002, that we'd be able to
7 develop something, we'd be able to go out
8 there and solve it with that. It's very
9 useful fodder for solving it in a lot of other
10 ways. You know, I'm pleased to Deputy Butters
11 is in the house. I happened to notice him as
12 I came back in.

13 Tim's been very helpful to us in
14 making connections with various parts in the
15 emergency response communities. Sam's been
16 working with him and others to do that never-
17 ending, you know, it is a never-ending task.
18 The operators, you know, let us not sell short
19 what all the operators do on a regular basis.

20 And speaking personally, my only
21 frustration is the groups who offer services
22 to the operators who do really crappy work.

1 You know, they go out there and they handout
2 a pair of gloves, you know, as an incentive to
3 somebody to come to a meeting, or a steak.
4 People cough down a steak and they're gone,
5 you know?

6 I don't know that there is much
7 value achieved in that, so sorry, that was
8 more rhetorical than anything else. It's not
9 to say that there is not a good exchange of
10 information. People meet each other and they,
11 sort of, know what to do when things go wrong.

12 As Tim tells me all the time, you
13 know, it's just a hazmat response, you know?
14 And of course, I think of them as a pipeline
15 response, but it is a hazmat response, you
16 know, of a different kind. So I think Sam,
17 and Tim, and others, are committed to working
18 on this. I know Richard Miller is here from
19 ICHIEFS and others, so we're really trying to
20 draw the emergency responders in.

21 We have them on all of the -- see,
22 I knew I could bait him up here if I said

1 that. We're trying to draw the emergency
2 responders in closer into pipelines so we have
3 more regular and ongoing conversations, but
4 perhaps it'd be prudent of me to put my tent
5 down and offer time a slot in there.

6 MR. BUTTERS: Thanks, Jeff. The
7 only thing I wanted to add is, you're spot-on.
8 As, you know, a fire chief myself for many
9 years, and a firefighter, we are generally
10 aware of pipelines, but we always felt that
11 the training, and as Jeff is fond of saying,
12 in the fire service, whether it career or
13 volunteer, you work with either shifts or
14 groups of people that work at certain periods,
15 and we'd always laugh that when the pipeline
16 presentation was done for B shift, A shift and
17 C shift, who were off that day, didn't get it.

18 And, of course, the pipeline
19 incident happens on A shift or C shift, not on
20 the shift that had the training. So that's,
21 sort of, the reason why we engaged with
22 Georgia about looking at different ways of

1 attacking this problem, because it is a
2 challenge, as Gerry indicated.

3 80 percent of the fire emergency
4 response community out there is volunteer,
5 although, the career systems protect,
6 probably, 80 percent of the population. So
7 it's really a risk-driven sort of issue, and
8 making the fire service aware of what the
9 risks are in their community, and kind of
10 developing training to address that is really
11 part of what we're looking at.

12 The other area, NFPA 472, which is
13 the standard for competencies for hazardous
14 materials response, is another focus that
15 we're looking at. We have representation on
16 that committee. Ironically, Larry is the
17 representative for the industry and he's
18 retiring, hopefully he'll stay engaged, but we
19 really need to make sure that the pipeline
20 industry is engaged, because that really
21 drives what the training requirements should
22 be.

1 And as was alluded to, what
2 training you provide to what I call the guys
3 that ride backwards in a fire truck, which are
4 the firefighters, is going to be much
5 different than the training that you're going
6 to provide to a command officer, or a
7 battalion chief, who has to actually institute
8 command operations at a pipeline incident.

9 So we're looking at, again,
10 through Georgia, is how we can break that up
11 so that we are really zeroing in on the kind
12 of training that's needed. And as Sam
13 mentioned, institutionalizing this so that as
14 a firefighter comes in and gets their basic
15 training, their recruit training, we integrate
16 pipeline awareness so they understand, yes, I
17 got to make sure that I understand how I'm
18 going to deal with these sorts of things,
19 because gas leaks and flammable liquid
20 incidents, fire departments run gas leaks all
21 the time.

22 It's mostly in the distribution

1 side, but it's a normal course of business,
2 and often, they become complacent and we've
3 had a lot of significant incidents where they
4 did let their guard down and some rather
5 tragic, almost near misses, occurred because
6 of that. And so it's just a constant, you
7 know, making sure that they're aware that they
8 go to keep their head in the game.

9 The other thing that we are
10 looking at is, and it speaks to Gerry's point
11 about low-frequency, high-consequence-type
12 scenarios, which pipelines are, is, we need to
13 take advantage of the lessons learned, and I
14 don't think that we have, generally, done a
15 good enough job of that.

16 For example, the incident that
17 occurred in West Virginia day before
18 yesterday, we need to find out how the
19 emergency responders handled that incident,
20 what did they know, what didn't they know,
21 were they aware of the pipelines, and what
22 actions did they take so that we can start

1 building that resource list and start closing
2 those gaps.

3 When I went to Marshal Michigan a
4 couple months ago, I was very surprised that
5 there was no comprehensive, or focused, after-
6 action study to look at the emergency response
7 to that incident. That was a significant
8 crude oil release, some say it was one of the
9 largest in the U.S. history, and there was no
10 real look at, how did that emergency response
11 system work, what actions were taken by not
12 only the fire department, but public health,
13 emergency management, law enforcement, all of
14 them had a piece of the action there because
15 those sort of lessons can be very, very
16 valuable to other communities that have those
17 incidents.

18 And then, you know, we can help
19 them better prepare themselves if it should
20 happen to them. When I was in Pennsylvania
21 with Cynthia on Monday, and I mentioned this
22 to Wayne, a very eye-opening day for me in

1 terms of the shale gas and oil production.
2 Just the magnitude of what's required to move
3 that energy and a lot of those facilities are
4 in rural areas where they're protected by
5 volunteer departments.

6 One of the questions I asked
7 Chesapeake is, what have you done to help make
8 sure that the emergency response community in
9 these areas are aware of these facilities?
10 And they have done that. They are working
11 with the local departments to make them aware.

12 And we need to take those lessons,
13 and those best practices, and begin to share
14 them in Texas, and Ohio, and North Dakota, and
15 other communities so that, you know, we're not
16 reinventing the wheel, and hopefully, you
17 know, getting ahead of the game here a little
18 bit.

19 CHAIRPERSON GARDNER: Are there
20 any other questions from the -- Don.

21 MR. STURSMA: One of our
22 discussion items yesterday, just want to talk

1 about what Dan just mentioned, concerned
2 whether there should be a requirement in state
3 law that anybody that hits a pipeline call 9-
4 1-1. Well, in some unfortunate experiences we
5 had, they call 9-1-1 and 9-1-1 doesn't know
6 what to do with a call like that. What they
7 will probably do is call the local fire
8 department and let them figure it out.

9 But if there's a presumption that
10 calling 9-1-1 is going to immediately get word
11 to the responsible pipeline company that
12 something is happening on their pipeline
13 system, don't bet on it. We had one case a
14 while back where it took two days to figure
15 out whose line that was.

16 MR. BUTTERS: That's a great
17 point, Don, and that was another take-away
18 that I took from Marshal Michigan. And the
19 supervisor at the 9-1-1 center, he had this
20 very, you know, sort of, offhanded comment
21 that just really resonated with me.

22 He said, you know, if I had the

1 ability to contact -- if I could have
2 contacted Enbridge when 9-1-1 was starting to
3 light up because people were getting these
4 odors of oil, if I had been able to contact
5 them and say, you know, are you seeing
6 something on your system in our community that
7 indicates there might be problem, they could
8 have probably gotten to that leak ten hours
9 before they did.

10 And I thought that was just very
11 unusual, because, you know, the 9-1-1 systems
12 I'm familiar with, they have contacts with all
13 the industries for the risks in their area,
14 and they can immediately call them, but that's
15 an area that we need to focus on.

16 In fact, we had not only NENA, as
17 Sam mentioned, but APCO, which is an
18 association that represents these PSAPs,
19 Public Safety Access Points, to begin
20 improving that communication system.

21 Another incident which just
22 recently occurred up in Paulsboro, New Jersey,

1 involving a derailment, one of the questions
2 that came out of an NTSB recommendation was,
3 are pipelines cited where derailments occur
4 because of the, you know, work that's done to
5 correct, or fix, wreck the train, as they say
6 in the business, to get that line back open
7 could involve excavation, to make sure that
8 pipelines are known.

9 It turned out that there were
10 three pipelines in that vicinity of that
11 derailment, probably all abandoned, but they
12 weren't known at that point, so that's another
13 area that we really need to make sure is
14 working, is that, you know, in the event of
15 these other transportation incidents, and
16 maybe an emergency call to 8-1-1 in these
17 cases would be valuable so that utilities can
18 identify what's in those areas, because on a
19 related point with the pipeline incident in
20 West Virginia this week, we were advised that,
21 one of the consequences of that was a rather
22 sizable fiber optic line was damaged, which

1 has compromised data and communication in that
2 area.

3 So there's other utility
4 challenges, in addition to pipelines, when
5 these transportation incidents occur, but the
6 connection between 9-1-1 and the companies are
7 critical. And Don is absolutely right, if
8 they call 9-1-1, that doesn't necessarily mean
9 that the company is going to be notified, but
10 we believe there are some alternatives,
11 there's some options, to facilitate that
12 immediate communication.

13 CHAIRPERSON GARDNER: Mike.

14 MR. BELLMAN: I'd like to kind of
15 take this a little bit to where Don was going
16 too, on the contacting 9-1-1. PHMSA issued an
17 advisory bulletin two months ago that is
18 problematic for a distribution company to
19 implement some of the things that were in
20 there, specifically, we should be calling 9-1-
21 1 on a loss of communications from SCADA.

22 Now, in a network distribution

1 system, I might have four or five different
2 points that are monitoring, and to lose
3 communications to one of them does not
4 indicate an emergency when I can look at the
5 other four and say, pressures are fine, let's
6 send somebody out to check the communication
7 line.

8 So it appeared that that advisory
9 bulletin was more towards the liquids than the
10 gas transmission, maybe, but I wonder if you
11 could comment on that and this issue that, if
12 we are constantly calling 9-1-1 on every
13 issue, you know, how often are we going to
14 become complacent from the fire service?

15 MR. BUTTERS: Well, let me take a
16 stab at that. I think the premise, the
17 spirit, of that is to, if you're seeing a
18 problem, a potential issue, that the local
19 community is made aware of it, and I take your
20 point that, you know, you don't want to create
21 a system where you're contacting them every
22 time there is, you know, a potential problem

1 that turns out to be nothing, because then you
2 get the whole Crying Wolf Syndrome.

3 And, you know, you get to the
4 situation, oh, geez, they're calling again,
5 and it's going to be nothing. And so when the
6 real deal happens, you know, you've missed it.

7 I think what it requires is some
8 logical discussions with the 9-1-1 systems,
9 and to me, that's where a conversation between
10 the industry, and NENA, and APCO, would
11 probably be helpful in terms of saying, all
12 right, look, we want to make sure that we're
13 addressing what the intent of this advisory
14 bulletin is, but we don't want to, you know,
15 create unintended consequences, and figure out
16 what the right system is.

17 To me, there's a solution in there
18 somewhere, but I think having the right people
19 at the table, and talk through it, and figure
20 out what kind of protocols need to be
21 developed so that, number one, they're not
22 being burdened with unnecessary contacts, and

1 at the same time, you know, they're not
2 getting the information that might be
3 relevant.

4 So that's, to me, how I would
5 probably approach it, but it's not going to be
6 an easy -- it's a complicated system out
7 there. There's a lot of PSAPs and some are
8 very sophisticated, like Fairfax, Chicago, et
9 cetera, have a very, you know, state-of-the-
10 art 9-1-1 system.

11 But, you know, where I have
12 property, for example, in rural Virginia, the
13 9-1-1 center is one person who also is the
14 dispatcher, is the call taker, is, you know,
15 a dogcatcher, I mean, so you've got, you know,
16 multiple hats in those sorts of systems and
17 we've got to figure out -- and, of course, as
18 you can appreciate, when there's a significant
19 incident, that 9-1-1 center just lights up.

20 I mean, you get many, many, many
21 calls and the ability for, you know, those
22 centers to allocate resources to handle a

1 particular issue can be a challenge as well,
2 but I think, through training, and again,
3 talking to some of the folks I know in that
4 business, a lot of the call takers, when they
5 get a pipeline incident, they're not even
6 aware of the right questions to ask.

7 You know, we went through this
8 issue with the EMS response where -- because
9 a lot of the folks that answer phones at 9-1-1
10 centers are not emergency responders. They're
11 civilians that are trained and they don't
12 have, necessarily, any field experience, so
13 you have to develop sort of a key questions to
14 put in front of them so that they are asking
15 the right things.

16 And training is something that
17 they said that they would like have for their
18 personnel that staff these 9-1-1 centers about
19 pipeline emergencies, just to give them an
20 idea, you know, what's involved and, you know,
21 that's where you can develop those contact
22 numbers so that if they do get a pipeline

1 incident in their community they know, okay,
2 here are the four, five operators in my
3 community, and this is who we would notify.

4 And likewise, the operators would
5 know, you know, what 9-1-1 centers serve their
6 system.

7 CHAIRPERSON GARDNER: Thank you,
8 Deputy Administrator, who did not hear my
9 ambition to be out of here by noon.

10 MR. BUTTERS: But, Chair, you
11 always reserve the right to cut me off.

12 CHAIRPERSON GARDNER: In the
13 interest of time, we're not going to take a
14 break, but obviously, we're all semi-adults
15 here and so if you need one, please feel free
16 to do so. Are there any comments or questions
17 from the public? Okay. Hearing none, all
18 right. Stop playing. We'll move on to Agenda
19 Item 3, which is Fitness for Service, and Alan
20 just left.

21 MR. WIESE: He was one of the
22 adults.

1 CHAIRPERSON GARDNER: Okay. We do
2 have a panel that's also going to participate
3 with Alan when he gets back. We hope that
4 it's not too long and you had the panelists?
5 Do they know who they are?

6 MR. WIESE: Yes, and another one
7 of those was an adult too.

8 CHAIRPERSON GARDNER: Why don't we
9 just take five minutes?

10 MR. WIESE: Yes, right. Thank
11 you.

12 CHAIRPERSON GARDNER: 11 o'clock,
13 folks.

14 (Whereupon, the foregoing matter
15 went off the record at 10:54 a.m. and went
16 back on the record at 11:03 a.m.)

17 MR. WIESE: With the Chair's
18 permission.

19 CHAIRPERSON GARDNER: Okay. Oh,
20 you're here.

21 MR. WIESE: Sorry.

22 CHAIRPERSON GARDNER: Those liquid

1 guys, you can never trust them. Okay. Alan
2 is back. Anything you want to say, Jeff?

3 MR. WIESE: I just wanted to make
4 sure that everyone in the room, I'm not sure
5 all of you, and some of you are newer members,
6 make sure that you knew Alan. We did this day
7 before, Alan Mayberry is my Deputy for Field
8 Operations. In that regard, he has the great
9 joy of running all the emergency response, you
10 know, incident calls we do.

11 He also directs the oil spill
12 program as well as field operations. Behind
13 me, since we did this before in the liquid
14 committee, we also have Linda Daugherty, who
15 is my deputy for policy and programs. She
16 pretty much gets to inherit everything else,
17 and while that sounds disproportionate, I
18 think both of them think they have their hands
19 full.

20 So I've asked Alan to sort of
21 kickoff a panel that we think is really
22 important, and again, it's sort of a precursor

1 discussion as we move towards IMP2.0. So with
2 no further ado.

3 MR. MAYBERRY: Okay. Thanks,
4 Jeff. And you can thank me for that impromptu
5 break, I guess. I was nowhere to be found,
6 but all right, the topic today, we decided to
7 add it to the agenda, Fitness for Service, the
8 reason being, for education and to establish
9 the public record on this concept. It's been
10 used in industry. I'm familiar with seeing it
11 used related to pipelines, but today, you will
12 hear from two of your fellow committee members
13 on what fitness for service means for their
14 respective areas.

15 You know, as we go forward, as
16 Jeff mentioned, toward IMP2.0, you know, is
17 there a place for fitness for service? I can
18 tell you today, we don't have plans, there are
19 not immediate plans when we leave here, nor
20 are we currently working on a policy, or
21 regulations, for fitness for service.

22 However, we are interested in

1 understanding, you know, as we put all the
2 pieces together, where this could fit in, you
3 know, to how operators manage pipelines going
4 forward and then how we, as a regulator,
5 oversee pipelines. So without further ado,
6 and I'm trying to be on-target with our noon
7 departure, I will turn it over to our
8 panelists.

9 We have two today, Sue Fleck and
10 Chad Zamarin. I think, Chad, you'll go first
11 and Chad will give you the perspective from
12 the Inner State Natural Gas Association of
13 America, so thanks, Chad.

14 MR. ZAMARIN: Thank you, Alan, and
15 I do think my goal here is, well, twofold,
16 one, to make sure we get out by noon, and two,
17 to hopefully provide a bit of an overview and
18 some context around the term fitness for
19 service. It's a fairly broad term and I hope
20 to try to put in context of an inner state
21 pipeline operator and, potentially, the
22 framework of our regulatory environment.

1 It's also, hopefully, the outcome
2 is that people understand it as a process for
3 addressing technical issues in a disciplined
4 manner. It's not a panacea for every issue.
5 It's more of a process that we are trying to
6 apply some specific technical challenges.

7 In particular, I'm going to focus
8 a little bit of what we've done on how we're
9 trying to solve the challenges that we have
10 with pre-regulation pipe, pipe without a
11 pressure test, pipe that may have less than
12 desired records, because they were installed
13 at a time where those standards weren't in
14 place.

15 I'm sure there are a lot of
16 different definitions out there, but to try to
17 put a little bit of thought to what fitness
18 for service means, we see it as the ability of
19 a system or component to provide continued
20 service within established regulations and
21 margins for safety.

22 And it is a well-accepted

1 approach, seen in a lot of different
2 industries, to evaluate the condition of a
3 system or a component to determine
4 acceptability for continued operation.

5 It's been applied in the petroleum
6 refining, petrochemical, pulp and paper,
7 nuclear, coal, and gas fired electric power
8 industries. I would even say that the way
9 that we're viewing fitness for service, it's
10 been applied and it's really a methodology
11 that shows up -- it's a term for a broad set
12 of methodologies that show up across, you
13 know, virtually every industry.

14 One of the specific applications
15 in the pipeline industry was as early as the
16 1980s and is really the foundation for how we
17 assess metal loss damage in our pipelines, how
18 we characterize that damage, and determine
19 whether or not the pipeline's pressure
20 carrying capacity has been reduced to the
21 point where a repair needs to be made.

22 A few more thoughts around fitness

1 for service for pipeline systems. It's a
2 disciplined approach to assess the condition
3 of a pipeline to demonstrate safety and
4 reliability. I think, to Alan's comments,
5 this is not meant as a bypass for strong
6 regulations. In fact, we view it as a
7 potential foundation for regulations that are
8 intended to address the challenges that we're
9 facing.

10 It's process-focused, it's based
11 on sound engineering, and I would submit that,
12 in the context of how we're defining fitness
13 for service, there are numerous examples.
14 I've showed just a few here. The alternative
15 MAOP rules that are in Part 192 that describe
16 the methodology for establishing a higher
17 design factor for a pipeline than the
18 traditional design factor that's in our code.

19 It requires multiple iterative
20 steps of advanced engineering analysis and
21 assessment in order to achieve a higher design
22 factor, very process-based, very balanced

1 against the desirable outcome. Weld seam
2 integrity, there was a DOT effort several
3 years ago to establish a process for
4 determining the risk associated with
5 potentially deficient weld seams, ERW in
6 particular, pre-1970 low-frequency ERW, but
7 that process has been applied to many
8 different types of seam welds.

9 It's referenced in our regulations
10 and it's applied by operators to identify
11 where additional activities beyond, really,
12 the minimum code requirements are required for
13 pipelines that may have unique conditions.
14 Process-based, it's a very detailed process
15 that we go through to determine whether or not
16 a pipeline requires more than just your basic
17 regulatory maintenance and inspections.

18 Threat-specific integrity
19 assessments. The code has much of it built
20 in. When we perform integrity management,
21 we're required to consider a multitude of
22 threats and we have to go through very threat-

1 specific assessments for addressing those
2 various threats to pipeline safety, and also,
3 defect-specific engineering critical
4 assessment.

5 I would offer that, the prior
6 slide that spoke to B310G and our metal loss
7 assessment, that's a form of engineering
8 critical assessment, a form of fitness for
9 services, and that's well-established in the
10 pipeline industry.

11 So I wanted to try to dispel a
12 little bit of the mystery around fitness for
13 service, that I think it is something that is
14 more of a concept, provides a framework for
15 taking a process, an engineering approach, to
16 addressing some of these issues.

17 I'm going to relate it to the
18 significant focus that we have right now on
19 maximum allowable operating pressure and pre-
20 regulation pipelines. Obviously, a lot of
21 that activity and focus in this area, numerous
22 PHMSA advisory bulletins, obviously, many of

1 the NTSB recommendations relate to this
2 particular issue.

3 We've also seen the California
4 MAOP order and the emphasis on this particular
5 issue. A lot of discussion about the need for
6 a standard on records so that we ensure the
7 systems, and the data, and the information
8 upon which we're making decisions properly
9 reflects the assets that we have in the
10 ground, and so the standard of traceable,
11 verifiable, and complete has been put out
12 there by NTSB, further defined by PHMSA, and
13 is already being applied by operators. We'll
14 talk a bit about that.

15 But I wanted to just highlight,
16 and I know it's tough to see up on the screen,
17 but this slide is meant to show, this is an
18 issue that is expansive, that is complex and
19 challenging. Maximum allowable operating
20 pressure touches just about everything we do
21 as an operator.

22 It's, in effect, the legal limit

1 for the pipelines that we operate and across
2 the bottom it shows that it affects how we set
3 alarm set points and gas control, it affects
4 how we set pressure protection points on
5 equipment out in the field, it affects how we
6 setup our compressor, our horsepower, how we
7 do risk assessment, it's a factor in almost
8 every engineering analysis that we do, so
9 getting it right is, obviously, critical to
10 just about every aspect of our business.

11 So I think we recognize, as an
12 industry, the importance of maximum allowable
13 operating pressure and getting it established
14 correctly the first time and then maintaining
15 it for the life of the asset.

16 So in light of the outcome of San
17 Bruno and many of the other incidents, we
18 recognize the need for a fitness for service
19 protocol for pipelines built prior to
20 regulations that may not have an MAOP
21 qualified to today's standard.

22 So I'm going to talk,

1 specifically, about how the inner state
2 pipeline companies have developed a process
3 that we're not claiming to be the final
4 solution, but at least we're putting out in
5 the public and in our operator community as a
6 methodology for addressing this issue, and
7 I'll talk a little bit about that briefly.

8 So our charge has been to develop
9 and apply guidance, to address records at MAOP
10 for pre-regulation pipe, to address the NTSB
11 recommendations and the PHMSA advisory
12 bulletins, and set a standard for pipelines
13 built prior to regulations, and where
14 pipelines don't meet that standard, identify
15 the actions that an operator will take to
16 mitigate that issue within some defined period
17 of time.

18 I won't go through this in detail.
19 I have a white paper that, a one-pager, I'll
20 pass to Cheryl and she can pass it out to the
21 committee. There's also a white paper that
22 was published, a presentation that was done at

1 the IPC, I think it's important to note that
2 the team that's been developing this process
3 for this particular issue has produced much of
4 this work almost 18 months ago.

5 So again, not trying to claim the
6 final answer has been achieved, but trying to
7 put a framework out there for others to see
8 and to weigh-in on. It's evolved over that
9 period of time, but for the most part, I think
10 our feedback has been that people recognize we
11 need a process approach to addressing this
12 issue.

13 So I'm not going to go through
14 this in great detail, and the one-pager gives
15 you a better example of how various pipelines
16 result in different outcomes. I'll touch on
17 it briefly, but let me just jump ahead for
18 now.

19 We did put out a process for
20 verifying pipeline records. This is kind of
21 the start for the operators. In the inner
22 state side, most operators are going through

1 this right now. Jeff mentioned that we have
2 next year to report our gaps in records for
3 pipelines and the establishment of MAOP.

4 That will be reported in our
5 annual report filing in June of next year.
6 And so operators are going through, and we've
7 proposed, kind of a systematic approach. This
8 is the high-level view, but we have a very
9 detailed protocol for taking your pipelines
10 and the records for those pipelines through a
11 process to verify the maximum allowable
12 operating pressure, and where that can't be
13 verified, we propose this fitness for service
14 approach.

15 Not meant to see the process on
16 this, although, I do have, in the last two
17 slides, a little bit of an easier view, but
18 for now, I'm just going to speak through it,
19 the point of the process, and answer any
20 questions on any specifics anyone has, but we
21 could certainly spend days on charting our way
22 through the process map to address particular

1 unique pipeline issues.

2 I think we all know the
3 legislation included a requirement to address
4 MAOP and records, and to address pipelines for
5 which a pressure test was not performed on
6 high-consequence areas and Class-III and IV
7 pipe. As I mentioned, we commissioned a
8 workgroup, we've had broad industry
9 involvement, and we already have operators
10 aggressively researching their systems.

11 This first page of the process map
12 characterizes your pipeline and whether or not
13 you've been able to establish a pressure test
14 performed in accordance with current
15 regulations, and if not, is there any other
16 form of pressure testing that's been performed
17 to help categorize the types of issues that
18 you're dealing with on a pipeline for which
19 you haven't had an established pressure test
20 and MAOP.

21 The second page of our process
22 really addresses, once you've characterized

1 the type of pipeline situation that you're
2 dealing with, whether or not that's a high,
3 medium, or low-risk situation. And what we
4 do, for the most part, I think one take-away
5 is, we've proposed that, for pipelines in
6 high-consequence areas, Class-III and Class-
7 IV, if you can't produce that traceable,
8 verifiable, and complete documentation to
9 support a pressure test was performed, you're
10 going to have to address that issue.

11 You're going to have to either
12 pressure test, you're going to have to reduce
13 the pressure of the pipeline by an amount
14 virtually equivalent to a pressure test,
15 achieving a factor of safety, or you're going
16 to have to replace the pipe.

17 And we've proposed, for that
18 highest risk portion of pipe, a seven-year
19 timeline, again, not claiming that it's the
20 right answer. We've tried to base a lot of
21 our work on solid technical foundation. We've
22 tried to be aggressive, but I think the

1 framework is what, most importantly, we've
2 tried to achieve.

3 Where pipeline is not in a Class-
4 III or IV, in a high-consequence area, even
5 though the legislation doesn't necessarily go
6 that far, we've proposed similar solutions for
7 those categories of pipe. We have introduced
8 the concept, or put a little more meat on the
9 concept, that was introduced in the
10 legislation of an alternative technology for
11 establishing a factor of safety.

12 You know, we're primarily focused
13 on inline inspection as a methodology.
14 There's some precedent on the liquid side of
15 the industry. Back in the late-'90s, a
16 regulation was developed by PHMSA to address
17 pipelines without pressure test documentation
18 or a pressure test. It was termed a risk-
19 based alternative to establishing MAOP.

20 I would call it a fitness for
21 service process for establishing MAOP in lieu
22 of a pressure test. And so we've tried to

1 bring in some of the precedent that's in
2 place, but at the same time, we've made it
3 clear that we're either going to have to
4 demonstrate an alternative technology that can
5 establish equivalent factor of safety, or
6 better, as a pressure test, or we're going to
7 have to pressure test, or reduce pressure, or
8 replace those pipes.

9 Again, we're going to have to
10 figure out over what time frame, but I think
11 the point is, we've tried to show that there
12 are a few different paths. We have also tried
13 to identify that there's a category of pipe
14 for which we think ongoing operations and
15 maintenance, in accordance with the
16 regulations, makes sense.

17 We proposed less than 30 percent
18 SMYS as the operating pressure under which,
19 not that you're going to operate and maintain
20 it to a different set of standards, but to
21 have that original establishment of MAOP, not
22 a technical issue, not a safety issue, like it

1 is for a pipeline that operates at a higher
2 percentage of its design capacity.

3 That is a very brief, I know, kind
4 of whirlwind overview of a fairly complex
5 issue, but I wanted to at least try to put out
6 a view of how to take on a fairly challenging
7 topic. We do have a legislative mandate. I
8 know that PHMSA has a lot of work to do to
9 address this issue, but I can tell you that,
10 from the operator community, we are trying to
11 understand and plan for how we address this
12 issue.

13 I think we recognize the need to
14 bring all pipes up to a common technical
15 standard for establishment of MAOP. One
16 differentiation I would like to make that
17 sometimes gets lost in this. Here, in this
18 presentation, in this process, we're not
19 trying to solve all of the challenges
20 associated with pre-regulation pipe, old pipe
21 issues, we're trying to make sure that just
22 the pressure, the maximum allowable operating

1 pressure, was properly established.

2 There's still a whole other host
3 of considerations that need to be taken into
4 as far as how you operate and maintain and,
5 you know, you can think of a lot of different
6 methodologies for addressing those issues, but
7 this is meant to try to put the issue to rest
8 with respect to, do you have a well-qualified
9 MAOP?

10 How you operate and maintain, you
11 know, on an ongoing basis to stay at that MAOP
12 is a different issue. It's not something
13 we're ignoring, but just to hopefully help.
14 Sometimes folks get confused there. And with
15 that, I will hand it off, or open it up.

16 MR. MAYBERRY: I guess we will
17 move on to the next panelist, if we could hold
18 questions, unless you have a burning question
19 right now, we'll just move on to Sue, who will
20 provide the perspective from American Gas
21 Association.

22 MS. FLECK: This is Sue Fleck,

1 National Grid, representing AGA. I will be
2 skipping over some of my slides because they
3 were talking to transmission, and I think Chad
4 covered a lot of the transmission issues
5 significantly better. I will state, though,
6 that there are some transmission pipelines
7 embedded within distribution systems. They're
8 usually shorter sections. They're treated a
9 little bit differently, so, you know, they're
10 out there, but I'm going to focus more on --
11 okay. Perhaps. There we go.

12 Okay. I was using the wrong
13 button. It's operator error. Nothing wrong
14 with the technology here. The fitness for
15 service is a concept that can be, you know,
16 it's not brand new. It's not fully defined,
17 as Chad said, you know, it's kind of evolving
18 over time.

19 Many have been looking at it for a
20 significant amount of time, others are just
21 starting to get on the bandwagon a little bit,
22 but it's really all about considering what you

1 have in your system, falls very nicely in with
2 integrity management, you know, know your
3 system, understand your risks, develop, you
4 know, plans to address those risks, and
5 mitigate what's going on.

6 So, you know, one of the things
7 that we hear a lot in the distribution
8 business is statements like, well, cast iron
9 and bare steel pipe aren't any good anymore.
10 You've got to get rid of them, or pre-1970
11 pipe isn't any good. You have to get rid of
12 it.

13 And really, the fitness for
14 service concept allows you to step back from
15 those broad generalizations and really think
16 about that particular material in the
17 particular system that it's in, and is it
18 still fitness for service or not? And in many
19 cases, you can answer the question, yes, and
20 in a different company in a different part of
21 the country under a different operating
22 pressure, the answer is no, you know, that

1 that particular material is not fitness for
2 service.

3 So it really is a complex issue
4 and we have to spend a lot of time thinking
5 through it on a company-by-company basis and
6 on our specific systems. I can also say that
7 there is significant effort, currently,
8 between AGA and NAPSAR to kind of work together
9 to understand some of these issues.

10 There are other groups of
11 stakeholders getting together to understand
12 fitness for service and to try to put some
13 more logic behind the decisions and to create
14 a larger body of information for the public
15 and all the stakeholders to use in
16 discussions.

17 Again, let's make sure I get the
18 right one. I will skip over and get to
19 distribution. On distribution fitness for
20 service, unlike the transmission side, there's
21 a much broader variety of materials that we're
22 considering. And if you look at your

1 distribution systems across the United States,
2 you have cast iron, you have bare steel, you
3 have different varieties of coded unprotected,
4 coded protected, coded sort of protected,
5 steel pipe.

6 You have different kinds of
7 plastics, copper, ductile iron, wrought iron,
8 there's all different kinds of things out of
9 there and there's also a broad range of
10 different kinds of fittings, meters,
11 regulators, relief valves, check valves, quite
12 a great variety.

13 Pressures will range from a
14 quarter of a pound internal pressure to, I'd
15 say, over a 125 pounds. There are some
16 distribution systems that are a 150, 200
17 pounds, so it's quite a broad range. And when
18 you look at each one of these materials and
19 try to make an evaluation on the fitness for
20 service, you have to understand that each has
21 their strengths and each has their weaknesses.

22 The current standard for

1 distribution systems is, really, plastic pipe,
2 but plastic pipe is more flexible, it doesn't
3 leak as much, well, it hardly leaks at all,
4 it's easier to install, you have a broad range
5 of sizes, it can go up to, you know, higher
6 pressures, but it is more susceptible to
7 excavation damage.

8 A backhoe tooth can go through a
9 plastic pipe easier than it can a steel pipe.
10 So that plastic is not fit for every possible
11 place. Sometimes you have to install steel
12 pipe. So just to kind of put it out there, in
13 cast iron, you know, as I said earlier, a lot
14 of folks believe that cast iron is no longer
15 fitness for service. It's not the case.

16 Very large diameter cast iron
17 pipe, we have some 42 inch in Brooklyn, was
18 installed appropriately, it's properly joined,
19 and that pipe's going to be there long past
20 any of our lifetimes, and it will be fitness
21 for service for a significantly long period of
22 time.

1 So you can't just use a broad
2 brush to say a particular material, or a
3 particular age pipe, or a particular type of
4 fitting is not fitness for service unless you
5 understand the service that it's in, the way
6 it was installed, the way it's been maintained
7 and operated over the years, and then those
8 decisions can be made.

9 So when we talk about distribution
10 fitness for service there's really two
11 different discussions. There's one on new
12 construction and new construction has to go in
13 based on federal and state guidelines,
14 different materials that are considered more
15 broadly fitness for service today, and they
16 are installed in a different manner, with
17 better documentation, and following all the
18 current codes and standards, which are at a
19 significantly higher level than what was
20 installed in the past.

21 The second side of it is, after
22 construction, the operators have to take a

1 look at different ways of continuing to
2 determine whether that product, that pipeline,
3 that service continues to be fitness for
4 service. It may have on the day it was
5 installed and now, 20, 30, a 120 years later,
6 it no longer is.

7 And the way the distribution
8 companies do that is, they collect data from
9 ongoing operations and maintenance. They
10 collect it through gas leak detection surveys,
11 through corrosion surveys, pipeline patrols,
12 marking, and watching excavation activities to
13 prevent damage, and essentially, taking all of
14 those pieces of data and making a
15 determination on whether that section of pipe
16 continues to be fitness for service or not.

17 And to kind of give you a little
18 bit of a feel for it, I'll give you an example
19 from our territory. We have a couple hundred
20 thousand bare steel services across our
21 service territory. And in general, bare steel
22 is going to corrode, so we know that that

1 needs to have a replacement program in place.

2 And we took a look at all of our
3 bare steel services across our territory and
4 developed a replacement program for that.

5 Then we drilled down on that a little bit and
6 took a look at pressures, so we figured, you
7 know, higher risk would be higher pressure.

8 So those services that are high
9 pressure are going to be replaced on a shorter
10 time frame. Further dug into it and looked at
11 operating, and corrosion, and leak history on
12 those and determined that high pressure inside
13 services, particularly those that are in flood
14 zones, are at an even higher risk, and those
15 services have all been removed from our
16 territory.

17 We put them into, I think it was
18 about, a one-year, possibly a two-year,
19 replacement program, where the other ones are
20 on five years, and some are on a 25-year
21 cycle. But again, it's looking at the
22 operating conditions and the history and

1 knowledge you have about those items, those
2 assets, within your system and how they're
3 operating over time.

4 So local distribution companies
5 use a lot of different tools, as I was talking
6 about, and similar to what Chad was talking
7 about on the transmission side, your decisions
8 are all about, should I repair this pipe,
9 should I rehabilitate it, should I change the
10 operating conditions, such as lower the
11 pressure or provide some other support to it,
12 or flatout replace it?

13 And on distribution companies, the
14 assets are generally smaller, generally less
15 expensive, and you'll see more replacement
16 programs, less rehabilitation programs. There
17 aren't as many opportunities to rehabilitate
18 distribution piping as there are on the
19 transmission side.

20 But we collaborate with our state
21 pipeline safety representatives and teams, and
22 sometimes the commissions, to talk about the

1 options that we have. And I can give you
2 another example, one of the states that we
3 operate in, we have quarterly meetings during
4 the year where we actually come in with all of
5 our information about how our pipes are
6 operating, leak rates, and other performance
7 factors, and we sit down and have an all-day
8 meeting, and talk with the safety regulators,
9 and come to some agreements on whether we
10 think our replacement programs need to be
11 accelerated or decelerated, or if we need to
12 add different materials into the program than
13 had been in the past.

14 So it's a nice collaboration. I
15 think we come to a program for the upcoming
16 year that makes a lot of sense from both the
17 state regulator's perspective and from the
18 utility company's perspective. And I think we
19 often times come to better results when we
20 have those collaborations.

21 So basically, in summary, you
22 know, I'll throw a term out that I didn't

1 mention earlier in the presentation, it's
2 really, you know, fitness for service for the
3 distribution companies is all about integrity
4 management principles. It's all about
5 understanding your system, understanding
6 what's in your system, understanding how it
7 works, how it operates, how you've maintained
8 it, and whether or not it is continuing to be
9 fit going forward.

10 And when the determination is made
11 that the fitness might be coming to an end, or
12 this particular bit of pipe needs to be
13 replaced, then we use smart modernization
14 techniques, essentially, to go after it, and
15 that's developing rehabilitation and
16 replacement programs, figuring out, you know,
17 how much time we should take, based on the
18 performance, to replace a particular system,
19 and then enacting those replacement programs
20 over long times.

21 Sometimes they can be, you know,
22 one-year programs, and sometimes, in the case

1 of our cast iron, our extensive cast iron
2 networks at National Grid, we're looking at,
3 like, 30, you know, to 40-year replacement
4 program in some of the states where we do
5 business.

6 But again, it's based on the
7 performance of those particular assets. So a
8 little different. Philosophically and
9 methodologically, you know, similar to what's
10 happening on the transmission side. Since the
11 assets are different and the use are different
12 on the distribution side, there's a little
13 more flexibility and each company has to kind
14 of come up with their own way of evaluating
15 fitness for service, so it's a little bit
16 different on the actual playing-it-out end of
17 the equation. That's all I had.

18 MR. MAYBERRY: Great. All right.
19 Thanks, Sue and Chad. I guess, just to wrap-
20 up, you know, before we go to questions, you
21 know, as our focus is pipeline safety, you
22 know, we are interested in this concept as a

1 way to, you know, establish the confidence in
2 the safe operations of a pipeline and also
3 ensure that confidence is maintained.

4 You know, it's a concept; expect
5 to hear more about it. We're not predisposed
6 at this point, like I said, to write a policy,
7 or write regulations on it, but perhaps it
8 does have a place as we go forward with
9 IMP2.0.

10 You know, just another point too,
11 you heard mention of grandfather pipelines and
12 the possible application for those, you know,
13 the issues of record keeping, that sort of
14 thing. You know, you've also heard from our
15 administrator and deputy administrator on, you
16 know, seeing the gathering lines that have
17 gone in, have been going in for the last
18 several years.

19 We really don't see this as an
20 alternative or a method to establish. If
21 those weren't installed using proper
22 practices, we don't see an off-ramp that would

1 take the place of good installation practices.
2 As you well know, our code's well-established,
3 B318 is well-established; B314.

4 If the newer gathering lines that
5 ultimately come under our regulations aren't
6 installed, you know, according to good
7 practice, with quality practices, then I don't
8 really see this as an off-ramp as we go
9 forward for those types of facilities.

10 And with that, I guess I'll open
11 it up for questions.

12 DR. FEIGEL: Sue, I think in your
13 first slide you alluded to an API standard, I
14 assume it was 579, saying it's not applicable
15 to fitness for service analysis, and
16 obviously, for plastic pipe, and probably, to
17 some extent, for the less ductile stuff, but
18 I would take issue that it's not at all
19 applicable to anything you're doing, which is
20 kind of what you seem to be saying.

21 MS. FLECK: And I probably didn't
22 mean to characterize that way. What I meant,

1 and the intent of that is, that you can't take
2 that standard and say it applies wholly and
3 completely to distribution pipelines. I agree
4 with you, there's certainly learnings within
5 that standard and concepts within that
6 standard that are perfectly applicable to what
7 we're talking about, which is not the standard
8 as a whole.

9 We want to make sure that people
10 don't misunderstand the term fitness for
11 service and think it means that standard,
12 because that would be a confusion point, but
13 you're right; you're absolutely right.

14 MR. STURSMAN: Well, I think we all
15 agree that trying to figure out some practical
16 way of dealing with both the physical, the
17 service, and the economic issues around, I
18 guess, the change in what is acceptable for
19 maximum allowable operating pressure, that's
20 a big issue we have coming down the road.

21 But in the meantime, you both went
22 through your presentations very quickly. I

1 did not get a chance to digest everything. I
2 wonder if those could be made available to us?

3 MS. FLECK: Mine has already been
4 made available and you also have on your desk,
5 two pages, one with some transmission concepts
6 and one with some distribution concepts from
7 AGA that you can read in a little more detail.
8 We can also make ourselves available for
9 questions, so all of that I've talked about
10 today is available.

11 MR. STURSMA: The presentations
12 are available someplace. I guess I don't know
13 where they are so I'd just like to know where
14 I could get to them at.

15 MR. WIESE: I think I can answer
16 that. We'll be posting them on the advisory
17 committee Web site. They may not be there
18 now, but I think we have the slides now, so
19 that'll be within a day or so. You know,
20 perhaps what we can do, Cheryl, John, if you
21 can remind me is, when we're sure we've got a
22 full docket of all the presentations up there,

1 we'll just blast out an email to you; make
2 sure know everything is there.

3 I wonder if you'd allow me just
4 one quick one. I know we're bumping up
5 against the end of the --

6 CHAIRPERSON GARDNER: Oh, no.
7 We're in good shape.

8 MR. WIESE: We have time? Okay.
9 Good. All right. I wanted to thank both the
10 presenters for taking time to come and speak
11 to you today. One of the things I've always
12 found interesting about advisory committees
13 is, really, more when the members speak, you
14 know, as opposed to us briefing you, it's you
15 briefing us on what's going on.

16 You've been appointed because of
17 your expertise, so we really do enjoy hearing
18 and so I want to thank both Sue and Chad for
19 that. As Alan pointed out, I think these are
20 topics that we need to have in play and need
21 to be debating. You know, as a regulator, you
22 know, and putting on my regulator hat, you

1 know, I got questions I could probably ask
2 both, but I think it's probably not
3 necessarily the time for it, whether it's time
4 intervals.

5 You know, my thing is, the people
6 we typically bring to the table here are
7 usually pretty good operators, you know, but
8 not everybody we deal with is a good operator.
9 So I'm really interested in trying to take
10 away a little discretion for some of the ones
11 who aren't good operators.

12 So by working with good operators
13 to define logical, practical, methodologies
14 that need to be followed, I think that's one
15 of the ways in which we address some of those
16 lower-rung performers. You know, and there
17 are those people that are stretched
18 economically, or whatever it is, but they're
19 cutting corners and they're causing a risk to
20 the public that we, in NAPS, you know, are
21 really committed to addressing.

22 You know, and I think introduced,

1 you know, a discussion topic that we'll have
2 to get into more too, how long, once you
3 realize you really don't have what you need to
4 establish the MAOP, should you have? You
5 know, and I think that's why we have the
6 economic regulators in the room, you know, in
7 talking with them.

8 I think there's got to be a
9 solution on both of those things. You know,
10 bring in the economics into play in positive
11 way to help, and we come in, always, from the
12 negative end, you know, trying to force people
13 in places, but it is good to have more
14 specificity.

15 I'm not trying to, you know, reach
16 decimal place accuracy, but I do like the
17 flowchart approach myself. That's just my
18 limitations of my thinking, but it does walk
19 those lesser operators to a place where they
20 really don't have an option. So thanks for
21 that rhetorical moment.

22 CHAIRPERSON GARDNER: Well, since

1 you've taken the opportunity, I'll also add,
2 also as a regulator, I'm, I guess, a little
3 bit sensitive to Sue's comment about the
4 various diversities and that each of the
5 individual distribution companies are kind of
6 unique and I'll just interpret her comments to
7 mean that they might need customized
8 regulations and approaches to determining how
9 their fitness for service application can be
10 defined.

11 And at the end of the day, most of
12 the natural gas distribution infrastructure is
13 still pretty much built with the same types of
14 pipes. There are only about four or five
15 different classes of pipes. The pressures
16 are, for the most part, pretty consistent
17 across them and I guess I just want to push
18 back on the need to, kind of, characterize
19 this as such an overly complex problem that,
20 you know, we'll need hundreds of years in
21 order for us to rectify. So if you want to
22 speak to that, I appreciate it.

1 MS. FLECK: Yes. Thank you. I
2 would. Again, this is Sue Fleck from National
3 Grid. It's not that there's necessarily a
4 different approach for each utility company,
5 but there may be different results when a
6 fitness for service analysis is in place, and
7 I'll give you another example specific to
8 National Grid.

9 Our cast iron in the Boston, in
10 the Massachusetts area, and our cast iron
11 systems in the New York City area, were
12 installed using very different methods, and I
13 would argue that the installation methods put
14 in place in New York City were far superior to
15 the installation methods that were in use in
16 Massachusetts.

17 So the same size pipe operating
18 under the same pressure situation probably
19 needs to be replaced sooner in Massachusetts
20 than it would in New York because of those
21 construction and installation differences. So
22 we'd use the same methodology to make the

1 decision, but we may come to very different
2 answers.

3 And when I'm talking about the
4 difference between different companies, it's
5 probably more in that direction that I would
6 urge caution. You're not going to have -- you
7 know, if you talk to Con Ed, and National
8 Grid, and PSE&G, all operating within the New
9 York Metropolitan area, you may have very,
10 very different results of a fitness for
11 service analysis for the same products, for
12 some of those kind of reasons; did we buy from
13 the same manufacturers, was the pipe the same
14 quality, was the installation methods the
15 same, have we maintained it to the same level
16 of, you know, keeping it up and replacing it
17 and repairing it on time, and I would argue
18 the answer is probably no.

19 We probably did all those things a
20 little different, so in the end, we come to
21 different conclusions, even though we may use
22 a very similar process. So I hope that

1 clarifies what I really intended.

2 CHAIRPERSON GARDNER: That's
3 actually very helpful. Thank you.

4 MS. FLECK: Thank you.

5 DR. FEIGEL: I've behaved myself
6 pretty much this morning --

7 MR. WIESE: Some people will take
8 issue with that.

9 DR. FEIGEL: Let me drop the
10 controversy bomb. Chad, how much thought has
11 been given to developing probabilistic failure
12 models? I mean, you're focused on, sort of,
13 the classic, not exclusively, and I don't
14 understand, in detail, what all you're doing,
15 but you're focused, to a great extent, on
16 hydrostatic tests, to a greater or lesser
17 extent, on inline testing.

18 I think there's this, maybe,
19 unfounded belief simply because they're the
20 classic tools that they, in fact, may be more
21 productive, or whatever the right word is,
22 than looking at data that has been collected

1 where you have collected it from other lines
2 and applying that on a model basis to lines
3 that you're trying to investigate.

4 There's a great aversion to that,
5 of course, because we're not looking at it,
6 we're not hammering on it, we're just computer
7 modeling it, but I am more and more convinced
8 that that may be an avenue that, in fact,
9 could be fairly fruitful.

10 MR. ZAMARIN: Those are very fair
11 and good comments. What I think INGAA has
12 tried to offer is a solution to the near-term
13 issue and balance, not just the technical
14 opportunities, but also the realities of the
15 stakeholder expectations, the regulatory
16 framework, the fact that it's not just a
17 technical solution, and that there is some of
18 that, not only from the operator's
19 perspective, but from the regulator's
20 perspective, the public stakeholder's
21 perspective that, you know, having a
22 definitive pressure test has some, you know,

1 significant value.

2 What we've tried to propose is
3 addressing the most -- our model tries to
4 address the highest risk issues in a
5 relatively quick manner with relatively well-
6 established methodologies, pressure testing,
7 inline inspection, to a little bit of a lesser
8 degree, but we have said that a longer term
9 solution is needed for the rest of the inner
10 state mileage.

11 That's actually a fairly small
12 percentage, that initial percentage, that
13 hasn't been upgraded through class location
14 changes or other, you know, solutions, but
15 there is a tremendous amount of pipe. If this
16 is a path towards bringing all pipe up to a
17 common level of, at least MAOP, qualifying the
18 initial MAOP, we recognize the need to get a
19 lot more sophisticated for the much broader
20 base of the infrastructure.

21 And we have initiated a technology
22 development effort and we're kicking that off,

1 and there's some good information about that
2 effort. We've been engaging with PHMSA, some
3 significant funding that we're asking from the
4 inner state industry, and probabilistic
5 modeling, advancing inline inspection
6 technologies, those are going to be the types
7 of solutions we hope we can bring to bear, but
8 we recognize that, in the short term, we're
9 going to have to deal with the HCAs, the
10 Class-III and IVs, and we're likely going to
11 have to do that with some pretty well-
12 accepted, established, technologies.

13 Does that answer the question?

14 DR. FEIGEL: Yes, it does, I
15 guess, with one caveat. Is INGAA really
16 convinced that the classic hydro tests do what
17 we have, for a long time, believe that they
18 do? I personally am unconvinced, but I
19 understand. It is the politically correct,
20 and not technically, off-based answer, but I
21 think, like so many things, we've always done
22 it this way and there's this public faith in

1 it that may not be totally technically
2 founded.

3 MR. ZAMARIN: And I agree. I
4 think we believe there are better tools and
5 some may yet to be tapped, or fully developed.
6 Certainly, our emphasis on alternative
7 technologies is important because we see it as
8 giving us more information about the
9 infrastructure than a pressure test does,
10 about, you know, identifying conditions that
11 may exist that wouldn't metastasize in
12 hydrostatic test failure, and allowing us to
13 deal with those long before they would.

14 And so I think INGAA strongly
15 recognizes that a pressure test is a very
16 blunt solution, with some technical
17 limitations, and some potential downsides to
18 our infrastructure, versus some much more
19 sophisticated capabilities, but I think it's
20 up to us to demonstrate those capabilities,
21 conserve an equivalent, or better, outcome.

22 And I think, as INGAA, we can be

1 honest and say, I'm not sure we've fully done
2 that yet for establishing MAOP and getting
3 everyone's confidence in that as a solution.
4 That's really what our hope is in this effort.

5 CHAIRPERSON GARDNER: In addition
6 to questions and comments from the committee,
7 we'll open up the floor, also, to the public.
8 Nevermind.

9 MR. KUPREWICZ: Thank you for the
10 opportunity. I'll be a little more nicer this
11 time. You do have a role model of an example
12 of a system that has worked. I've seen a
13 couple cases now where, clearly, the operators
14 have gotten it in front of the PUC Commissions
15 of various states, and I've seen a few
16 examples where, clearly, the operators of the
17 gas companies, distribution companies, did not
18 get it, and that's the DIMP.

19 That process involved some sort of
20 understanding and compromise, and it wasn't
21 any extremes, whether the public or the
22 industry, but from what I've seen in the test

1 cases under oath I've had to testify to, there
2 are companies who clearly get the DIMP
3 process. So you ought to feel like there's an
4 example where you can make things work.

5 I'm not saying that we expect
6 perfection. If you just complied with the
7 DIMP regulation, you could get into trouble,
8 but clearly, there are operators who have been
9 implementing the DIMP concepts well-before
10 federal regulation. I codified that into a
11 little clearer standard position.

12 So that's a positive statement.
13 It also gives the PUC Commissioners of various
14 states a powerful tool to try to understand
15 where the risks are in the various systems
16 that are going to be different, as you heard
17 this morning. So that's a positive. So I'd
18 like to leave this on a positive note.

19 There are grounds in-between the
20 extremes and sometime they may take a while.
21 DIMP took quite a lot longer than everybody
22 really probably wanted, but I think the

1 quality of the product reflects that from my
2 personal opinion. Anyway, I'll leave that on
3 a positive note. Thank you, Mr. Chairman.

4 CHAIRPERSON GARDNER: It is my
5 extreme pleasure to bring this meeting to
6 almost a close, unless there are additional
7 questions from the public, or comments,
8 because, certainly, I would like for everybody
9 to have the opportunity to speak in the next
10 30 seconds.

11 And Cheryl didn't give me any
12 notes about how to close off the meeting, but
13 I guess I'll officially bring the meeting to
14 a close. However, Mr. Weiss has a few words
15 to share with you before we leave.

16 MR. WIESE: Okay. Thank you very
17 much, Wayne. I'll make mine mercifully short.
18 I have only two things I want to do. I want
19 to say thanks to a few people if you'll
20 indulge me. I want to thank the presenters,
21 in particular, the last panel. I'd like to
22 also thank Max, and Pat, and Sam Hall for your

1 time, and they've done this twice now.

2 I do like joint session myself.
3 You know, I think it's more interesting, but
4 the committees continue to want to meet
5 separately and there are times when we need to
6 try to not do that to my people, make them do
7 multiple presentations, but I wanted to thank
8 the presenters.

9 I also wanted to thank John, and
10 Cameron, and Dana, and Cheryl for helping us
11 on a regular basis, make sure the committee
12 meetings come off. The committee members
13 themselves, welcome, again, to the new
14 members. Again, the votes are almost more
15 interesting, aren't they?

16 But we'll have a lot of work to do
17 between now and next fall, so we may have more
18 than the normal number of meetings. We're
19 trying to get our ducks in a row for IMP2.0.
20 I thank the public, as always, for taking time
21 to come out and join us. Reiterate that the
22 information -- we transcribe these. It's a

1 fairly formal meetings for a reason.

2 There are a lot of people who
3 can't make it. The pressure's on me from my
4 public affairs people to webcast these
5 meetings, and we probably webcast a dozen
6 meetings a year, but, you know, they're not
7 cheap, and like Tweets, it has a, kind of,
8 influence on people's behavior.

9 So I guess I will close with that,
10 unless I'm forgetting anything there, by
11 wishing you safe travels and happy holidays to
12 all of you. Thank you for coming.

13 (Whereupon, the meeting in the
14 above-entitled matter was concluded at 11:53
15 a.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Gas Pipeline Advisory Committee

Before: Pipeline and Hazardous Materials Safety Admin.

Date: 12-13-12

Place: Alexandria, VA

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my direction; further, that said transcript is a
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Court Reporter

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