

U.S. DEPARTMENT OF TRANSPORTATION
 PIPELINE AND HAZARDOUS MATERIALS
 SAFETY ADMINISTRATION (PHMSA)

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VOLUNTARY INFORMATION-SHARING SYSTEM
 WORKING GROUP

+ + + + +

PUBLIC MEETING

+ + + + +

THURSDAY
 JUNE 29, 2017

+ + + + +

The Working Group met in the Gallery Ballroom, Hilton Arlington, 950 North Stafford Street, Arlington, Virginia, at 8:30 a.m., Diane Burman, Chair, presiding.

MEMBERS PRESENT

DIANE BURMAN, New York State Public Services
 Commission; Chair

ERIC AMUNDSEN, Energy Transfer Partners

KATE BLYSTONE, Pipeline Safety Trust

BRYCE BROWN, The ROSEN Group

ROBERT BUCHANAN, Seal for Life Industries

DAN COTE, NiSource Gas

JASON CRADIT, TRC Oil and Gas

YIMING DENG, Ph.D., Michigan State University

SHERINA MAYE EDWARDS, Illinois Commerce
 Commission

MARK HERETH, Process Performance Improvement
 Consultants

LEIF JENSEN, Sunoco Logistics*

WALTER JONES, Laborers' Health and Safety Fund
of North America
ALAN MAYBERRY, Associate Administrator for
Pipeline Safety, PHMSA
JOE SUBSITS, Washington Utilities and
Transportation Commission*
MICHELLE THEBERT, Georgia Public Services
Commission
CHRISTOPHER WARNER, Mears Group, Inc.
MARK ZUNIGA, UniversalPegasus International,
Inc.

PHMSA STAFF PRESENT

HOWARD McMILLAN, Executive Director and Acting
Deputy Administrator
CHRISTIE MURRAY, Designated Federal Official
AHUVA BATTAMS, Office of Chief Counsel
CHRIS McLAREN
AMY NELSON
HUNG NGUYEN
CAMERON SATTERTHWAITE
CHERYL WHETSEL

ALSO PRESENT

DREW HEVLE, Kinder Morgan
NICK HOMAN, Marathon Pipeline
DAVID NEMETH, Energy Transfer
MICHAEL STACKHOUSE, Phillips 66

* via telephone

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

2 8:52 a.m.

3 DR. MURRAY: Good morning and welcome.
4 All right. Thank you all for joining us for just
5 our second Voluntary Information-Sharing Working
6 Group committee meeting. We're happy to have you
7 here. We will have committee members
8 participating today by phone, as well as here in
9 person.

10 If you are on the phone and can hear
11 me, please confirm that you can hear me. Okay.
12 So, we will continue to work to make sure the
13 committee can dial in and participate. Or if
14 you're on mute, please take yourself off mute and
15 respond.

16 (Laughter.)

17 PARTICIPANT: Over the phone, they can
18 hear you.

19 DR. MURRAY: They can?

20 PARTICIPANT: Yes.

21 DR. MURRAY: Okay, great. Diane
22 Burman, are you able to hear as well?

1 CHAIR BURMAN: This is Diane, I can
2 hear you.

3 DR. MURRAY: Okay, great.

4 CHAIR BURMAN: Can you hear me?

5 DR. MURRAY: Yes, I can hear you.

6 Perfect.

7 CHAIR BURMAN: Perfect.

8 DR. MURRAY: We're going to go ahead
9 and get started. We apologize for the delay this
10 morning. I think we'll still be in good shape as
11 far as time and wrapping up on-time, if not early
12 today. But certainly we will work to stay on-
13 track today.

14 My name is Christie Murray. I am the
15 Designated Federal Official for this particular
16 Advisory Committee and I am happy to share with
17 you throughout the day. Diane Burman and I will
18 help to facilitate today's discussions.

19 First, I want to just remind and
20 refresh everyone, I know we met back in December
21 on the 19th last year, that was our first
22 meeting, so I thought I'd at least start off with

1 refreshing what we're here to focus on as a part
2 of this Working Group's efforts.

3 And basically, our role is to fulfill
4 Section 10 of the PIPES Act, 2016 PIPES Act.
5 Which is ultimately to consider the development
6 of a voluntary information-sharing system that
7 can be used in a collaborative effort to improve
8 inspection information, to help with risk
9 analysis work, and ultimately advance pipeline
10 safety, and I'm paraphrasing. But also, the
11 ultimate deliverable for this committee is to
12 provide recommendations to the Secretary of
13 Transportation.

14 Since we met last December, there was
15 a lot of great discussion from the committee
16 initially, robust discussion in terms of what
17 will the scope look like, there were a lot of
18 ideas. There were questions about whether this
19 Working Group will focus primarily on the
20 requirements in the mandate.

21 There were question around if there
22 was an opportunity to expand what that could look

1 like further. And the answer to that, I think we
2 agreed to was, there was definitely an
3 opportunity to expand beyond the mandate, but
4 certainly making sure that we address the work of
5 the mandate as our primary focus and then,
6 looking to see what's appropriate to take on in
7 addition to that.

8 So, that will be part of what we talk
9 about. This particular committee meeting was
10 designed to be both informative, educational, as
11 well as advance this committee's efforts in terms
12 of getting organized.

13 With any new group, team, entity,
14 there's front-work around, how do we get
15 organized? How do we maximize the use of
16 everyone's time? How do we focus on the
17 deliverables and the actions at hand?

18 So, with this meeting today, and we'll
19 share the agenda and talk about the agenda in
20 more detail shortly, that's certainly the intent
21 and focus of what we'd like to get accomplished.

22 A few housekeeping items. First, the

1 restrooms, if you go straight out of these exit
2 doors, for those who are here in person, the
3 women's bathroom is straight ahead, the men's
4 restroom is off catty-corner to the left.

5 Also, if you have not done so already,
6 I need to make sure I did as well, silence your
7 mobile devices, to make sure we minimize
8 disruptions. And we have numerous people here,
9 thank you, even the public audience who joined
10 us.

11 If you could also make sure your
12 devices are silenced and we will make sure we
13 provide opportunity throughout today's committee
14 meeting to invite comments and participation for
15 those of you who are participating with us.

16 If you could, when you have an
17 opportunity to speak, please hold your comments
18 until we open the floor for public comment and
19 keep your remarks concise, but brief.

20 Also, there's opportunity to
21 officially provide written comments to the docket
22 and the information is provided here, it's Docket

1 Number PHMSA-2016-0128. And, as always,
2 participants should conduct themselves in a
3 professional manner.

4 In terms of safety, we would -- in the
5 event of an excavation -- not excavation,
6 evacuation from the building -- I've got 811 on
7 my mind -- but in case of -- in the event that we
8 have to leave in an emergency situation, there
9 are exits that are labeled to my left, but
10 certainly behind this row to my left, and we
11 would go down to the first floor and out to the
12 left through the lobby and we would meet in front
13 of the building. We'd find a place outside in
14 front of the building to meet, in one area, so
15 that we can account for everyone.

16 Next is a part of our safety-share.
17 Okay. We wanted to take this as an opportunity
18 to promote and highlight one of our high school
19 811 video contest winners for 2017. This is
20 actually the grand prize winning video, that's
21 why I had 811 on my mind.

22 I'm excited about this effort, because

1 we're really working to ingrain our safe digging
2 messaging, in particular 811, as young as
3 possible across the country. And we wanted to
4 share this brief video with you.

5 And for those of you who are over the
6 phone, you should be able to see the video, I'm
7 not sure if the audio will come through clearly,
8 but you should be able to see the video as we're
9 displaying it. If you're connected to the Skype
10 connection.

11 (Video played.)

12 DR. MURRAY: So, it's a very uplifting,
13 compelling --

14 (Laughter.)

15 DR. MURRAY: -- powerful message, but
16 nevertheless, it really underscores the level of
17 creativity and talent that you're seeing even at
18 the high school level.

19 So, we thought that was an excellent
20 job, it certainly -- we had to watch it twice
21 when we were judging this contest, because it
22 left that big of an impression with us. So, we

1 thought we would just share that for our safety
2 minute. Okay.

3 So, getting back to our business. In
4 order to complete the business of the Advisory
5 Committee, we ask that all parties hold their
6 comments until we open the floor. And as I
7 mentioned earlier, keep comments brief.

8 Also, we also want to make sure that
9 the presiding official -- in the event that we
10 need to, we will work very much so to keep the
11 agenda moving forward. Thank you.

12 Also, this Federal Advisory Committee
13 meeting, the members and members of the public
14 are asked to preserve order and decorum during
15 this meeting.

16 No one shall either be, by
17 conversation or otherwise, delay or interrupt the
18 proceedings or the peace of this committee
19 meeting, nor disturb any member while speaking or
20 refuse to obey the instructions of the Chair or
21 the Designated Federal Officer or Official. If
22 someone chooses to be disruptive, we will or we

1 may ask you to leave, depending on what that
2 looks like.

3 Next up, I will introduce the
4 Honorable Diane Burman, who is the New York State
5 Public Utilities Commissioner. And she is with
6 us initially by phone. She is the government
7 representative, a government representative on
8 this committee and she's serving as our Chairman.

9 Also, I want to recognize our acting
10 Deputy Administrator, Mr. Howard McMillan,
11 otherwise, we refer to him as Mac. He's joining
12 us this morning to share remarks.

13 And, of course, our Office of Pipeline
14 Safety Associate Administrator, Alan Mayberry.
15 And all the other PHMSA participants, if you
16 could just stand and make yourselves known,
17 whether you're on the staff or -- thank you --
18 here to listen in on the meeting. So, thank you,
19 everyone. So, next, I will hand the meeting off
20 to the Chairman, Diane Burman.

21 CHAIR BURMAN: Hello, everyone. Thank
22 you for bearing with me as I'm on my way. Can

1 you all hear me?

2 DR. MURRAY: Yes.

3 CHAIR BURMAN: Can you all hear me?

4 DR. MURRAY: Yes, we can.

5 CHAIR BURMAN: Great. So, before we
6 get started, I want to conduct a member roll
7 call. This will help us to establish a quorum
8 and officially call the meeting to order. So,
9 first, if we can have and if, Cheryl, you can
10 help me with going through the member list.
11 There's 24 Working Group members.

12 If we can go in order and say a
13 person's name, their title, the company or
14 organization, and the representative group that
15 they're in. And then, if they are present, to
16 say present and identify whether they're on the
17 phone or in the room.

18 DR. MURRAY: Okay. Let's start with
19 Kate down at the end and work our way around.

20 MEMBER BLYSTONE: I'll try to remember
21 everything she asked. Kate Blystone, outreach
22 manager for the Pipeline Safety Trust. I

1 represent the public. And I'm physically in the
2 room.

3 MEMBER THEBERT: Michelle Thebert,
4 Georgia Public Service Commission. I represent
5 state pipeline safety inspectors. And I'm in the
6 room.

7 MEMBER AMUNDSEN: Eric Amundsen, Energy
8 Transfer. I represent the pipeline operators.
9 And I'm in the room.

10 MEMBER HERETH: Mark Hereth. I'm a
11 principal with PPIC. I represent the industry.
12 And I am present in the room.

13 MEMBER BROWN: Bryce Brown with the
14 ROSEN Group, vice president. I represent
15 inspection service providers. And I'm in the
16 room.

17 MEMBER EDWARDS: Good morning. Sherina
18 Maye Edwards, Commissioner at the Illinois
19 Commerce Commission. I am a Commissioner
20 representing or, excuse me, regulating the
21 utilities in the state of Illinois. And I'm
22 present in the room.

1 MEMBER JONES: Hi. I'm Walter Jones.
2 I am representing labor. I'm with the Laborers
3 Health and Safety Fund of North America. And I
4 am in the room.

5 MEMBER WARNER: Chris Warner, vice
6 president of Mears Group, representing cathodic
7 protection contractors. And I'm in the room.

8 MEMBER COTE: Dan Cote, vice president
9 of pipeline safety and compliance for NiSource.
10 I represent the LDCs. And I am present in the
11 room.

12 MEMBER CRADIT: Jason Cradit, senior
13 director of technology for TRC Solutions. And I
14 am in the room.

15 MEMBER ZUNIGA: Mark Zuniga, chief
16 information officer for UniversalPegasus,
17 representing inspection technology vendors. And
18 I am in the room.

19 MEMBER DENG: Yiming Deng, associate
20 professor, Michigan State University. I'm
21 representing research institutions. And I'm in
22 the room.

1 MEMBER BUCHANAN: I'm Bob Buchanan with
2 Seal for Life Industries. I represent, I
3 suppose, the coating industry. And I'm in the
4 room.

5 MR. MAYBERRY: I'm Alan Mayberry, PHMSA
6 Associate Administrator, representing PHMSA on
7 the committee. I guess we can go to the phone
8 then. Those members on the phone?

9 MEMBER SUBSITS: Yes, this is Joe
10 Subsits. I'm with Washington Utility and
11 Transportation Commission. And I'm representing
12 the National Association of Pipeline Safety
13 Representatives. And I'm on the phone.

14 MEMBER JENSEN: This is Leif Jensen,
15 senior director with Sunoco Pipeline,
16 representing hazardous liquid pipeline operators.
17 I am telephonic.

18 CHAIR BURMAN: Is there anyone else on
19 the phone? No? So, I guess that leaves me. I
20 am Diane Burman. I am a New York State Public
21 Service Commission Representative and I represent
22 the state regulators.

1 Is there anyone else, committee
2 members that we need to recognize? And is there
3 any other PHMSA staff that we need to recognize?

4 DR. MURRAY: No, I think we're good,
5 Diane.

6 CHAIR BURMAN: With that, I do believe
7 that there's an established quorum and I call
8 this meeting of the Voluntary Information-Sharing
9 Working Group committee to order. The meeting is
10 being recorded and a transcript will be produced
11 for the record.

12 The transcript and the presentations
13 will be available on the PHMSA website and the
14 eGov docket at www.regulations.gov. The docket
15 number for this meeting is PHMSA-2017-0136.

16 I would like to remind people that
17 they should introduce themselves each time they
18 speak, so that your comments can be acknowledged
19 in the meeting transcript. And we would ask that
20 tent cards be set up on its side if you care to
21 make a comment.

22 We will, in a moment, be reviewing the

1 agenda for Day One and Day Two. So, first, can
2 someone pull up the slide for Day One?

3 DR. MURRAY: Yes, they are up.

4 CHAIR BURMAN: Okay. And can I ask you
5 to read Day One's slide?

6 DR. MURRAY: Absolutely. So, for Day
7 One, we've already covered the first few items.
8 Next, we will hear opening remarks from Mr.
9 McMillan and Alan Mayberry. Then, we will move
10 into some of our committee management business,
11 where we will have an overview of the FACA
12 subcommittee requirements from our Counsel's
13 Office at PHMSA.

14 Then, we'll talk a bit about forming
15 subcommittees and what that could look like and
16 teeing up for the group to think about over the
17 next two days. Then, we'll move into committee
18 business. This is where we'll get more into some
19 of the educational and informative pieces of our
20 work.

21 And we will talk a little bit about
22 integrity management, have an overview of it and

1 talk about different types of assessment tools,
2 such as inline inspection tools. Then, we'll
3 hear from operators, one will share an experience
4 with their integrity management implementation.

5 Then, we'll break for lunch, we'll
6 have an hour for lunch. Everyone should be
7 provided a restaurant map. If not, there's one
8 out on the registration table. But lunch will be
9 on your own.

10 And then, after lunch, we'll reconvene
11 at around 1:00 p.m., and we'll move the
12 conversation into more of a geospatial
13 conversation, looking at pipeline data. Amy
14 Nelson will present on our National Pipeline
15 Mapping System.

16 We'll also hear from operators on how
17 they utilize GIS systems in terms of their
18 implementation efforts and operator assessment
19 tools. And then, we'll wrap up today with any
20 action items that may have come out of today's
21 discussion, share brief closing remarks, and
22 adjourn.

1 Next, I'll go to Day Two for an agenda
2 overview. Tomorrow, we will take roll call, call
3 the meeting to order, recap what we discussed,
4 some of the highlights from Day One.

5 We will have operators share
6 challenges that they've experienced with
7 integrity management, inline inspections, data
8 sharing in general. And then, the committee will
9 move into some more discussions around management
10 items, such as Alternate Designated Federal
11 Officials for PHMSA, proposed Co-Chair selection,
12 and possibly take a vote.

13 Additional expertise needed on the
14 parent committee itself, possibly take a vote on
15 what that may look like. And then, we'll talk a
16 bit more about subcommittee formation and
17 planning and see if there are items that would
18 require the committee's vote as well.

19 And then, we'll discuss planning for
20 the next meeting, which we're tentatively looking
21 at in September of this year, and we'll share
22 more about what that could look like. And then,

1 we will review action items, any key takeaways,
2 and we will close out the meeting. Turning it
3 back over to you, Ms. Burman.

4 CHAIR BURMAN: Thank you. Thank you so
5 much. Before I turn it over to the PHMSA
6 leadership for some opening remarks, I just
7 wanted to give a brief overview of where we were
8 and where we are now.

9 Legislation was passed, the safe pipe
10 legislation, and we are fulfilling a mandate for
11 Section 10 of protecting our infrastructure of
12 pipelines and enhancing safety, which is the
13 PIPES Act of 2016.

14 We met officially for the first time
15 on December 19, 2016 and at that time, we had 22
16 present members, four of those members were by
17 phone. At that time, in that meeting, we
18 established many different things.

19 We voted on four things. We voted on
20 approval of the charter. We voted on approving
21 the bylaws. We voted on designating me as the
22 Chairman. And we voted on the need for the

1 Voluntary Information-Sharing Working Group.

2 We discussed, but didn't vote on, the
3 scope, the governance, and subcommittees. There
4 were initially identified four subcommittees that
5 we were looking at, but then we also discussed
6 other subcommittees that may be necessary. We
7 decided not to vote at that time on
8 subcommittees, but we would be looking at it.

9 We also looked at the concept of data
10 sharing, data quality. What is the data? Is the
11 data the miss? What is actually necessary for
12 data to be collected? What's overload for data?
13 We looked at whether or not we needed to have a
14 case study, integrity management issues,
15 confidentiality agreements and Freedom of
16 Information Act.

17 We were focused on best practices and
18 common language. For example, in the airline
19 industry, they talk about near misses and close
20 calls. We talked about risk analysis, risk
21 management, and technology.

22 We talked about the need to

1 distinguish between distribution and
2 transmission. And we talked about the overall
3 focus is on the framework on pipeline safety. We
4 also talked about preventing the next accident
5 and what our goals were.

6 The objective for the Working Group is
7 to develop recommendations on how best to
8 establish a voluntary information-sharing system
9 to exchange and protect pipeline safety and
10 inspection related data.

11 And the Information-Sharing Group is
12 one that will be identifying recommendations to
13 submit to the Secretary. I thank you for letting
14 me participate and be a member of this Working
15 Group and I look forward to drilling down on our
16 goals.

17 Now, I'd like to introduce Mr. Howard
18 McMillan, the acting Deputy Administrator.

19 Followed by that, Mr. Alan Mayberry, Associate
20 Administrator for Pipeline Safety. And if this
21 traffic lets up, I will be there before 5:00.

22 (Laughter.)

1 MR. McMILLAN: Okay, Diane. Thank you
2 very much. Good morning. I am Mac McMillan. I
3 am the Executive Director of PHMSA and until we
4 have an Administrator appointed, I am the acting
5 Deputy Administrator.

6 I thank you for coming this morning
7 and for your commitment to pipeline safety and to
8 be willing to discuss the important need to share
9 information and data. I appreciate your time and
10 work on the committee and this very important
11 Working Group.

12 But since this is my very first time
13 to meet with you, I think the first meeting was
14 on the 19th of December and I had just arrived at
15 PHMSA on the 12th of December, so I was not able
16 to make your first meeting. But a little
17 background on how I wound up in what I call the
18 best job one could ask for, in PHMSA.

19 And that is, initially I had spent
20 about 30 years in the military and once I retired
21 from that job, I became a county administrator.
22 And then, I did about six and a half years with

1 the Internal Revenue Service. And then, I worked
2 in the private sector for a while.

3 And then, I came back to public
4 service, because really public service is really
5 my calling. And I served for eight and a half
6 years with the Department of Homeland Security.
7 In fact, I ran a program that many of you may be
8 familiar with, it was called the E-Verify
9 Program.

10 And I did that for eight and a half
11 years. And it's still a very good program, by
12 the way, so make sure you're -- I saw a face
13 light up over here, so I know you're enrolled,
14 and that's good.

15 And then, in December, I really got
16 just a fantastic opportunity to join PHMSA and
17 I've been onboard since the 12th of December.
18 But as the PHMSA Executive Director and acting
19 Deputy Administrator, I'm responsible for the
20 Agency's day-to-day operations and oversee
21 consistency of program execution PHMSA-wide.

22 In my few months here, there's one

1 thing I've noticed among the great staff that
2 comprises PHMSA is that there's dedication,
3 expertise, and a great deal of passion. And the
4 passion is included with my colleagues here
5 today, by the way.

6 And I always say, if you want to move
7 an organization from good to great, you got to
8 have passion, that's the one thing that gets you
9 over that line. It's the passion that one brings
10 to the office, to the job, because it's the thing
11 that motivates people when no one else is asking.

12 Your diverse experiences and expertise
13 and points of view are extremely useful to us as
14 we work to ensure that we can meet the
15 Congressional mandate to develop a voluntary
16 information-sharing system as was promulgated in
17 the PIPES Act.

18 The feedback that you provide, as we
19 work to improve inspection information, is
20 absolutely, what I call, it's indispensable.
21 What we don't want to have are failures or
22 releases.

1 And every time there is one, such as
2 last night we had an occurrence, I send that
3 information to the Secretary's office and she
4 takes an interest in pipeline integrity, she
5 takes an interest in releases, I can assure you.

6 So, it's important that we do what we
7 can to make sure we don't have that next
8 accident. And that's what this is all about, as
9 Diane point out and as Christie has mentioned.
10 But the feedback and information sharing with the
11 purpose of improving gas transmission, hazardous
12 liquid pipeline, and facility integrity.

13 As I've gotten onboard and my learning
14 curve has shortened somewhat, I find that we
15 focus on pipelines, because that's what people
16 see and hear and can go out and touch and feel
17 and be concerned about, especially if it's
18 passing in the backyard, but facility integrity
19 is also important, because there's quite a bit
20 happening at the facilities that don't get into
21 the public domain right away.

22 That's very important, because we have

1 mechanisms in place to contain that. So,
2 facility integrity is important as well. So,
3 thank you for taking that on in terms of your
4 agenda. Your work on this Working Group is vital
5 and will help improve pipeline safety and
6 efficiency in our nation.

7 The key is getting the energy products
8 to market and if we don't get it, some people
9 don't make a profit and we have problems in terms
10 of trying to manage the incidents that occur.
11 So, I think we all have a shared objective, to
12 make sure that we can move things through the
13 pipelines to market without incident. And so,
14 with that focus, I call it one mission, one
15 focus, I know we will be very successful in doing
16 that.

17 One note before I finish talking and
18 let you get about doing your business you came
19 for, is that I do want to give a shout-out to the
20 Honorable Diane Burman of the New York State
21 Public Services Commission.

22 She has done a great job setting the

1 agenda and actually setting the tone this
2 morning. And thank you very much, Diane. And
3 she serves as the Chair of the group and having
4 met her earlier in another venue, I know she'll
5 serve this group quite well.

6 As I stated earlier, I appreciate your
7 efforts and I believe that the Working Group can
8 recommend what I call smart, creative, and
9 innovative ways for us to share information,
10 strategies, and lessons learned across industry,
11 government, and public safety groups.

12 And as pipeline information
13 technologies continue to develop quickly, it is
14 vital that we say ahead of the curve and work
15 together to identify and disseminate the most
16 effective innovation solutions for addressing
17 pipeline safety risk.

18 In closing, unequivocally I believe
19 developing recommendations to address information
20 sharing is going to take a lot of hard work. And
21 I want you to know we will have additional
22 meetings of this sort, with robust discussions,

1 to make sure that we accomplish the mission.

2 And accordingly, I want to make sure
3 that we hear all of your recommendations on how
4 to proceed. I'm committing to making PHMSA the
5 very best that it can be and your expertise and
6 insight will be an important part of our Agency's
7 processes as we move forward.

8 Again, I thank you for your service
9 with us today and your contribution is absolutely
10 indispensable to the mission that we have to
11 accomplish. Thank you very much. I am fortunate
12 to be here. Thank you for what you're doing for
13 us.

14 CHAIR BURMAN: And now we'll turn it
15 over to Alan.

16 MR. MAYBERRY: Thanks, Diane and Mac.
17 And I really only have like two minute at most,
18 but I did want to share some thoughts, just as we
19 get kicked off here. First off, I'm very excited
20 about this group.

21 I think it dovetails nicely in with
22 the agenda that's evolved from the new

1 administration of a theme of really three primary
2 areas, safety, which is paramount, I think we all
3 agree it's paramount, infrastructure, and then,
4 the future.

5 Certainly related to the safety theme,
6 as we talk information sharing, we're talking
7 about other ways to help ensure safety. Sharing
8 information, if you look at a common theme around
9 accidents that are out there, certainly you can
10 look at specific issues that happen, but I think
11 there's an element of how information is shared
12 in an organization that has been a part of the
13 reason why accidents occur.

14 I think we're looking at another
15 opportunity here as a way to leverage information
16 to that end and a way to potentially set up a
17 system to share that information, or share
18 information certainly as it relates to pipeline
19 safety to help ensure safety.

20 Infrastructure, certainly it's
21 important. Safe infrastructure is good business
22 and it's just -- it's our primary focus,

1 certainly as PHMSA, is safety and nothing other
2 than safety. But I think as we look to -- for
3 infrastructure, supporting infrastructure growth,
4 just ways to make sure that that happens safely
5 and that once it's in the ground, it stays safe,
6 certainly is the focus and should be our
7 continued focus.

8 And then, finally, future, really
9 we're here to talk about the future. And you're
10 part of the conversation of where we had and
11 where -- other approaches to pipeline safety that
12 look beyond just regulations, that has been a
13 focus and is certainly a role we play, that will
14 always be a role we play. But we're looking at
15 other ways to help ensure safety as we head
16 towards zero accidents, which we all agree is our
17 goal.

18 So, I'm excited about the work that
19 we're participating in and, actually, I have yet
20 to be a part of as a member of the committee, and
21 look forward to seeing what we come out with, as
22 far as a way to set up a system that's outside of

1 just coming up with a new regulation, but a way
2 to -- other ways to ensure safety. So, anyway,
3 thanks again and I look forward to the
4 conversation today and tomorrow.

5 DR. MURRAY: So, as Diane, who has just
6 -- Honorable Diane Burman has joined us, we will
7 now move into the next section of our agenda, and
8 we're going to move into some of our committee
9 management discussions.

10 And we have Ahuva Battams, who will be
11 joining us now to talk with us a bit about
12 subcommittees and what the Federal Advisory
13 Committee Act requirements are as the committee
14 considers the formation of subcommittees to help
15 move the work forward.

16 MS. BATTAMS: Good morning, everyone.
17 As Dr. Murray said, I'm Ahuva Battams. I'm an
18 attorney advisor with PHMSA in their Office of
19 Chief Counsel.

20 And I'm going to talk about just the
21 basics of the rules for forming subcommittees and
22 how they are run. And if anyone needs me,

1 there's my contact information and also,
2 obviously, you can contact Cheryl with questions
3 as well.

4 So, what is a subcommittee? A
5 subcommittee is a group that is generally not
6 subject to FACA's reporting requirements, which
7 means that the group does not have to publish its
8 working papers and is not generally available to
9 the public, we don't need to file a Notice in the
10 Federal Register.

11 And the group is drawn in whole or in
12 part from our parent Advisory Committee, but can
13 also have members from outside of the parent
14 group, so that you can have expertise on each
15 subcommittee.

16 As I said, subcommittees are not
17 subject to the notice or public disclosure
18 requirements of FACA. The creation and operation
19 of the subcommittees must be approved by the
20 Agency that established the parent Advisory
21 Committee. This also includes the members of the
22 subcommittee.

1 The most important thing I'm going to
2 tell you about subcommittees today is that the
3 subcommittee cannot be a substitute for the
4 parent committee, it can only provide advice to
5 the parent committee to consider and then
6 deliberate on.

7 There's no requirement that the
8 subcommittees be announced in the Federal
9 Register or that the public be included in a
10 subcommittee. The Designated Federal Official or
11 the Alternate Designated Federal Official must
12 attend every subcommittee meeting.

13 As I just said, the subcommittees
14 cannot be a substitute for the parent committee,
15 so the subcommittee cannot deliberate and then
16 pass on its decision to just be rubber-stamped.
17 It can only be providing that advice to the
18 parent committee, otherwise you have to follow
19 the standard FACA requirements of the Notice in
20 the Federal Register and the public access.

21 In our VIS charter, it states that
22 PHMSA has the authority to create subcommittees

1 and determine how the subcommittee members are
2 selected and what interest these members will
3 represent.

4 The subcommittee will report back to
5 our parent committee here and the subcommittee is
6 not permitted to directly provide advice or work
7 product to PHMSA or the Secretary.

8 Our bylaws also include information on
9 creating subcommittees. Our Chairperson can also
10 establish a subcommittee, with PHMSA's approval.
11 The subcommittees must be listed in our charter
12 and when it comes time to renew our charter, if
13 that time comes, we will update that list.

14 Subcommittee reports must be submitted
15 to the parent committee for review and approval
16 and then they will be subject to FACA. So, if
17 your subcommittee creates a report for the parent
18 committee to be deliberating on, at that point,
19 that report has to be provided to the public,
20 just like our normal parent committee documents,
21 and then it will be discussed in public at a
22 committee meeting.

1 I know that was the quick and dirty,
2 does anyone have any questions?

3 MR. MAYBERRY: This is Alan. There's
4 just -- I know as we get cranked up here, I think
5 it's obvious that we're considering some
6 subcommittees, so just wanted to make sure it was
7 understood, if you have any questions about that
8 or the thought process behind that, it seems to
9 make sense as far as dividing this up into
10 different areas and we'll get into that tomorrow.

11 So, in case you had a question about
12 why are we all of a sudden talking about
13 subcommittees, it might be a better way to divvy
14 up the work.

15 CHAIR BURMAN: This is Diane Burman.
16 I just want to clarify. So, when we first met
17 back in December 19, 2016, there were four
18 different subcommittees for consideration, best
19 practices, policy, legal, and funding, the third
20 was data information structure, and the fourth
21 was system development.

22 There were other ones that we had

1 discussed at that time. Again, we decided at
2 that time not to vote on any. And then, we had a
3 planning meeting on April 20, 2017, there were 20
4 out of the 24 members on that call.

5 It was a call, it was just about
6 planning the agenda and also looking at some of
7 the subcommittees. And it was determined that
8 this would be the meeting that we would drill
9 down.

10 Again, just between the charter and
11 the bylaws, the charter allows PHMSA to set the
12 subcommittees, but the bylaws allow the Chairman,
13 with the approval of PHMSA, to, if it's deemed
14 appropriate, to have specific subcommittees.

15 And our goal really is not to weight
16 down folks with subcommittees, but really to try
17 to get focused on some of the work that can then
18 be brought back to the full meetings where we
19 have four annual meetings, so that we can really
20 get a lot accomplished in between the meetings.

21 But we will have to talk about whether
22 or not some of the work is appropriate in the

1 subcommittee or, after further discussion, in a
2 big meeting, and how to break it out from that
3 perspective.

4 I know one of the topics that had come
5 up was proprietary information sharing and the
6 determination of maybe that was something to look
7 at in a subcommittee, but really we needed to
8 first wrap our arms around it in a full meeting.

9 So, I just wanted to kind of bring
10 people up to speed, if we forgot. I did, on the
11 plane, since I had some extra time with the
12 delay, reread the transcript. Okay. Thank you.

13 MS. BATTAMS: Okay. With that, if
14 there is no further focus on the PHMSA
15 subcommittee requirements, I would like to open
16 it up if anyone has any further questions on the
17 phone here. Mark, you don't -- usually you're
18 very talkative. Okay. So, with that, I think
19 we'll go -- oh, on the phone, I'm sorry.

20 MEMBER JENSEN: Yes. This is Leif
21 Jensen with Sunoco Pipeline. A question for
22 Ahuva, or at least a perspective, if I understood

1 you correctly, the work product of the
2 subcommittees is not disclosed to the public or
3 published on the docket until it's been submitted
4 to the parent committee for either a vote or, as
5 I think you described, for deliberation.

6 We've already been contacted through
7 our media relations department from a reporter
8 asking us to offer any insight with respect to
9 subcommittee work.

10 And it's my perspective that we should
11 not really disclose to the media or the public
12 the subcommittee's work product until it's ready
13 for the parent committee's deliberation and
14 consideration and publication into the docket.
15 I'd like to hear your perspective and opinion on
16 that.

17 MS. BATTAMS: So, under FACA, the --
18 you're entirely correct, the work product in the
19 subcommittee does not need to be made public,
20 unless the parent committee is considering it.
21 So, if -- we could choose to make those documents
22 public, but we are not obligated to.

1 And I think that we want to be
2 consistent in whatever we choose to do. The
3 point of the subcommittee is to really drill down
4 into a specific topic, that might not be even
5 ready to discuss with the public or with the
6 parent group. That's why the subcommittee is
7 formed.

8 I would advise not releasing that
9 information until it's coming to the parent
10 committee. If the group wants to discuss a
11 different policy, we can always do that. But
12 under the terms of FACA, until that work product
13 is coming to the parent, we do not need to
14 disclose it.

15 MEMBER JENSEN: Okay. Thank you.

16 CHAIR BURMAN: This is Diane Burman.
17 Just to clarify, there's no intent to have a lack
18 of transparency through the subcommittees. In
19 fact, we'll always have not only the Designated
20 Federal Official with us, as well as someone from
21 Counsel's Office from PHMSA, to make sure that we
22 are fully complying with the law.

1 Really, the subcommittee itself,
2 because it's not an Advisory Committee and won't
3 be issuing any recommendations, is really just a
4 way of helping to flesh out some of the work
5 product. And I would expect that when it comes
6 back to the full committee, there would be a
7 summary of sort of the status and thoughts.

8 And while the subcommittee is being
9 held, that's also why the DFO and the Counsel's
10 Office from PHMSA is so important in making sure
11 that all the parameters and the procedures and
12 the transparency that's necessary for bringing it
13 forward will be there and will go flesh that out.

14 So, and as for contact from reporters,
15 that's for each and every person, in terms of how
16 they handle reporters. I particularly work
17 through my press office to work with reporters,
18 so if anyone approaches me, it's usually, I have
19 no comment. But that's just me. Okay.

20 With that, I think we're going to now
21 turn it over to Christie Murray, our DFO, to get
22 to the next portion, which is the actual

1 subcommittees that PHMSA is recommending.

2 DR. MURRAY: Thank you. So, as we talk
3 about subcommittees, I do want to offer up some
4 considerations for the committee to think about
5 today, tomorrow, and even beyond, as we work to
6 get organized.

7 Of course, we're thinking about what
8 committees are needed, how will subcommittees
9 help address the mandate and the areas that we
10 will define as a part of the scope of this
11 efforts, which parent committee members will sit
12 on each subcommittee, what external participants
13 would we like to invite?

14 What would that process look like, who
15 will chair each subcommittee, what will be the
16 tasks and deliverables and timelines for each
17 subcommittee? And how will we arrive, out of the
18 subcommittee, arrive at a consensus in the work
19 that they are proposing to bring forward to the
20 parent committee, and how will they report-out to
21 the parent committee?

22 So, those are all questions that we

1 should be thinking about in terms of what this
2 could look like. So, to help maybe shape or give
3 at least food for thought to this discussion, and
4 as the Honorable Diane Burman mentioned earlier,
5 we talked a bit about this at our first meeting
6 and our administrative meeting and there were a
7 lot of different ideas around subcommittees.

8 And I think the committee wasn't quite
9 there yet with how the subcommittees could be
10 shaped. But of course, we wanted to pitch a
11 proposed approach. Hear me out, my intent for
12 this morning's discussion is to really get your
13 creative minds going and then, tomorrow, we can
14 certainly get more insight.

15 I know it's very small writing, I
16 would say that the key is to look at that left-
17 hand column. So, what we've proposed here are
18 six subcommittees, some of which have come about
19 from the previous discussions the committee has
20 had.

21 And the premise here is to go back to
22 the basics, in terms of, what do we have to

1 address from a minimal or baseline standpoint?
2 Which is Section 10 of the PIPES Act, 2016 PIPES
3 Act.

4 So, in that effort and thinking about
5 technology and R&D, the data sharing system
6 itself, what's needed, what kind of information,
7 these are the six subcommittees that we're
8 proposing. It could look a bit differently,
9 there could be a gap somewhere that the committee
10 may introduce.

11 But we have the data sharing system
12 needs, possibly with a focus on SMS. I tried to
13 highlight a few key words from the mandate to
14 align with the rationale for why this committee
15 may be needed.

16 As you can see, this particular
17 committee would focus on, is there a need for an
18 information-sharing system? What could that look
19 like? How do we maintain proprietary information
20 and security sensitive data?

21 I actually see that theme running
22 throughout all the committees. You can see this

1 show up in any one of those other areas, but
2 certainly making sure that we account for this
3 somewhere in our subcommittee process.

4 I also see this committee potentially
5 helping to shape or narrowly focus our scope of
6 the whole VIS effort, factoring in safety
7 management as a focus point, and issuing
8 recommendations to that nature.

9 Next, there's technology and research
10 and development. I grouped those together,
11 because I think there are natural dialogue that
12 kind of spills over into both of those areas.

13 And here, and I'm not going to read
14 the language for each one, but as you can see,
15 there are mandated areas that are directly
16 focused around technology, methodologies, a
17 secure system, the development of the system,
18 factoring in risk analysis, that would help shape
19 what technology may be available or would be of
20 interest to this effort.

21 Then, there's training and
22 qualifications. One of the things that I know

1 was discussed previously was, how do we make sure
2 that professionals who may have to interface with
3 whatever is created as a result of this effort?

4 How will we make sure that we're
5 expanding knowledge, that the right folks have
6 the opportunity to get trained, and what those
7 qualification and training needs look like as a
8 part of what we may recommend as a committee?

9 And then, there are best practices.
10 This is a very general area, where it could mean
11 that this committee would go out to look at other
12 successful or unsuccessful attempts at
13 information-sharing systems completely.

14 It could go out and actually have a
15 task to drill down from a technology standpoint
16 on a particular best practice that another
17 subcommittee or the parent committee has an
18 interest in. So, this would be focused on doing
19 research, going out and finding out what already
20 exists and where maybe are some gaps in other
21 places or gaps in our industry.

22 And then, the next committee is one

1 that we kind of grouped together, in terms of
2 looking at the regulatory needs of an
3 information-sharing system. Let's seen,
4 maintaining that proprietary -- again, you see
5 proprietary and security sensitive data showing
6 up here as well.

7 This group would look at it from a
8 funding and economic standpoint and also, what
9 are the legal implications or the legal
10 challenges that need to be teed up as a part of
11 this work?

12 And then, finally, it may be of
13 interest to this committee to have a subcommittee
14 that's focused on, what will this report look
15 like? What would our -- how will we shape our
16 recommendations?

17 How will we make sure that there is
18 consistent terminology and definitions developed
19 across the different subcommittees' and the
20 parent committee's work? And that would be the
21 entity that will create the framework of the
22 report, the recommendations, and it gives us a

1 centralized place to organize around all the
2 subcommittees.

3 So, these are just items for your
4 consideration. So, what -- depending on -- even
5 if the parent committee decides, well, we like a
6 few of these, we may want to change out some, or
7 maybe there's something missing, what could
8 theoretically happen next?

9 Let's just take that first one, the
10 data sharing system needs subcommittee, then this
11 committee could then drill down deeper -- because
12 I know the question that you may have is, so,
13 what is each one of these going to do and how is
14 that going to look? How will they know what
15 their focus will be? What will they -- what will
16 be the outcomes of it?

17 Well, here's what we'd like to see
18 from a high level, a task statement. So, the
19 parent committee would issue a task statement for
20 those approved subcommittees. It will outline
21 what their purpose for existence is, what's the
22 description of the work they'll consider?

1 And this is just a sample that I
2 created for talking purposes. With
3 considerations. And then, what ultimately are
4 they delivering back to the parent committee in
5 terms of a report-out, a summary of their advice
6 or recommendations, any acronyms or terminology,
7 et cetera.

8 Any of those things that would be of
9 interest to the parent committee, so that they
10 understand really what the subcommittee was
11 working on.

12 And then, ultimately, it would be
13 important to provide some structure in terms of
14 milestones and timelines for each subcommittee,
15 how will they know the urgency around some of the
16 action items that they may have or deliverables?
17 So, this could be multiple timelines, multiple
18 milestones, but certainly, giving them more
19 guidance as to the expectations from the parent
20 committee.

21 And, theoretically, you would have one
22 of these task statements for each of those six

1 committees. That way, it gives the parent
2 committee an opportunity to go back and revisit
3 those task statements.

4 Maybe what we initially thought the
5 focus should be, maybe that's changed, evolved,
6 expanded over time. But it gives a natural place
7 to create that consistency and provide guidance
8 on what that could look like.

9 So, as we talk further in our
10 discussions today and tomorrow, please continue
11 to think about, do the subcommittees proposed
12 meet the needs of this committee, are there
13 others, are there -- maybe there are too many or
14 too few, how that could look, what gaps may exist
15 from some of the discussions that we hear later
16 today, how do we address the key considerations
17 that -- I hate to keep flipping back, but just
18 bear with me -- how do we address these key
19 considerations?

20 These are things that we would want to
21 understand before we invite others, particularly
22 outside of the committee, to participate, they're

1 going to have similar questions. And we can
2 really expand and have some discussion around it.
3 And finally, consider that there may be other
4 preparatory work with subcommittees outside of
5 today's meeting.

6 So, certainly, we may talk about the
7 different types of subcommittee needs and some of
8 the other key considerations and how we define
9 those tasks and deliverables and timelines, who's
10 going to lead, who's going to participate on
11 those, and any guidance and logistic support that
12 PHMSA can offer.

13 This will give us an opportunity to
14 plan out what that looks like and be able to
15 invite others to participate. Thank you.

16 CHAIR BURMAN: Thank you very much.
17 Does anyone on the phone have any questions or
18 comments? Does anyone in the room?

19 MEMBER COTE: Just an over --

20 CHAIR BURMAN: Can you say your name?

21 MEMBER COTE: Oh, I'm sorry, forgive
22 me. I'm Dan Cote, NiSource LDC. Just an

1 overriding comment or two, if I may. It seems to
2 me, thinking about our overall mandate, the
3 information that needs to be shared will
4 generally fall into what is substantially two
5 large buckets.

6 One -- and because, again, a lot of
7 this refers to confidentiality, the need for
8 proprietary information, and at the same time,
9 there's incredible opportunities for sharing in
10 that area among the industry for things like DIMP
11 and IMP and understand near miss data to avoid
12 all of us making the same mistakes.

13 The culture of the gas industry for a
14 very long time has been one where all of us are
15 very reluctant to air dirty laundry, and that's
16 been historical going back 100 years. And so, in
17 order to change this, it seems to me, one bucket
18 needs to be protected information that is for the
19 industry and the industry exclusively, and to
20 develop those learnings.

21 The second large bucket, in my mind,
22 is things that are shared more generally with the

1 public, in terms of progress the industry is
2 making, some of the technical risks at a very
3 high level that we need to consider, much broader
4 information.

5 But before we establish the
6 subcommittees that you've referred to, those two
7 buckets need to be identified much more clearly.
8 And, in fact, it's possible that maybe two
9 subcommittees are added to that, one that really
10 defines in much more detail the information that
11 needs to be proprietorial and why and the
12 information that should be shared with the public
13 and why.

14 And it seems to me, if we don't have
15 those as enablers, it's going to be impossible
16 for those subcommittees that are being
17 recommended to really do their work effectively.
18 We really need to start with that strategic
19 visions of how shared information ought to be
20 used. And again, on that basis, I can easily see
21 the information overall falling into those two
22 buckets I described.

1 CHAIR BURMAN: Thank you. Mark?

2 MEMBER HERETH: Mark Hereth. I would
3 -- I support those comments and I think that's a
4 great framework for looking at this. I would
5 also ask if the members of the committee could
6 get a copy of the couple of slides there that had
7 the six proposed subcommittees and that potential
8 breakout of the way the task committees work
9 could be set up.

10 I appreciate the work that's done
11 there. Christie, that's really nice work and
12 well thought out. And I think it would be
13 helpful if we have that at some point today to be
14 able to deliberate on that and then, use it for
15 some homework in preparing for tomorrow.

16 CHAIR BURMAN: Okay. So, we're going
17 to have that, as well as have it emailed to
18 everyone. And then, I'm sorry, I don't know your
19 name, at the end.

20 MEMBER BLYSTONE: I'm Kate.

21 CHAIR BURMAN: Okay.

22 MEMBER BLYSTONE: I echo --

1 CHAIR BURMAN: And your last name?

2 MEMBER BLYSTONE: Kate Blystone,
3 Pipeline Safety Trust. I echo Mark, that I'd
4 really love to see that slide. And that was one
5 of the questions I had had. Just, this is
6 probably a quick question and then, something to
7 ruminate over.

8 The question I have is whether or not
9 by the close of this meeting, these two days, if
10 it's not just the intention to set up the
11 subcommittees, let's say we get through that
12 process, is it the intention to also populate
13 those by the end of the meeting? If the answer
14 is no, that's great. And then, I have a follow-
15 up.

16 DR. MURRAY: Okay. This is Christie
17 Murray. To answer the question, no. Our effort
18 was to just propose how it could look, to just
19 get the conversation going. And if by the end of
20 today the committee decides, we're not ready to
21 make a decision on these subcommittees, by the
22 ones we proposed, we're okay with that.

1 If the committee is ready to do that,
2 then we're fine with that too. But, certainly,
3 there will be more work outside of this meeting
4 in an administrative manner to really get
5 organized and give the committee an opportunity
6 to stew over what we have in these slides and to
7 bring forth other ideas as we plan out what this
8 will look like.

9 MEMBER BLYSTONE: Okay. And then, the
10 follow-up to that is, something for the group to
11 consider. Whether or not, when these
12 subcommittees are formed, they're just limited to
13 the people who have chosen or we've elected to
14 put on those committees, elected in the -- you
15 know what I mean, or if any member of the parent
16 committee can sit in and listen to the
17 conversations that are happening in those
18 meetings?

19 It's just a question I think we need
20 to answer and I think it goes to what Mr. Cote
21 was saying and Mark as well.

22 DR. MURRAY: So, it is important for

1 members of the parent committee to be represented
2 on each of the subcommittees. But, certainly, we
3 would invite, even if you're not a member of a
4 particular subcommittee, it's still open for any
5 member to be able to listen in. Thank you.

6 CHAIR BURMAN: Okay. And then --

7 MEMBER AMUNDSEN: Eric Amundsen with
8 Energy Transfer. Just maybe a few comments on
9 the remarks that Dan made. And I agree with him
10 in terms of the two buckets. I would maybe add a
11 bucket.

12 When you look at information to be
13 shared, the way I look at it, there's information
14 that we share internally in our companies and
15 with our service providers about preventing
16 incidents. So, it's the integrity management
17 piece of it. So, what are we doing to prevent
18 incidents? And I think that can be a little bit
19 more public, if you will, maybe less
20 confidential.

21 And then, the bucket that Dan referred
22 to is, after an incident, that tends to be very

1 closely held, for a lot of good reasons, in terms
2 of legal action and those sorts of things. But
3 there's a tremendous amount of information,
4 knowledge, and wisdom to be gained from sharing
5 that type of information amongst operators that
6 we really don't tend to do today.

7 And I think there's tremendous value
8 there, having gone through many of those as a
9 company and as an individual. There's tremendous
10 value in making sure that others don't make the
11 same mistakes and that others learn from things
12 that we've learned, we need to do better.

13 And then, the third bucket, which Dan,
14 again, referred to, is, how do we get better at
15 sharing the fact that we're sharing? How do we
16 get better at informing the public and our
17 regulators that we do do this?

18 We do do this at certain levels,
19 probably not to the extent that we need to, but I
20 think that we haven't served ourselves well as an
21 industry in communicating and promoting the fact
22 that we already do the other two buckets.

1 We already do, to some extent, share
2 amongst operators and service providers about how
3 we're executing integrity management, how we're
4 using data, how do we get better at analyzing
5 that data and using the technology? We do that,
6 I think, to a greater and greater extent every
7 day.

8 We do, depending on the relationships
9 between companies, I think, share information
10 about incidents and corrective actions that we
11 take, but that, again, tends to be very closely
12 guarded, and, again, for good reasons.

13 But I think the third one is, we don't
14 tell anybody that we're doing that, and I think
15 that's one of the reasons that we're sitting here
16 today is that we don't do a very good job at
17 sharing that we do a lot of this stuff already.
18 So, I think that's a very important piece. And,
19 Dan, I appreciate your comments.

20 CHAIR BURMAN: Thank you. Kate? Oh,
21 okay. So, anyone else on the phone? So, I just
22 wanted -- this is Diane Burman. I just want to

1 offer some of my own thoughts. Can someone pull
2 up the slide with the proposed six subcommittees?

3 And do we have a way of breaking out
4 one side with the proposed subcommittees and the
5 other side with the data sharing system needs, so
6 that you have one slide there and a different
7 slide there? It's not our -- okay. So, it all
8 goes up the same? All right. So, we'll keep
9 this slide up.

10 I just want to point out a couple of
11 things based on the discussion here. Six -- four
12 out of the six subcommittees are ones that were
13 talked about before, at our first meeting,
14 December 19. And I think it's important just to
15 review.

16 These are, obviously, proposed
17 subcommittees from PHMSA. The first one, which
18 is the data sharing systems needs, was originally
19 called data and information structures. And
20 really, it has been expanded because of the SMS
21 and part of the discussion on the proprietary and
22 intellectual property issues.

1 There was a recognition at the
2 December 19 meeting, which Dan has raised again,
3 which I think it's important to show the
4 compliment from one to the next meeting, which is
5 that it is very important to fully understand the
6 proprietary information and to have a significant
7 discussion before the subcommittee is focused on
8 that. And also, the sensitivity of all of that.

9 This is not intended to be a gotcha.
10 In fact, since this whole Voluntary Information-
11 Sharing Working Group is really modeled after the
12 airline industry, which, again, had its own
13 concerns, significant concerns on sharing
14 information and the need for clear guidance on
15 addressing some of the issues that can trip up
16 people if there's not a discussion from the front
17 end.

18 Which is why, initially, the airline
19 industry was very hesitant and slow in adopting
20 some of the changes, because it really is about -
21 - based on trust and needing to work through some
22 of those issues.

1 But the focus, just like on the
2 airline industry, focuses on helping to prevent
3 the next accident and working through some of
4 those challenges, so that there can be sharing
5 among the industry, as well as then the
6 stakeholders, to learn and to address those
7 issues.

8 So, I don't think that it's going to
9 be easy and I think there will be some challenges
10 and we will need to have some conversation on
11 that. That's why I think it's important, also,
12 when we get to this that, when we look at the
13 purpose and the actual description of the task,
14 that it's very important that we have clear sort
15 of guidance on those issues.

16 The second proposed subcommittee,
17 technology and R&D, was really the fourth
18 subcommittee initially, which was on system
19 development. We heard loud and clear at the
20 first meeting that folks were very interested in
21 technology as a part of this, technology and
22 innovation.

1 So, I think that this is trying to
2 incorporate those aspects of gas technologies
3 that are going to be helpful, especially when it
4 comes to risk assessment and risk management.

5 The third one here, training and
6 qualifications, that's new. That wasn't before
7 done, but I think that was trying to address some
8 conversation on looking at case studies and
9 working through some of the issues and the
10 workforce development issues.

11 Then, the next one, which is best
12 practices, has remained the same. And it really
13 goes towards looking to the industry in a
14 voluntary way on best practices.

15 And then, the next one, regulatory,
16 funding, and legal, was originally identified as
17 policy, legal, and funding. It has gotten
18 broader, and again, here it also added to, in the
19 description, the proprietary and security
20 sensitive data in a confidential manner.
21 Because, again, the need for a clear laser focus
22 on what that means, which will be necessary for

1 the full body to look at.

2 And then, the last one, also is new,
3 which is the recommendations, report,
4 definitions, and development. And I think the
5 intent behind that is sort of the help in the
6 putting all together for folks from the different
7 committees. So, a lot of the other committees
8 will -- and the discussions around the full
9 Working Group meeting will help in sort of the
10 worker bee drafting that may come.

11 And, again, in recognition that there
12 needs to be common language and focus on what
13 we're actually talking about, especially even
14 when we're talking about something about, what is
15 the data?

16 So, I just really want to flesh that
17 out. I don't know that we're ready, at this
18 point, for a vote. Technically, we don't really
19 need to have a vote, just like technically before
20 we didn't need to have a vote on the charter or
21 the bylaws, but we thought it was important to do
22 that, as well as the one vote that we took that I

1 think was important to say, is there a need for
2 this Voluntary Information-Sharing Working Group,
3 which we all voted yes on. So, at least in
4 December, we thought it was important.

5 I do think, at the end of the meeting,
6 we'll have to go back and look at these
7 subcommittees to give guidance to PHMSA with this
8 and then, how we go about populating the
9 different subcommittees and work through some of
10 those challenges, especially as it goes to the
11 description and the purpose behind them. Okay,
12 Michelle?

13 MEMBER THEBERT: Michelle Thebert. I
14 guess one of the things I think we should
15 consider too is, along with what data, is who we
16 share it with. Because the public is going to
17 want something different than the industry wants
18 something different from the operators and the
19 regulators.

20 So, maybe even have different
21 subgroups within the data of, how are we are
22 going to share this with the public? Because a

1 lot of this data, they're not going to have any
2 idea what it is and they're not going to care,
3 but operators will and the regulators will.

4 So, maybe, I mean, I guess it could
5 get really big, if you start looking at it like
6 that. Because each piece of data is going to
7 mean something different to somebody. So, I
8 mean, that could be a really big task, I guess,
9 trying to figure out exactly what needs to be
10 shared.

11 And then, like, how do you share it
12 with the public? You put it on the PHMSA website
13 and how is that going to be created, I know it's
14 going to cost money. So, there's a lot of
15 different issues, I guess, once you figure out
16 what data is, how you get it out to people, along
17 with letting them know it's out there.

18 Because I guess we should figure out
19 the charter groups too. I mean, I don't know
20 what the -- what it requires, it just says, share
21 with -- I don't really know. I'm not even sure
22 who we're supposed to be sharing it with, based

1 on what it says. So, I would assume it would be
2 all the different stakeholder groups. So, that's
3 just --

4 CHAIR BURMAN: Alan, and then we'll go
5 to Dan.

6 MR. MAYBERRY: Yes, on that note, just
7 a couple of things. I think, I mean, the way I
8 look at this is, we're looking to share
9 information -- that we're trying to prevent
10 accidents, so how do we do that?

11 Currently, I acknowledge, there is a
12 level of sharing that happens, but we've also
13 heard that it's not happening and not everyone
14 does it, I think some of the good ones do, some
15 of the better operators do.

16 But the other is, just getting around
17 some of the proprietary legal issues that are
18 involved, which is critical to help share
19 information that could help prevent accidents.
20 So, to me, that's the focus is, operationally,
21 how do we make sure that information that's
22 relevant to operations, safe operations, is

1 shared with the right people and done in a
2 transparent way, too?

3 Obviously, there's no need to --
4 there's nothing to hide, but the primary focus is
5 to share operating data, if you will, that would
6 prevent accidents, but do it in a transparent
7 way. Okay.

8 The other thing is that, along with
9 the homework that was mentioned, I know, related
10 to considering these six committees, the other
11 thing to keep in mind, and not to get ahead on
12 the agenda, but we do have an item tomorrow to
13 discuss the expertise of the committee and the
14 potential need for additional members.

15 We have 24 members now, we could go up
16 to 30, and we're going to have a discussion
17 tomorrow on any needed skill sets that you guys
18 might think are appropriate for this committee.
19 And that could kind of flavor our discussion with
20 the committee related to what committees we have
21 as well, so you may be thinking in terms of both
22 these identified six and then, potential other

1 skill sets that are needed. Thanks.

2 CHAIR BURMAN: Dan?

3 MEMBER COTE: Thank you. Just a
4 comment on the technology and R&D piece, and I
5 think that goes to a more general comment that
6 Alan made. This is really about sharing to
7 improve processes before issues occur, at the
8 highest strategic level. And the more that's
9 fostered across the board, the safer our pipeline
10 system will become more quickly.

11 Most of this, as I read this agenda as
12 a distribution guy, really is ILI-centric. Now,
13 most distribution companies do not have pipelines
14 that are piggable today. And so, they're using a
15 variety of direct-assessment technologies, which
16 is compliant with the regulatory construct.

17 And at the same time, that is, at some
18 level, I don't want to say being ignored here,
19 but clearly as I read the technology and R&D
20 segment, it doesn't even capture best practices
21 in that area. And right now, it looks like the
22 committee is essentially giving the distribution

1 group a hall pass, saying, you don't have to
2 share information, because you're not doing ILI.

3 In my mind, that's a strategy mistake.
4 There ought to be another bullet under that, or
5 my recommendation would be, another bullet under
6 that, that talks about direct-assessment
7 technologies and ways to improve those processes
8 and identify best practices.

9 There are a number of technical
10 challenges, as this committee and particularly
11 PHMSA knows very, very well, to direct-assessment
12 that doesn't capture as much data as ILI. At the
13 same time, it's still a valid method of
14 assessment for those non-piggable pipelines.

15 So, I mean, if we use that as an
16 underlying strategy, this should be about being
17 more inclusive of sharing valuable technical data
18 across the industry to benefit the whole. And
19 so, let's not get hung up on technology.

20 I was a little concerned initially
21 when I saw an instant focus on ILI, which is
22 clearly an industry best practice, but not

1 universally applied today. So, let's not throw
2 the baby out with the bath water, please.

3 CHAIR BURMAN: Alan?

4 MR. MAYBERRY: Alan Mayberry. I
5 totally agree. I mean, my thinking on this,
6 certainly ILI was called out by name in the
7 mandate, but I see what we're setting up here as
8 a framework, really, to share information, all
9 information, that's relevant, not just ILI.

10 But I think that should be part of our
11 outcome is to address that, that this is not just
12 -- lends itself not only to ILI, but could be
13 used for other systems or other information as
14 well.

15 CHAIR BURMAN: Anyone on the phone?

16 Oh, sorry.

17 MEMBER BUCHANAN: Certainly good points
18 and I'm sure this will go well beyond ILI and you
19 look at C3 there, you look at dig verification,
20 there's going to be data that comes out of dig
21 verification and the digs themselves, so that
22 data will obviously be shared.

1 The only concern I've got, and maybe
2 it's a comment, is that, there's enough bad press
3 about pipelines around the world and how does the
4 information get shared and that information, if
5 it's misunderstood or misanalyzed by somebody or
6 some group that could use that against the
7 pipeline industry, rather than looking at it from
8 our mandate, that we want to make this better,
9 they say, well, pipelines are bad and some of
10 this data verifies that the pipeline industry has
11 issues.

12 So, I think we obviously have to be
13 cautious about how that information is shared and
14 even how it's written and how the reports are
15 written and, certainly, that'll come out in some
16 of the subcommittees, I'm sure.

17 CHAIR BURMAN: Sorry, my tent card was
18 placed up. Could you please say your name?

19 MEMBER BUCHANAN: I'm sorry, Bob
20 Buchanan.

21 CHAIR BURMAN: Thank you.

22 MR. NGUYEN: Hi. My name is Hung

1 Nguyen with PHMSA. In getting back to Ms.
2 Thebert's comment about information sharing, has
3 the committee considered maybe anonymous sharing?
4 As I understand it, operators and certain vendors
5 have issues with sharing proprietary information.
6 Maybe that could be another subcommittee bucket.

7 CHAIR BURMAN: All right. So, I think
8 right now, we're still sort of going through all
9 the different issues that we have to address, so
10 this sort of hits the bucket list of some of the
11 things.

12 I just do want to say, sort of, from
13 my perspective, again, this is -- looking at the
14 PIPES Act and the specific Section 10 that dealt
15 with this issue, as well as then the charter and
16 the bylaws, I think there's a recognition that,
17 in some ways if you read it just strictly based
18 on that, that we're very limited.

19 It doesn't necessarily address a lot
20 of the distribution issues and the ILI data is
21 one that, I think, we've recognized from the
22 beginning that, while ILI data for interstates

1 may be utilized, there is a lot of framework
2 beyond that, looking at near misses, as well as
3 other things that can be identified.

4 So, I think we've recognized, the
5 Working Group itself, from the first meeting,
6 that we needed to look at, what was the
7 appropriate expansion? Again, keeping in mind
8 that the framework is on pipeline safety.

9 And it's really geared towards, when
10 I look at it, is the data sharing that can help
11 the industry and the regulators work together in
12 a cohesive way that actually helps them identify
13 things that can try to prevent the next accident
14 and that help in that info-sharing back and
15 forth, without having to worry that it's going to
16 be utilized in a way that then prevents that,
17 because you're then shut down because everyone's
18 using it to start pointing fingers.

19 That is, sort of, not the, at least
20 from where I sit, not the intent, that's outside
21 of it. And that's why we do look to the airline
22 industry and where they were at and how they

1 dealt with some of those issues, that may be
2 helpful.

3 So, just keeping in mind, when I'm
4 talking about data sharing, it's not about data
5 sharing for the sake of inundating either the
6 federal or the state regulator with the
7 information or the public, but rather, it's data
8 sharing so that it can actually help people in
9 being able to make assessments and look at the
10 risks and how to manage and deal with certain
11 best practices that aids in all of what we're
12 doing overall.

13 And that really is also why some of
14 the issues in proprietary and intellectual
15 property and confidentiality and the airline
16 industry was fully excepted out of the Freedom of
17 Information Act, as it dealt with the information
18 sharing for this purpose, not for other purposes,
19 but for this purpose.

20 But there is a recognition that
21 there's also going to the need to have some buy-
22 in, not just with the federal regulators, but

1 also the state regulators and, depending on which
2 state you sit in and depending on where you may
3 be, it may be harder to have that buy-in.

4 And those are some of the things that
5 we need to be cognizant of and that, I think, is
6 why it's important for us to have further
7 dialogue and understand that this isn't going to
8 be an overnight, tomorrow, we're not voting on
9 the adoption of everything. And not even next
10 month.

11 So, I just want to be clear that we're
12 not looking to do this in a way that makes
13 everyone leave the room and not come back. This
14 is intended to help facilitate. Okay. With
15 that, are there any further questions or comments
16 on the phone or in the room?

17 MEMBER SUBSITS: Yes. This is Joe from
18 Washington State. If anyone is looking at
19 pipeline safety historically, there's been a
20 strong tendency to look at -- learn from your
21 past mistakes, learn from near misses, and I
22 think there's a lot of positive to be gained by

1 that.

2 But I think it's important not to
3 overlook -- there could also be a great deal of
4 energy or information gained by positive
5 practices. A lot of times, a positive replaces a
6 negative.

7 For example, if an operator has some
8 strategies for enhancing internal communications
9 with vendors, that information could become just
10 as beneficial as learning from accidents. So, I
11 think there's another way you can look at usable
12 information in this type of sharing, database
13 sharing.

14 CHAIR BURMAN: Thank you. And I see
15 your tent card is up?

16 MEMBER AMUNDSEN: Yes. Eric Amundsen
17 with Energy Transfer. I'll just, maybe,
18 acknowledge that we might not want to miss an
19 opportunity to learn from what the airline
20 industry did and maybe get some more in-depth
21 insight into how exactly, I mean, where did they
22 start?

1 Did they sit in a room like this and
2 kind of figure out, how are we going to do this?
3 And where did they go from there? So, let's take
4 the opportunity to learn almost step-by-step how
5 they progressed that initiative and where did it
6 ultimately end up?

7 And I think we're hoping to jump right
8 to the end, but I think there's going to have to
9 be a lot of crawling before there's walking and
10 running. And so, let's learn, to the extent we
11 can, exactly how they did that, what growing
12 pains they went through, what system did they
13 use? Let's not recreate a system if there's one
14 available that they're using.

15 And I think it would also be useful to
16 understand what is the information or what is the
17 data? Is it airframe inspection data? Is it
18 engine inspection data? Probably not, it's
19 probably more along the lines of lessons learned
20 and improved processes for maybe doing analytics
21 on the data of those types of inspections.

22 But, again, without really knowing, we

1 don't know. So, again, let's take every
2 opportunity and maybe that's a subcommittee in
3 and of itself, go figure out or go learn from
4 what they did and how they did it and bring that
5 back to us.

6 CHAIR BURMAN: Sherina, and then
7 Christie.

8 MEMBER EDWARDS: Thank you, Madam
9 Chair. Sherina Edwards from the Illinois
10 Commerce Commission. I think that Eric had a
11 good point in talking about best practices and
12 lessons learned.

13 But I think the real focal point is
14 the collaborative nature and the fact that, even
15 around this table and on this committee, there
16 are key stakeholders from various sectors of the
17 industry.

18 And we have to make sure that we, I
19 think, allow that to continue to flow when we're
20 thinking about these subcommittees and it's
21 important to ensure that there are multiple
22 voices on every subcommittee, so that we can have

1 that collaborative nature, and then focus on the
2 best practices.

3 Having a focal point on one particular
4 sector, one particular portion of a sector, is
5 not necessarily helpful, but I think the only way
6 that we're going to be able to advance is if we
7 each continue to focus on what we're all bringing
8 to the table and make sure that everyone's voice
9 is heard. So, I think that needs to be a focal
10 point.

11 CHAIR BURMAN: Okay. Christie?

12 DR. MURRAY: This is Christie Murray.
13 I wanted to, Eric, just touch on what you just
14 described in terms of us, the committee learning
15 from what the airline industry has done fits very
16 well into that best practices category.

17 And I could see an example or a case
18 where the parent committee would want the best
19 practice subcommittee to tee up some of the
20 things that you talked about with the step-by-
21 step process on who they progressed, what their
22 systems look like, how they handled their

1 analysis, some of those pieces, and coming back
2 to inform this group. So, that was an excellent
3 point.

4 Also, I just want to remind the
5 committee that the discussions we're having are
6 certainly not an attempt to advance us beyond
7 where the group is ready to go.

8 It's really to give you food for
9 thought, so that we don't walk away not giving
10 you an opportunity to kind of have a small
11 preview of things that we know we're going to
12 have to contend with moving forward.

13 And it's also an effort to help have
14 these kind of conversations, because I think, to
15 Dan's point, certainly what's shown here on the
16 screen is what came directly, word-for-word, out
17 of the mandate.

18 However, I think there is agreement
19 that there's more that needs to be considered.
20 And so, as you're thinking, as you're hearing
21 more today from other speakers, we're interested
22 in understanding, what are some of those things

1 that aren't depicted that we need to be covering?

2 CHAIR BURMAN: Mark?

3 MEMBER HERETH: Mark Hereth. I just
4 wanted to weigh in and reinforce the point that
5 Eric made, that, Christie, you reinforced. I
6 know that with INGAA, when we were developing a
7 safety management system document, prior to work
8 that we did within API RP 1173, one of the most
9 valuable visits that we had was with Member
10 Weener of the NTSB. And he shared the experience
11 that the group that developed information-sharing
12 went through in the FAA.

13 And in fact, one of the points I would
14 add to one of the points that Eric made is, is to
15 know the things that they would do differently
16 today, having gone through that process, the
17 things they wouldn't have done, to save us from
18 making those mistakes or spending that time. So,
19 I think that's a great point. And I'm sure
20 there's people we can tap into in that process.

21 CHAIR BURMAN: Thank you. Is there
22 anyone else on the phone who wants to make --

1 have a question or comment or discussion? And
2 then, I do want to open it up to those in the
3 audience, if they have comments that they want to
4 make.

5 MEMBER JENSEN: Yes. This is Leif
6 Jensen with Sunoco Pipeline. As it relates to
7 onboarding and tasking the subcommittees, taking
8 a step back, we have the actual Section 10 of the
9 statute, we have the charter, and we have the
10 bylaws, and it may help us as a committee help
11 prescribe the tasks for the subcommittees if we
12 author a clear mission statement and objectives
13 of what we're trying to achieve.

14 It will help us cascade our goals and
15 our objectives to the subcommittees if we author
16 that. Short of just admitting the bylaws, the
17 charter, and the statute, I think it's necessary.

18 We did have this conversation at our
19 first meeting back in September and I just think
20 it's warranted to help us align with respect to
21 our objective. I don't think we need a
22 subcommittee to achieve this, but perhaps a small

1 group could author a draft.

2 CHAIR BURMAN: So, just so you know,
3 because you're not in the room, there's a lot of
4 people nodding, positively, not negatively. So,
5 just want to share that with you. Before we go
6 to the public, Christie, your tent card -- oh,
7 no, okay. Does anyone in the audience have
8 anything that they'd like to say? Other than
9 when the break is?

10 MR. STODY: Good morning, thank you.
11 John Stody with the Association of Oil
12 Pipelines. Certainly want to thank you for
13 laying out this strawman and giving us things to
14 think about. Appreciate many of the elements on
15 there.

16 One of them is the legal questions and
17 how to make sure that people are comfortable with
18 the process, so that they're encouraged to
19 participate. And you mentioned the potential for
20 expanding the committee, or at least adding
21 additional points of expertise.

22 An additional person on the committee

1 might be, for example, a legal person, an
2 attorney who'd be an expert in those ways and
3 could provide advice to the group, based on that
4 participation point.

5 On the last point there, with the
6 mission statement, where at least I'm personally
7 hearing and we've heard, not differing opinions,
8 but different visions on what is the ultimate
9 product of the group, is it information sharing,
10 and I think the term was information for
11 information's sake, or is it the safety learnings
12 and the safety practices?

13 So, certainly, that involves sharing
14 along the way, but really being clear on what is
15 the ultimate product and the ultimate outcome
16 through a mission statement will help prioritize
17 and safeguard those.

18 And the final point I make is, many of
19 the issues up there naturally follow the
20 statutory text, the need for information, and
21 that's the data itself. And there's then hints
22 at the system that would house the data, that's

1 important.

2 But I think also vital, and it's a
3 little bit in there, but I don't know if it would
4 be a separate subcommittee or how you would set
5 it up, but the program, where are we going to be
6 in three to five years from now?

7 How are we actually going to use this
8 and how will it all work? Who will give
9 information to who, who will house that
10 information, who will review it and make
11 recommendations, how will that go out to the
12 Agency? Once this thing is up and running, what
13 is that thing and how does it interact?

14 And then, obviously, some of those
15 legal safeguards, information sharing,
16 communications, all will be important to how and
17 if this voluntary system works and people, you
18 have active participation achieving the safety
19 goals that you have. So, that programmatic
20 aspect would be my final comment. Thank you.

21 CHAIR BURMAN: Thanks. This is Diane
22 Burman. I just want to react to a lot of what

1 we've heard. And I kind of look at this as also
2 the necessity for making sure that we're
3 gathering or we're exchanging data and the where
4 doesn't necessarily have to be to me, in fact, it
5 probably shouldn't be to me.

6 But data information that's really
7 relevant and appropriate in real-time, that
8 actually allows folks to say, wow, that's helpful
9 information for my next steps in actionable
10 actions that I'm going to take. That will
11 actually help in, again, getting towards the
12 framework of preventing the next accident and
13 better pipeline safety.

14 So, to the extent that we have to keep
15 in mind that, even in looking at it from a data
16 sharing purpose, it may be limited to who is
17 needing that information for that particular
18 purpose.

19 It doesn't mean that just because you
20 share it, it now has to go to everybody, because
21 then that doesn't get to the goal, which is the
22 actions that need to be taken or can be taken to

1 be helpful in what we're doing for pipeline
2 safety.

3 I also don't want to be the bride
4 who's left at the altar. So, I'm very cognizant
5 of the fact that this means that we may have to
6 have a long, slow engagement before that. So,
7 I'm very -- this isn't, while it's new and that
8 it was put in the legislation in 2016, these are
9 things that the industry, as well as regulators
10 and the public have been talking about for a long
11 time.

12 And, actually, I think it's the
13 industry that has helped to make this more
14 formal. And so, for that, I'm really kind of
15 looking forward to making sure that we go slowly
16 and appropriately in a way that helps us get to
17 something that we can say, wow, that was good and
18 very tangible and now it helps us.

19 But we do need to really flesh out
20 some of these issues. It may even be appropriate
21 to have a small group, I don't want to say a
22 subcommittee, because then she has to add the

1 seventh one, that really fleshes out, again, a
2 lot of the devils are in the details here, and
3 what that means for the subcommittees.

4 But that's also going to be, again, no
5 subcommittee is meeting without Counsel, as well
6 as the DFO, and they will have a clear mandate,
7 in terms of the purpose and the description and
8 the tasks.

9 And no subcommittee is making
10 recommendations in a vacuum, it comes back to the
11 full body. And, again, I don't think that we're
12 taking a vote at this point. We are just trying
13 to flesh out and make sure we capture everything.

14 One thing that was said at the
15 December 19 meeting, that we didn't say here, is
16 there was a need to focus on cyber-security,
17 which probably touches almost every single one,
18 and I just want to make sure that people are
19 aware that that's something that we see as very
20 relevant, or at least I see, I think my
21 colleague, Commissioner Edwards would also, and
22 she's somebody that can offer significant help to

1 us, especially at the state regulator level, on
2 those issues.

3 So, thank you. And now, we have --
4 I'm sorry, my back is to people, so I understand
5 that there are people behind me who have some
6 comments, so let's open it up to the public.
7 Thank you.

8 MR. BOSS: Terry Boss with the
9 Interstate Natural Gas Association of America. I
10 really appreciate the group getting together on
11 this.

12 One thing that I do want to point out,
13 if you look at some of the legislative discussion
14 based on this thing, clearly there was a focus on
15 this thing and, as was pointed out, that perhaps
16 there was some ILI discussions and this was an
17 impetus to it, there may be some things out there
18 with DA.

19 But this is a classic elephant with a
20 blind person trying to feel the elephant, I think
21 there's at least a dozen viewpoints of what this
22 thing is and what should be shared. Information

1 sharing is more of a tool for a lot of different
2 things to get done.

3 So, I think it's very appropriate for
4 this group to really figure out what you're
5 trying to accomplish, because there are a lot of
6 needs out there and information sharing can do
7 it, but what somebody thinks this program is
8 supposed to do or not do is, I think, a little
9 confusing right at the moment.

10 CHAIR BURMAN: Thank you, good point.

11 Anyone else?

12 MS. KELLER: Hi. This is Heidi Keller
13 with the American Petroleum Institute. And I
14 just wanted to echo a couple of the comments that
15 have already been made, in that I think it's very
16 important that the group develops a mission
17 statement and, also, develop more of a strategic
18 direction.

19 And perhaps that could be captured in
20 the last subcommittee, and maybe developing an
21 outlook of where we want to be in the next couple
22 of years, similar to what John Stody at AOPL

1 said.

2 I would also like to support the
3 comments made by Alan in regards to the fact that
4 the group should develop a framework that looks
5 beyond ILI and includes other inspection methods.
6 Thanks.

7 CHAIR BURMAN: Okay. Anyone else in
8 the public that has any comments? I do also want
9 to point out to folks the charter, the
10 legislation, the charter, and the bylaws, which
11 has a lot of information, as well as the first
12 meeting's transcript, which focused on some of
13 the issues that we do need to address and
14 including -- I think it was pretty much everyone
15 was in agreement that we needed to not just be
16 limited to the IJIs -- is that what -- ILI,
17 sorry, I'm getting all my acronyms mixed up here.

18 And to the extent that, again, we're
19 trying to get to not just focusing on the
20 gathering of data and the overload of that, and
21 really just trying to help unbottle this. So,
22 with that -- okay.

1 With that, we're taking a break for 15
2 minutes -- is that what we're doing? Okay. --
3 for 15 minutes, then we're going to start
4 promptly. And I'm going to run to get coffee, so
5 I may trip over some people. 10:45.

6 (Whereupon, the above-entitled matter
7 went off the record at 10:31 a.m. and resumed at
8 10:51 a.m.)

9 CHAIR BURMAN: We're going to get
10 started. This is Diane Burman, for those who are
11 on the phone. Are people on the phone back?

12 MEMBER JENSEN: Yes. This is --

13 CHAIR BURMAN: Great. I just really
14 want to just spend one minute just discussing
15 this morning's conversation. A couple of things.
16 A couple of process fails.

17 I know that I got last night the, some
18 of the slides, including the proposed
19 subcommittee. I assumed that everybody else had.
20 That's going to be rectified as we're sitting
21 here. Folks are going to get the same slides
22 that I got yesterday.

1 The other thing is that we are going
2 to be discussing tomorrow some, what I call
3 management processes issues, and formation of
4 going forward in between the regular meetings.

5 We did have one planning committee
6 meeting. Some of the focus I think is also on
7 looking at the planning of the different
8 subcommittees, and the drill down of their
9 purposes and tasks. And then bringing it before
10 the full working group.

11 But also trying to do that in between
12 meetings through a planning, a full planning
13 meeting call, so that we could sort of make
14 headway in some of that.

15 I did hear people talk about the need
16 for a mission statement. I once told someone
17 that if I ever was tasked with writing a mission
18 statement I wouldn't continue in any fashion.
19 That happens not to be this committee. So, I'm
20 not going to look to a mission statement, per se.

21 But it's really about, what are the
22 goals and objectives, and the policy objectives

1 that we're looking at. And that will come with
2 understanding the tasks and the description, and
3 really understanding what we are doing from an
4 information sharing perspective.

5 And then how we go about that, and
6 understanding what some of those challenges are
7 that we're going to have to address. And that's
8 really sort of the bread and butter of what this
9 working group will be working through.

10 So, with that I thank everyone for
11 their comments. Because it was helpful. But we
12 will now look to the next agenda item, which is
13 Integrity Management, In-line Inspection tools.

14 Again, this came about from the
15 December 19th meeting, as well as the planning
16 meeting April 20th. And the need for substantive
17 knowledge on this.

18 So, I'll turn it over now to Chris
19 McLaren to give us the presentation. And as,
20 just checking that people will be getting emailed
21 the PowerPoints. Okay. Shortly. Thank you.

22 MR. McLAREN: Thank you, Chairman

1 Burman, for allowing me to come speak today. And
2 I think that was an important point about
3 everybody will be getting the PowerPoints
4 following this presentation, or pretty soon here.

5 Because this, the design of the
6 presentation is to provide sort of a history, an
7 overview of integrity management, leading into
8 the integrity assessment in ILI technologies that
9 we utilize, to sort of form a basis for our
10 discussion of the data of the different processes
11 that will be utilized, so that we all have a
12 consistent frame of reference, and sort of
13 provide a baseline of training.

14 It is a fairly long presentation. We
15 are running a little bit behind. But this will
16 probably take us to lunch. And with that, you
17 can see we're going to provide an overview of
18 what PHMSA regulates, hazardous liquid
19 transmission, gas transmission, gas gathering,
20 gas distribution, and liquified natural gas.

21 And there are a lot of operators, as
22 referenced by our operator ID numbers. There's

1 also, that number comes, and fluctuates, and
2 goes. And if you count master meters and small
3 LPGs we end up with a lot of operators. So,
4 there's a lot of different assets and asset types
5 that we regulate.

6 We've talked about the different
7 technologies that they would utilize, whether
8 that's in-line inspection, which is certainly
9 preferred by the NTSB, and provides the largest
10 datasets, all the way to direct assessment
11 technologies, guided way, pressure tests, and
12 others that can be submitted through our special
13 permit process, and IM notification processes.

14 So, what is integrity management?
15 Integrity management is a management system
16 customized and designed through the regulation
17 for pipelines. It's an integrated and iterative
18 process for assessing and mitigating pipeline
19 risks.

20 We look at both sides of the risk
21 equation, the likelihood of the threat occurring,
22 and the consequences of an incident occurring in

1 that area. We look to integrate all available
2 integrity related data and information during a
3 number of these processes, whether it's the
4 determination of what integrity assessment
5 technology actually utilize, to integrating that
6 data for risk mitigation measures.

7 So, IM, integrity management, is a
8 safety process that an operator can use to assess
9 and mitigate risks, in order to reduce the
10 likelihood and consequences of incidents. Within
11 the integrity assessment realm we are looking to
12 identify those threats that form the likelihood
13 side of the equation.

14 But of course, in remediating those
15 threats we have to take the consequence, or where
16 those threats occur, into the remediation
17 decisions. It covers both proscriptive and
18 performance based IM regulations. And it should
19 be implemented as a comprehensive, systematic,
20 and integrated approach to improve the safety of
21 the pipeline system.

22 So, the history began in the 80s and

1 '90s as higher profile incidents began to occur
2 at higher rates. Some of the examples are
3 Edison, Bellingham, Washington, Carlsbad, New
4 Mexico. And this heightened public safety
5 awareness, as well as higher regulatory awareness
6 and action, caused the need for the response to
7 be a variety of things.

8 PHMSA's response began with looking at
9 how we could manage risk through the risk
10 management programs, and then how we could
11 possibly do system inspections leading to the
12 development and promulgation of the integrity
13 management regulations to maintain safety.

14 Pipeline accident investigations
15 tended to reveal that accident causes were
16 situations not often addressed in proscriptive
17 regulations.

18 That the performance based regulations
19 in the management of risk offered an avenue where
20 environmental consequences, and the operation
21 environment in which the pipeline resided could
22 be looked at more in depth to identify where risk

1 mitigation measures needed to be taken. And that
2 was not handled appropriately through
3 proscriptive or minimum safety regulations.

4 So, one concept that I'd like to
5 introduce here is sort of the idea of barriers.
6 Pipelines have a variety of barriers that we'll
7 discuss, especially as we start looking at
8 threats, and how we look to address those
9 threats, whether they be the design of the
10 pipeline, the material it's made out of, the
11 coatings that are applied to it, the cathodic
12 protection, the other barriers that are put on it
13 to address certain threats.

14 For instance, for excavation damage,
15 and third party damage we implement different
16 programs to address that, and try to identify and
17 stop it.

18 But there are hazards. We put up
19 barriers. And for an accident to occur it's
20 typical that multiple barriers, or defensive, or
21 safeguards must be, must have failed in order for
22 the accident to occur.

1 I mean, the common, one of the common
2 sayings about an accident is, the stars aligned
3 at this point. Because there are a lot of
4 barriers put up. But there must be a succession
5 of failures typically for an accident to occur.

6 And it was hoped that the change to a
7 performance based regulation would help reduce
8 pipeline accident rates. So, within the
9 hazardous liquid it's in, the regulations reside
10 in Part 195.452 and 450. There's some
11 definitions. And then, within the gas
12 transmission, within Subpart O.

13 And one of the other key phrases
14 within this slide is that, address issues that
15 are unique to their operating conditions. You'll
16 hear the term operating environment.

17 Because there are a lot of issues that
18 are on the likelihood and the consequence side
19 that occur locally, and aren't always a
20 systematic or systemic occurring event. That
21 these local issues need to be addressed, that are
22 unique to a particular operating environment.

1 So, one of the things that we need to
2 talk about is aging infrastructure. And that was
3 one of the points of integrity management, was to
4 increase the amount of integrity assessments on
5 our pipelines, specifically due to the aging of
6 our infrastructure.

7 Now, even with all of the construction
8 that's gone on. We've had quite a boom in the
9 2000 and 2010s. Even with those construction
10 booms we have not, we've only really maintained
11 our average age, as we continue to rely upon
12 aging infrastructure.

13 And these are some slides that provide
14 some numbers. This is by percentage by decade on
15 hazardous liquids, showing the date that it was
16 constructed, and where that resides within that
17 decade of construction.

18 And here is a little bit easier chart
19 to look at. So, this is for hazardous liquids,
20 showing when the bulk of that construction
21 occurred, specifically after World War II. And
22 then we've, that's a lot of the pipelines that we

1 have out there. Those would be reaching over 50
2 years of age now.

3 For gas transmission, similar. After
4 World War II large construction booms. That,
5 it's just really hard to, even with all the new
6 construction we're trying to do, to replace that
7 infrastructure. And it continues to age. So,
8 it's important that we maintain it safely, and
9 continue to assess it with the best technology
10 and data.

11 So, we have layers that we have
12 implemented through the integrity management
13 rule, and through prescriptive minimum
14 requirements of the rule, to protect against
15 aging infrastructure.

16 We look at operating safety factors,
17 the stresses on the pipeline, how, what tests we
18 had for the material in the welds. We continue
19 to require minimums for cathodic protection, to
20 protect against external corrosion.

21 And certainly the damage prevention of
22 public awareness regulation promulgated in the

1 recent near term have supported the reduction in
2 third party damage. Certainly on transmission
3 lines.

4 But ongoing maintenance we look to
5 integrity management to, in a recurring
6 assessment of the integrity of the pipeline. And
7 then appropriately repairing and remediating
8 those anomalies and defects found, as well as
9 taking risk reduction measures identified as a
10 result of the evaluation.

11 Hopefully supporting as shown in the
12 Swiss cheese model as the right there, that these
13 barriers set up and prevent those hazards from
14 reaching an accident phase.

15 So, let's look at some of the
16 significant incidents. Now, PHMSA has all
17 incidents, significant incidents, and serious
18 incidents. And significant incidents is probably
19 the, one of the best ones to look at. It offers
20 those significant incidents that have met a
21 fairly significant financial or injury threshold.

22 And for those we see material weld,

1 equipment failure at 33.3 percent. You know,
2 that's kind of a difficult cause category.
3 Because it is fairly, it does encompass quite a
4 bit of failure causes.

5 And on the transmission side of gas a
6 lot of these can be related to relief valves
7 going off for whatever reasons. Whether that
8 represents a failure of the relief valve, or
9 actually an over pressure event.

10 Within hazardous liquid when we start
11 to see that number go up it's a little, it's
12 quite a bit more significant. But certainly we
13 see material and weld there, showing our, some of
14 the anomalies we want to deal with, with
15 integrity management, as well as corrosion and
16 excavation damage.

17 And those are sort of the three
18 significant ones we look at through ILI tools and
19 other integrity assessment technology. And I
20 seem to have --

21 All right. So, on hazardous liquid we
22 can see that material weld and equipment failures

1 is a larger number. And corrosion at 23 percent.
2 So, those are those integrity management related
3 features we want to look at, the focus of
4 integrity management.

5 Now, we've got some more data here
6 that is, some more bar charts that shows things.
7 Certainly, we look back over 15 years. Corrosion
8 has been the leading cause of incidents.

9 And I think that we've started to see
10 that trending down as we've gotten better control
11 of repairing those corrosion anomalies. And also
12 replacing aging cathodic protection systems.

13 Equipment failure continues to be a
14 fairly high one, a lot with the gas transmission
15 relief valve impact. And excavation damages
16 continue to sort of go down from where it was
17 such a major issues on transmission lines years
18 ago.

19 It's certainly still a very leading
20 cause of significant failures on distributions
21 systems. But on transmission lines it's being
22 addressed effectively, or improved, with improved

1 effectiveness by our other barriers of damage
2 prevention and public awareness.

3 All integrity management, or certainly
4 the beginning of, with liquid, hazardous liquid
5 transmission, we began with four objectives that
6 then were promulgated over, and supported the
7 basis for the design of the gas transmission IM.
8 And that was to implement management systems in
9 pipeline operations.

10 Another focus was to accelerate the
11 integrity assessments of these high consequence
12 pipelines to address the aging infrastructure
13 issues, and remediate those pipelines.

14 Also, looking to increase public
15 assurance in pipeline safety is one of the
16 focuses of an integrity management program. And
17 to allow regulators to have an increased role in
18 reviewing integrity management plans and
19 programs. And being able to provide influence
20 upon those programs to ensure they're meeting the
21 minimum code requirements.

22 So, an integrity management programs

1 has, within pipelines, has several key areas.
2 The first one is that they're focused on high
3 consequence area. To meet the cost benefit
4 analysis, of course, is the basic reasons for,
5 the primary reason for any rule to be
6 promulgated. But also to ensure that we're
7 addressing the highest priority areas in an
8 appropriate order.

9 So, the risk ranking of those areas
10 will affect both the baseline assessment,
11 integrity assessment of them, as well as some of
12 the remediation discussion. And then we'll also
13 utilize that risk analysis as we go through the
14 program.

15 So, within an integrity assessment
16 plan you must look at, typically you have to go
17 gather your data or information, and do an
18 analysis, utilize a risk assessment on that data,
19 and identify the threats to the pipeline that
20 need to be addressed by the integrity assessment.

21 Certainly we've talked about the
22 importance of ILI. We'll look at some different

1 tools for addressing those different threats.

2 As we start to talk about other
3 integrity assessment methodologies, like direct
4 assessment, depending on whether you're
5 addressing external corrosion, you would use
6 ECDA. If you're addressing internal corrosion,
7 ICDA. If you're addressing stress corrosion,
8 cracking, SCCDA. So, these tools are designed to
9 address specific threats, or specific data needs
10 that the operator has.

11 It's also very important therefore, to
12 ensure that the data analysis and information
13 collection gathered the needed information that's
14 going to support this decision of which threats
15 or integrity threats and defects that I'm going
16 to go inspect for.

17 So, then a tool is chosen. And a
18 integrity assessment is performed. And there are
19 remediation procedures. Now, during the data
20 that's acquired from that integrity assessment,
21 or from that tool run, GIS or geographical
22 information system data is looked at to ensure

1 that we understand where those anomalies are
2 occurring, what external or environmental
3 conditions are applying to them.

4 Are they at a road crossing, under a
5 river? Is it where a new housing development was
6 built, and maybe the pipeline was dented. So
7 we'll later today hear about some of the GIS
8 information that will kind of be tied into that.

9 And all that information is acquired,
10 and becomes part of the remediation decisions
11 that have to be made. You know, following
12 remediation you've learned a lot about your
13 pipeline by the gathering of that data.

14 And that's sort of the data analysis
15 piece that we're talking about here on this
16 committee, is the acquisition of ILI data, what
17 we learn in the field, what changes we saw, what
18 we can do better, what we can learn more.

19 And then, it's the basis of that
20 information that then updates the risk analysis
21 piece. And it goes on to support the risk
22 reduction measures determination, whether they're

1 preventive measures or mitigative measures.

2 And that takes place also within the
3 continuing evaluation and assessment, where the
4 pipeline is looked at, its integrity is looked at
5 as a whole. And it is determined when a
6 reassessment of the pipeline needs to occur,
7 whether that's five, seven, ten, 11 years,
8 however many years later.

9 One of the important pieces is the
10 performance effectiveness measures, to ensure
11 that our integrity management system is operating
12 as designed, and as implemented.

13 So, within integrity assessment
14 methods, the primary means of assessing them is
15 ILI tools, or pigs. Different tools are going to
16 look for geometric deformation, such as dents,
17 buckles, and even weld misalignment, and pipe
18 expansion. Those can all be found with
19 deformation tools typically.

20 There's also some of the ILI tools
21 that will look for corrosion, such as metal loss
22 and wall thickness changes. And then also for

1 cracks, whether they be in the pipe body, or in a
2 weld seam, or in girth welds.

3 And weld seams, when we talk about
4 weld seams, we're talking about an axial seam
5 down the weld. And you can see that seam right
6 here. This is where the pipe was manufactured.
7 It was brought over out of a plate. And it was
8 brought together to form a pipe. And then it was
9 seam welded

10 And when we talk about girth welding
11 we're talking about a weld that would be
12 basically here to join two links of pipe. So,
13 you can see, these anomalies are located in very
14 different directions.

15 For a seam weld anomaly we're looking
16 axially down the pipeline. For a girth weld
17 we're looking circumferentially, across the
18 pipeline. So, that's an important thing to keep
19 in mind as we start talking about the orientation
20 of an anomaly.

21 There's also pipe strains. Pipe
22 strains can be caused by, well, in the southwest

1 region we have hurricanes that come through, and
2 move pipes quite a distance as they, when they're
3 offshore or near shore, as the come onshore with
4 large landslides. In the northwest you have land
5 movement, and in the west, that can occur,
6 creating strains on a pipeline.

7 There's also strains associated with
8 deformations that can be quantified to support
9 the addressing of the deformation anomaly on what
10 needs to be done. And then there are hard spots
11 in pipe, which is a manufacturing of the plate
12 issue, which can lead to cracks. Yes.

13 There's also pressure testing. And
14 pressure testing is a one-time pressure testing
15 of the pipeline to a sufficient stress to ensure
16 its maximum operating pressure.

17 Now, failures of those during a
18 pressure test can certainly give you a lot of
19 information but the anomaly types, and what is in
20 the pipeline.

21 It can also give you information about
22 what the largest remaining anomaly could have

1 been in that pipeline that could have survived
2 the pressure test. So, there is information that
3 you can gather from pressure testing.

4 Direct assessment of pipelines
5 certainly gives you information about the
6 pipeline, by identifying external things to it,
7 such as the cathodic protection system, and other
8 affects that it may have from other acting
9 entities, like other cathodic protection systems,
10 DC impressed current from transit, or other
11 sources, AC induced currents from power lines,
12 and other transmission.

13 And then, based on those anomalies and
14 their grading, you can then go in and dig the
15 pipeline to try to understand what your grading
16 showed on the pipeline. There may be some
17 comparisons of that data that may show some
18 benefit, to ensure that we're getting the
19 appropriate grading and remediation of anomalies
20 on direct assessments.

21 There's other technologies, like
22 guided wave, which has been proposed in the gas

1 IM rule, following an 18 step procedural
2 requirement. And guided wave may have some
3 benefits for information sharing, to ensure that
4 it's being applied correctly, and doesn't have a
5 misapplication that we can stop.

6 There's also other new technologies
7 that are allowed into utilization, based on the
8 use of the special permit process, or the
9 integrity management notification process.

10 So, this is, integrity management,
11 just like any management system, follows a
12 continuous cycle. And here's a graphic
13 representation of that.

14 At the top we started with the HCAs.
15 We then assessed, did a risk analysis,
16 remediated, and then went through performance
17 measures. These are all continuous improvement
18 loops. Continuous improvement is a requirement
19 of any integrity management program. And so,
20 there it is shown graphically.

21 So, what are some of these threats to
22 the integrity that we talk about? We looked at

1 materials by looking at the pipe. And we saw an
2 axial seam, and had a girth weld described. It
3 would be of construction. There's also other
4 things that can take place during construction.

5 There's operations and maintenance
6 issues that we need to assess. And then the
7 integrity management needs to collect all that
8 information, and decide how we need to assess it.

9 Firstly, on materials, on pipes and
10 coatings. On pipe material we can have wall
11 loss. We can also have in those seams cold
12 welds, lack of fusion, and different, other
13 different anomalies that can be latent for some
14 time possibly, but then have been, then can begin
15 to grow, and must be assessed for based on there
16 being a flaw.

17 Within pipe material, depending on its
18 age, the older material commonly had non-metallic
19 inclusions, and other stringers and laminations
20 that need to be accounted for. Sometimes they're
21 not injurious, and sometimes they are.

22 And hard spots is a frequent condition

1 that's a superficial issue on a pipeline, that
2 can then in the presence of cathodic protection
3 can have problems with hydrogen cracking. And
4 that's kind of, sort of a specialty threat.

5 So, pipe coatings have been, are
6 applied to most all of our pipelines. There are
7 a few bare pipelines around there. That data is
8 available. And they are mainly of the older
9 vintage. And most all have been removed.

10 A bare pipeline would have to have
11 very good, have to be in a non-corrosive
12 environment, and/or have adequate CP to survive.

13 Issues though with coatings, aside
14 from just some of them don't age so well is being
15 poorly installed, and sometimes having, and
16 sometimes disbonding.

17 When a coating disbonds it can tent
18 over, it can cover an area, and allow an
19 electrolyte or water to get into the pipe
20 surface, creating an area where corrosion may
21 occur.

22 There's also, over girth welds,

1 sometimes a problem with, once the weld is made
2 the coating that's done in the field over that
3 weld not being, having, not having long term
4 properties. Also, over the seam weld sometimes a
5 coating can tent and create a void in there,
6 which can allow electrolyte to collect.

7 And then, there are some coatings that
8 actually shield cathodic protection from getting
9 to the pipes, such that when they do fail, if
10 they tent or cover, the cathodic protection can't
11 protect the pipe following it.

12 On construction, some of the integrity
13 threats are those pipelines that haven't been
14 pressure tested to ensure the seam and mechanical
15 properties of themselves.

16 And there's also installations issues,
17 such as weld misalignment. And miter bends has
18 not been allowed for a long time. But there are
19 miter bend installation issues out there. And
20 that's where a pipe, multiple pieces of a pipe
21 are cut, and then form a curve or a bend.

22 Also, depth of cover. Pipelines have

1 a minimum depth of cover during construction.
2 But that depth of cover is not required to be
3 maintained. It is a re-baring, or re-lowering
4 the pipeline to a lower depth can help ensure
5 that excavation damage, and other mechanical
6 damage doesn't occur to it.

7 And of course, during construction we
8 see dents being put in. And also the use of
9 inappropriate backfill, such as rocks being put
10 in there that the pipe can lay on, and cleanup,
11 such as boards and other material being in there.

12 So, one of the most important things
13 about a successful IM is data. And data quality
14 is expensive, difficult, and very important. How
15 an operator responds to missing or suspect data
16 is very important to ensure that the right
17 threats are identified, and that the right
18 knowledge about the pipeline is known.

19 Because we're all, it's all going to
20 be supportive of making the right integrity
21 related decisions. And data integration is one
22 of the fundamental pieces of integrity management

1 that supports not only the remediation, but also
2 the preventive and mitigative measures that may
3 be chosen.

4 Some preventive measures may be things
5 like running close interval survey, and improving
6 and replacing cathodic protection equipment. It
7 can also be to enhance surveys, and patrols of
8 the area. It can also be to recoat the pipeline
9 in some larger cases. And also replacement
10 should be considered as an option.

11 And coming out of that data
12 integration also comes the reassessment strategy.
13 And that would when I'm going to reassess the
14 pipeline, at what interval. What growth of
15 anomalies am I seeing? So, there's a lot of
16 decisions that come out of that.

17 And on the hazardous liquid side, and
18 this is sort of the structure of the regulation
19 as it falls within 195.452. It also has the
20 definitions in 450 for a high consequence area,
21 which then goes back to unusually sensitive area.

22 And within the hazardous liquids piece

1 there's not only the people consequence, there's
2 also the environmental consequence, which is very
3 significant. So, it relies upon some other
4 definitions aside from census data and other
5 growth, area growth factors, such as unusually
6 sensitive areas.

7 That would be environmentally
8 sensitive places where water is sole source
9 aquifers, sole source water sources, and other
10 aquifers, as well as areas important to
11 endangered species. Also, commercially navigable
12 waterways are covered within that unusually
13 sensitive area.

14 So, here's sort of a quick schematic
15 of some of the way liquid pipelines are
16 determined on where high consequence areas are.
17 The top left is a populated area that is directly
18 intersected. The next one on the right is a
19 populated area that is indirectly affected

20 Now, how may that indirect effect
21 occur? It could occur either through the event
22 itself, such as is used in the C-FER equation on

1 the gas side. Or it could be through a transport
2 mechanism, which could be either ground
3 transported, such as through gravity, down scale,
4 or through water or other transport, or through
5 the air in some cases.

6 And also, you can see on the bottom
7 there a lake or marsh where they're indirectly
8 affected by the product being transported from
9 the accident site to the environmentally
10 sensitive area. Just a couple more pictures
11 about how the produce may pool and move.

12 So, the gas transmission rule is
13 within Part 192. And Subpart O is where it's
14 contained. And it utilizes for the determination
15 of high consequence areas an affect primarily on
16 people through the CFER equation, which
17 determines a potential impact radius, based on
18 the diameter of the pipeline, the pressure which
19 it operates, and the latent heat content of the
20 product.

21 The worst case scenario being that a
22 failure could impact this large of a diameter.

1 And this is another place where GIS is utilized,
2 as that potential impact radius is slid up and
3 down the pipeline. And where it impacts an
4 appropriate number of houses, or residences, or
5 buildings, and/or particular identified sites.
6 And HCA is identified.

7 And we can also utilize the class
8 locations, Class 3 and 4, plus identified sites,
9 to identify your high consequence area. And here
10 is a showing of a sort of an impact radius, along
11 with some of these Class 3 areas.

12 So, there's different ways to
13 calculate the HCAs where the rule would apply.
14 And the one thing I would say about a lot of the
15 high consequence areas, that -- Well, wait.
16 Let's go through one more example.

17 Here you can see this is utilizing
18 GIS, sort of a primer for what we'll see this
19 afternoon. You can see the yellow dots, and the
20 identification of all of the residents and other
21 particular sites, and how that determination of
22 high consequence areas is a fairly rigorous

1 activity.

2 But regardless of how much HCA mileage
3 is identified, whether it be by liquid or gas, in
4 order to assess these when using in-line
5 inspection typically we are running that tool
6 from trap to trap, from a launcher to a receiver
7 over some distance, typically less than 100
8 miles.

9 And we are gathering information on
10 much more than just the high consequence area.
11 And so, that is why ILI is certainly preferred
12 method, because of the information that is
13 gleaned from it on much, besides there just being
14 a lot more information.

15 But also we're gathering information
16 on areas outside of the HCAs. Because there is
17 quite a bit on gas. There's quite a bit that's
18 outside of HCAs, 93 percent on liquid. And I
19 think it's about 60 percent, yes, 59 percent
20 outside of HCAs.

21 And remember, the numbers from liquid
22 early on were, while there's 40 percent high,

1 that can affect the high consequence area on the
2 liquid side, it was about 80 that was getting
3 assessed.

4 So, the integrity assessments are used
5 to evaluate, remediate threats. And we've looked
6 at some of these. We're now talking specifically
7 about threats. Because that's going to determine
8 the type of tool we're going to select, as well
9 as the data that we're going to be getting back,
10 and how we want to look at that data.

11 Now, of all these methods, just one
12 more time to recap, we are specifically looking
13 and talking from here on out about ILI. But as
14 Dan brought, Dan Cote brought up during the
15 discussion, and others have talked about, there
16 are other methodologies where they may be fertile
17 ground for looking at that data collection, and
18 data sharing.

19 As PHMSA promulgated the integrity
20 management rule industry got moving and created
21 several standards. The gas industry developed
22 the 31.8-S, and the liquid industry API 1160,

1 about the same time the rules were coming out,
2 plus or minus.

3 Also, to address all the requirements,
4 procedural requirements of the integrity
5 management system, ACI, NACE and ASNT developed
6 certain standards that this group will probably
7 be looking at as we go forward, such as API 1163
8 on in-line inspection systems qualification, and
9 then the NACE guidance 0102 on ILI.

10 And then the American Society of
11 Nondestructive Testing developed a qualification
12 certification program for the in-line inspection
13 personnel to be able to, for operators to be able
14 to understand what level of expertise they were
15 getting on the reading of the pig runs that were
16 providing them with their reports.

17 And here's a little schematic. It
18 comes out of 1163, showing how these standards
19 tie together. You select the system based on the
20 threats. And then you prepare and run the tool.

21 And once the tool comes out of the
22 pipeline you validate its operation to ensure

1 that you're getting good results, and download
2 the data. You then analyze the data. And that's
3 where the ASNT ILI PQ can come on analyzing that
4 data.

5 And then a report is issued, which is
6 sent to the operator. Then the operator goes out
7 and performs digs to validate that data, and
8 understand the accuracy of it. And also to
9 remediate those injurious conditions.

10 So, let's see, what happened there?

11 All right. I'm going to get the unity charts
12 here soon, I promise.

13 So, we've looked at these threats
14 again that we're assessing with our tools. And
15 then, to go back and look at sort of the process
16 that's coming through here again, to recap what
17 we just saw in the 1163 diagram.

18 Here is an example of launchers and
19 receivers, where a pipeline has a, either
20 initiation point or a station point where it is
21 convenient to run all sorts of in-line tools,
22 whether they be smart or not, to support pipeline

1 operations.

2 The end cap would be, the pressure,
3 the barrel is isolated, pressure is removed, and
4 this end cap is opened. And then the tool is put
5 in there. And the tool is then run through
6 operations. It is then captured and removed.

7 First off, there's all sorts of
8 cleaning that has to be done. Cleaning of
9 products in the pipeline, moving of liquids in a
10 gas pipeline, and other solids. As well as in
11 the liquid pipeline moving the paraffins and
12 cleaning the surface, and getting it, not only to
13 ensure that there's not the propensity for
14 internal corrosion, but to also ensure it's
15 capable of being in-line inspected adequately by
16 a smart tool.

17 So, there's all sorts of things that
18 can come out of a pipeline. This is atypical of
19 what we typically see. But it is a picture to
20 remind us that we must clean pipelines well
21 before we inspect, so that we can get the best
22 possible data.

1 So, deformation in-line inspection
2 tools. And here is an example of one. You can
3 see all the deformation fingers here. Sometimes
4 it's encapsulated.

5 But this tool is looking for pipeline
6 deformation, whether that be a dent, evidence of
7 a dent from third party damage, or whether it be
8 expanded pipe, as shown here, which was a pipe
9 that expanded during a pressure test. And
10 therefore, it was shown to be inadequate of
11 strength pipe.

12 But there's all sorts of threats that
13 we can address with a deformation tool. And we
14 can look for girth welding alignment. We can
15 look for where we have movement of the pipeline,
16 based on landslides, et cetera, based on the
17 strain being put on it.

18 And here's some more diagrams. When
19 we start looking at dents, dents have particular,
20 like right here. Dents have particular
21 geometries.

22 And sometimes we can capture and

1 understand the significance of that dent through
2 the high resolution deformation tools, to try to
3 identify the criticality of repairing that dent.
4 And typically when we have a dent on one side, it
5 creates an ovality in the pipeline.

6 And here's some examples of mechanical
7 damage, and how different tools see it. So, here
8 we have this anomaly on the bottom, which has
9 been mapped out. And it has a deformation tool,
10 which has given us this enhanced image.

11 A MFL, or magnetic flux leakage tool,
12 which we'll look at a in a minute, has created
13 that image. We'll then be able to capture that
14 image and this image with other enhancements or
15 tool usages. So, there's all kinds of different
16 ways we can gather information with different
17 tools about an anomaly.

18 And when we start looking at metal
19 loss, we're looking at some specific types of
20 tools. We want to quantify metal loss. And that
21 is corrosion. There can also be the
22 identification of gouges and other crack-like

1 anomalies in dents, which is some of the support
2 that combo tools can give.

3 But typically what we're looking for
4 is, a standard MFL tool is what's typically run.
5 It is looking for anomalies that occur on the
6 pipeline. And typically down to pits a quarter
7 inch and larger.

8 Ultrasonics can also find and quantify
9 metal loss very accurate, as long as there is a
10 liquid or electrolyte, to be able to send the
11 waves. So, they're utilized on liquid pipelines,
12 and in slugs on gas pipelines.

13 And then there is the EMAT tool, or
14 electromagnetic acoustic transducer tool, which
15 is utilized in gas lines, because it can give
16 very accurate results, similar to ultrasonics,
17 without having an electrolyte present. And in
18 recent years its progress and its technology has
19 come very, very well along.

20 So, the high resolution magnetic flux
21 tool has become very, very popular, and very
22 consistent in its application. It's also been

1 married with deformation tools.

2 Here you can see a very large tool on
3 the bottom, large diameter with lots of different
4 inspection technologies incorporated into one
5 tool. And that's been a great help to the
6 marrying of data, to ensuring that we're looking
7 at the same anomaly with different technologies,
8 to gain more information about its threat, and
9 whether it needs to be remediated.

10 In the picture above you can see a
11 smaller diameter tool with several technologies
12 on it. So, the MFL tool utilizes a magnet, or
13 two magnets, or a whole load of magnets to run
14 down the pipeline, with a sensor in between.

15 So, this magnet is moving its waves
16 through the metal of the pipeline. And when
17 metal loss is sensed there is a flux leakage that
18 the sensor picks up the difference for, and
19 therefore, can identify that there is a leakage
20 of the field out of the pipeline. And it can
21 quantify that into an estimated metal loss.

22 And these tools are, in my opinion,

1 electronic marvels. They travel down the
2 pipeline at significant speeds. And create and
3 generate these data reports that are extremely
4 accurate. And I think the long term use of them
5 has caused them to gain much trust and
6 confidence.

7 So, as the defect field orients
8 differently, we may need to start utilizing other
9 types of magnetically oriented anomaly, tools.
10 Such as, here you can see a very thin anomaly
11 that the, in the axial field, that the standard
12 MFL tool with its magnets aligned in that
13 direction may not be able to pick up and
14 differentiate metal loss very effectively there.
15 Whereas, here it did a lot.

16 So, we may want to utilize a different
17 technology, like a circumferential technology, or
18 what may be called an axial tool, where the
19 magnets are oriented in a 90 degree different
20 direction to gather that data. So, those are two
21 different tools looking for two different
22 threats.

1 Let's look a little more at the metal
2 loss here. You can see how some of these
3 anomalies come up. And then the report out,
4 utilizing software from the ILI tool there can
5 help enhance what the diagram is showing, and
6 support remediation decisions.

7 And then, when those remediation
8 decisions are made, one can go to the field and
9 will map out corrosion, and identify depths. And
10 this is the type of data that is then coming
11 back, based on this signal.

12 And it would be shared from the
13 operators, or the vendors performing that in the
14 ditch analysis, such as that are represented here
15 today. It would be providing back to the
16 operator, and then to the vendor, to discuss what
17 the results were showing, and ensure that all
18 injurious conditions to the pipe were identified
19 that could be identified, so they could be
20 remediated.

21 Here is another application for EMAT,
22 showing some pipe body cracks. It's a very large

1 EMAT tool. And why detect cracks? Crack
2 detection's become a focus of some of our
3 proposed regulations. And because we've seen a
4 lot of issue with axial flaws and cracking for
5 quite some time.

6 And so, you can see here a very large
7 multiple tool set. And this is similar to what,
8 except for some of the technology, what all the
9 vendors would be able to provide is some sort of
10 tool that can be coupled together, and then run
11 to address different threats that were identified
12 by the risk analysis and data integration that
13 the operator needed to address for the pig run.

14 So, that working between the operator
15 and the vendor to identify the right tool is very
16 important.

17 And this kind of shows a diagram of
18 the value of multiple datasets. And further goes
19 to reinforce why it's so important to have good
20 information analysis at the front end, to make
21 sure that we are identifying what threats need to
22 be addressed. And that the ILI tool vendor is

1 aware of them, and other particulars about the
2 pipeline specifications to run the right tool and
3 make the right calls.

4 Oh, one thing I wanted to talk about
5 before I left was, this is a new term, the XYZ,
6 or geo positioning. So, not only are we looking
7 sometimes to get good positioning data for the
8 pipeline, to ensure we have a good smart line.

9 And sometimes to develop that smart
10 line, so, we'd be looking for the smart line or
11 geo spatial information, the deformation, and
12 then the other ILI information.

13 And so, once we've run the tool we
14 then start, we've then developed our anomaly
15 repair schedule. We then go into the ditch to
16 gather field information.

17 And now we've got, in the field we've
18 not acquired data utilizing appropriate equipment
19 to then be able to compare what the vendor
20 provided as an as called number, and what the
21 operator found with his crew as an as found. And
22 we create unity plots.

1 And this is where we can start looking
2 at some of the tool performance data, ensuring,
3 you know, 90 percent of the time I am finding 90
4 percent of the anomalies, or whatever that, or is
5 the tool over calling my anomaly depth?

6 Can I, is the tool performing such
7 that my tolerance band can be tightened up, such
8 that the tool tolerance can actually be
9 considered less than ten percent? Or is it
10 greater? Because that has an impact on my
11 remediation, to ensure that I've removed all
12 injurious anomalies.

13 All right. And so, the unity plot
14 here shows the ILI measurement, which would be
15 the as called from the vendor. And say the
16 vendor called out a 60 percent deep anomaly.

17 And then, when the operator went to
18 the field and excavated that measurement, let's
19 find, what they found, we found one 60 percent
20 that was actually 40 percent. And then as we
21 come around here we found a 60 percent that was
22 actually 65 percent.

1 So, I mean, this tool is calling a
2 variety of 60 percent depths, and most of them
3 are right around 60 percent. Now, there is
4 measurement error both on the tool, as well as in
5 the field.

6 So, there is a tolerance band that
7 acceptable for this because of the different
8 measurements we're having to take. And what
9 we're looking for is that a tool is performing
10 within the bounds that the vendor provided it,
11 it's specifications.

12 So, ILI technologies and tools can be
13 self-propelled, such as we've seen. Those tools
14 have large cups on them that take the pressure of
15 the pipeline. And they're pushed. Some
16 pipelines don't have enough flow. And so, a
17 robot or other pipeline must be, or other device
18 must be self-propelled down it by itself.

19 Or sometimes there's not an ability to
20 launch and receive the pig easily. So, maybe a
21 pipeline has to be cut, and a tethered pig
22 inserted into it, and fed down the pipeline, and

1 then retrieved from a single area.

2 So, we've talked about a lot of
3 different tools. And we'll see a lot of acronyms
4 as we go through this work. Not only is EMAT one
5 of the ones that's work, a lot of work's been put
6 on in the last ten years. It's been very
7 successful.

8 But ultrasonic shear wave tools are
9 used for cracking, for crack-like features,
10 versus the ultrasonic tools that typically catch
11 and receive a wave, which are very good for metal
12 loss.

13 Also, there's the need for mapping,
14 for providing three dimensional geographical
15 pipeline coordinates, to understand where the
16 pipeline is exactly from above the ground, as
17 well as how its depth of cover may be.

18 Other things that must be accounted
19 for, especially on gas pipelines, where the
20 product typically flows, quite often flows at a
21 higher rate than the pigs preferred speed, is to
22 have speed valve controls.

1 Okay. So, one of the standards, and
2 we'll just kind of look at some big tables right
3 now. But, that we may be looking at is what
4 anomalies, or what threats, what are acceptable
5 methodologies for assessing for those threats?

6 And here's a handy guide from NACE
7 0102, where we can see the different types of
8 cracks or features that we're looking for, metal
9 loss, crack-like anomalies, alignment,
10 deformation. And we can see where the different
11 types of tools are.

12 For instance, transverse MFL is going
13 to be preferred for axial cracking. Ultrasonic
14 shear wave is going to be preferred for crack-
15 like defects.

16 And it's not going to do much about
17 deformation. It may, it will detect it. But
18 it's not going to really quantify it that well
19 for us. For deformation tools we want to detect
20 and size them for deformation.

21 For typical metal loss, where
22 depending, we're going to use a standard or high

1 resolution MFL tool. Typically, the higher the
2 resolution, the more accurate the metal loss
3 reading.

4 And so, those are the kind of tables
5 that are in the standards, that have been
6 developed to support the ILI use and integrity
7 management programs.

8 And here's some graphic
9 representations of some of the anomalies. And
10 so, when we look at an anomaly like this, and
11 anomaly that we can identify has a width, in
12 terms of, that's like a circumferential direction
13 along the pipeline. And it has a length. And
14 that length is going to be axially down the
15 pipeline.

16 So, what we see here with a standard
17 MFL tool, magnetic flux leakage, is that it can
18 see circumferential slotting very effectively.
19 And it is very good in this general range. It's
20 not so good with axial slotting and grooving.
21 And pinholes are a very difficult flaw for most
22 any tool really, except ultrasonic to see.

1 And so, that threat identification of
2 what, the communication of what the vendor needs
3 to look for on the pipeline from the operator is
4 very key to choosing the right tool.

5 But if we employed a transverse MFL
6 tool we can that it's going to be oriented
7 towards seeing that axial slotting and grooving
8 much more effectively than the MFL, because of
9 the reorientation of the magnets. Whereas, now
10 it's not going to see the circumferential
11 grooving or slotting very well.

12 The other technologies that commonly
13 used, ultrasonic. And this is the compressive
14 wave, not the shear wave. But you can see a good
15 general, high resolution mapping of the
16 anomalies. But that it's going to have a little
17 window that's around the circumferential and
18 axial, where it's not going to be able to see
19 that based on the wave.

20 But it has a good general appearance
21 overall for metal loss dept. You'd have to use a
22 shear wave tool, ultrasonic tool, to really see

1 cracking.

2 So then, once the pig is pulled out of
3 the trap, it's then loaded on the truck. It's
4 tested to see if the results came back, and to
5 download the data and do its systems check. And
6 if it's confirmed to be a good run the data is
7 then started to be analyzed and communicated to
8 the operator. And that's when then the field
9 evaluations can begin.

10 So, that is the end of the
11 presentation. Are there any questions or
12 comments? Discussion?

13 CHAIR BURMAN: Thank you very much.
14 Anyone on the phone have any questions or
15 comments? Anyone at the table? Anyone in the
16 public?

17 Well, thank you, that was helpful. I
18 do think though you may be on call after we take
19 a break for lunch, and then we do the next agenda
20 item. It may bleed into each other. So, don't
21 go away, okay?

22 MR. McLAREN: Thank you.

1 (Whereupon, the above-entitled matter
2 went off the record at 11:52 a.m. and resumed at
3 1:03 p.m.)

4 CHAIR BURMAN: I'd like to welcome
5 everyone back. We're, just for a, sort of time
6 check, we're going to go now to Agenda Item 3.

7 We're behind about an hour and two
8 minutes, so we are going to, after Agenda Item 3,
9 and after some discussion and Q&A, we're going to
10 take a pause and look at what we have still
11 scheduled, and also some key take-aways from
12 Agenda Item 2 and Agenda Item 3, and focus
13 thoughts on where we are from the objectives of
14 the Working Group.

15 So why don't we now turn it over to
16 Drew from Kinder Morgan. He's going to talk
17 about operator integrity management
18 implementation. Thank you, Drew.

19 MR. HEVLE: Thank you very much. My
20 name's Drew Hevle. I'm Manager of Corrosion
21 Control for Kinder Morgan.

22 I, first, I'd like to thank the

1 Committee for the invitation. I appreciate the
2 opportunity to talk about our program.

3 First, a little bit about Kinder
4 Morgan. We're five different business units,
5 primarily pipelines, but some terminals as well
6 in North America, US, Canada, and Mexico.

7 Our group supports the natural gas
8 pipelines business unit, so we're focused only on
9 natural gas.

10 Here's a map of our pipeline system.
11 So, a big company. We've got 60,000 miles of
12 natural gas pipelines that we operate.

13 Of those, we have 3,372 high
14 consequence areas, totaling about 2,195 miles.
15 That's the 2016 numbers.

16 So we do a lot of in-line inspection,
17 160 to 200 segments a year, typically, with
18 multiple technologies.

19 That's, translates into 6,000 to 8,000
20 miles per year of pipeline assessed. So we're
21 assessing quite a bit more than just our high
22 consequence areas.

1 The scope of that amount of work
2 requires that we have robust company standards
3 and processes.

4 So we have an overarching ILI
5 procedure that addresses, soup to nuts, our ILI
6 process.

7 We rely on things like ILI service
8 provider customer profiles to ensure that we get
9 quality and consistent results.

10 We have documented processes within
11 our company for, for example, our company
12 analysts have work instructions to detail how we
13 process the data once we get it.

14 We have a pretty rigorous field
15 anomaly assessment and response. We have,
16 certainly have response criteria, conservative
17 response criteria and quality processes to ensure
18 that we're getting good data.

19 And then finally, we do things with
20 that data beyond what is done just with the, so
21 it's a cycle.

22 And we'll start out on top with the

1 risk assessment, then it goes to the actual
2 inspection where you run the tool.

3 You get the data and you analyze the
4 data, and then you evaluate and remediate what
5 the data tells you you need to, and then you
6 close the process. That's our cycle.

7 We'll start out with risk assessment,
8 and every in-line inspection starts out as the
9 gleam in the eye of a risk assessment algorithm.

10 And that's what drives the
11 determination of what method you're going to use
12 to assess the integrity.

13 It drives, there's a number, and I'm,
14 I've got a little bit of overlap with Chris's
15 presentation, so bear with me.

16 I'll try not to beat the dead horse,
17 but there are some kind of key concepts in here.
18 There are four approved in the regulations.

19 There are four approved assessment
20 tools, one of which is other technologies. And
21 then consensus standards define the threats and
22 the assessment tools that would apply to those

1 threats.

2 There is some guidance in regulations,
3 as well as in consensus standards on how to
4 select the proper ILI technology.

5 And as an example, here are the 22
6 listed threats in the ASME B31.8-S. This is
7 slightly different for gas, this is for gas
8 pipelines.

9 It's slightly different for liquid
10 operators. But in general, you have a bunch of
11 different potential root causes.

12 This list is based on some PRCI
13 research that was done to identify root causes of
14 potential threats to pipelines.

15 So vendor selection is important, what
16 technologies are offered, what are the
17 specifications within those technologies, do
18 their processes comply with the consensus
19 standards on your pipeline? What are, what are
20 the details on your pipeline that the tool has to
21 go through?

22 There are different requirements for

1 different tools and different technologies. And
2 sizes have different requirements as far as how
3 quickly they can turn through a bend, bore
4 changes for changing wall in the pipeline, for
5 diameter changes.

6 And then what are the velocity ranges
7 that this tool is accurate for? Internal
8 inspection technologies, Chris did kind of talk
9 about this.

10 You may need to, it's not an
11 inspection, but a cleaning tool. You may need to
12 clean the surface of the pipeline prior to
13 inspection.

14 Some technologies have to get closer
15 to the wall, and are less tolerant of debris and
16 such in the pipeline.

17 Gauge tools will determine if a tool
18 can pass through the pipeline. Typically, you
19 would, you would run that if you'd never run a
20 tool before to ensure that there isn't anything
21 that would hold up a, the, you run a cheap tool
22 so you make sure nothing would hold up the

1 expensive tool or damage the expensive tool.

2 Then geometry and caliper tools can
3 identify the location, orientation, and size of
4 things like dents or deformations, other ovality
5 changes.

6 We saw a good, a picture of pipe
7 expansion, as well as restrictions, bends,
8 changes in girth welds and wall thickness and
9 other pipeline features.

10 Metal loss tools, there's a number of
11 different technologies to identify metal loss,
12 which is typically corrosion, either internal and
13 external corrosion.

14 Then there are other tools designed to
15 identify linear features. Stress corrosion
16 cracking would be one, or as Chris mentioned,
17 defects in seams or girth welds that have
18 different orientations.

19 So there's different technologies.
20 EMAT, shear wave, ultrasonic, transverse MFL.
21 And then finally, what Chris called the XYZ tool,
22 we typically IMU, inertial mapping unit, which is

1 to gather location information to price, either
2 precisely relocate where you are in the pipeline
3 for a particular defect, or to improve your GIS
4 mapping systems.

5 You can also use this information to
6 identify pipe movement or identify, or you might
7 have strain based on changes in the shape of the
8 pipe.

9 Chris actually had this exact slide,
10 this diagram to show certain types of tools are
11 more accurate for certain orientation and shape
12 of defects.

13 So this is typical for an MFL tool,
14 and this is typical for a crack tool. And if you
15 have both cracks and anticipate having corrosion,
16 you might have to run two separate technologies
17 to identify all of those defects.

18 Here are some examples of MFL tools.
19 And here are some examples of crack tools. They
20 may, at first glance, look the same, but they
21 really are quite a bit different.

22 These are all free-swimming tools,

1 meaning that they're propelled by the gas in the
2 pipeline.

3 In addition to the tool technologies,
4 some other considerations in selecting a vendor
5 are the reporting capabilities and flexibility.

6 Certainly if you're dealing with
7 Subpart O assessments, there is a requirement for
8 reporting within 180 days in high consequence
9 areas.

10 If you're like us, getting 160 to 200
11 different segments worth of data, you want to get
12 that data in the same format so that you can
13 process it easier.

14 And so we have a, we have a format
15 that we ask for all our data in. The vendor
16 obviously would have to meet those reporting
17 requirements in format, in timing, and meet them
18 reliably.

19 So reliability is important as well,
20 as well as, you know, the analysis of this data
21 on the vendor side is key in ensuring that your
22 results are accurate and consistent.

1 So the analysis process within the
2 vendors, within their shop, is vital. Then
3 performance, they have to meet our company
4 profile requirements, and the profile defines all
5 of the different details that we're asking for
6 from the vendor with regard to acceptance
7 criteria, with regard to specifications, with
8 regard to qualifications in timing and reporting
9 and all of that.

10 The tool has to be available, and
11 there are times where it's difficult to schedule
12 a particular tool on short notice because other
13 folks in the industry are using that tool.

14 There has to be some flexibility in
15 tool scheduling, and the reliability of the tool
16 in getting data the first time you put it in and
17 take it out is critical.

18 I mentioned our customer profile.
19 This is, this is kind of key in providing
20 consistent results and deliverables across our
21 entire systems, across different tools and
22 technologies from different vendors, and across

1 multiple vendors.

2 So once we are, you know, we're
3 processing this large amount of data, we have to
4 get that data in a consistent format.

5 We have to ensure that the data
6 quality is consistent across all of these
7 different variables.

8 There are detailed analysis
9 requirements, detailed reporting format
10 requirements, and report timing. I've mentioned
11 each of these as well.

12 So planning is important. Launching,
13 receiving, handling the ILI tool. You have to
14 ensure that you can operate the tool, run the
15 tool at the proper speed to ensure that it's
16 accurate.

17 There's a, once you've run the tool,
18 there's a data quality assessment to ensure that
19 the tool did run within its specifications, and
20 that the data you're getting is accurate.

21 There are EHS considerations. Above-
22 ground markers are used to track the tool, as

1 well as to identify locations in space within the
2 data.

3 And I mentioned, cleaning the pipeline
4 as well. So that's when we go on to the
5 inspection portion of this.

6 Here are just some pictures that I
7 harvested off the website. Thank you, vendors
8 for loading pigs into pig traps, launchers.

9 And once you run the tool and get the
10 tool back, you do a data quality assessment
11 review. You confirm that you have data coverage.

12 Do you have data from the whole
13 segment? Do you have data 360 degrees around
14 from all of the sensors in the tool? Do you have
15 any degradation?

16 For example, you may have a little bit
17 of over-speed in a run because a tool goes
18 through a heavy wall segment and gets a little
19 restricted, and then when it pops out, it might
20 go faster than you had hoped.

21 And so you evaluate that degradation,
22 and it's within your specifications to ensure

1 that it's either acceptable or not acceptable.

2 Once you take the tool out, you do
3 your DQA, then analysis, there's a preliminary
4 report from the vendor.

5 That gets reviewed and may generate
6 some action. There's a final report. And then
7 finally, data alignment with all of the pipeline
8 attributes.

9 And here's a typical reporting process
10 for us. Some of these time frames may change,
11 depending on the technology.

12 Some technologies require much more
13 complex analysis than others. And so, if you're,
14 for example, running a conventional MFL tool, the
15 analysis is more straightforward than if you're
16 running an EMAT tool or something more complex.

17 But typically, if, this is our process
18 for most of our inspections, and it falls well
19 within the 180 day maximum requirement within the
20 Subpart O.

21 And then, you go out and, the whole
22 purpose is to improve, of an assessment, is to

1 ensure that the pipeline is safe.

2 And if there are things that
3 identified that need to be repaired or evaluated,
4 you go out, dig them up, and look at them.

5 And if they require repair, you fix
6 them. So we identify anomalies into different
7 categories based on the severity.

8 And those categories dictate what time
9 frame you're going to respond to evaluate and
10 repair those things.

11 We have a conservative response
12 criteria based on failure pressure ratio and
13 depth-based.

14 We also bake into this whole process,
15 the consideration of tool tolerance and metal
16 loss growth information.

17 So if you have a corrosion defect that
18 you identify, it's possible that that corrosion
19 defect is going to continue to grow.

20 And so you have to consider that in
21 what you respond to, as well as how frequently,
22 or how long you're going to go before you

1 reassess.

2 And then a key is the selection and
3 training of NDE personnel, because you have a
4 tool that tells you something about these
5 defects.

6 And then you have people go out and
7 you measure them to confirm or identify
8 differences.

9 And so the people who go out there
10 have to be trained, have to be qualified, and
11 have to accurately measure these in order to
12 understand how accurate the tool is.

13 We obviously have an OQ requirement as
14 part of the regulations. But in addition to
15 that, we conduct training for each of the NDE
16 technicians who does work on our, on our
17 anomalies.

18 We require knowledge testing, and we
19 perform field audits, and we have certainly
20 identified opportunities for improvement within
21 vendors and within specific NDE technicians.

22 And we have taken action if we aren't

1 getting the results that we expect. Then,
2 evaluation and remediation.

3 We have a, what we feel like is a
4 robust setup procedures for field anomaly
5 evaluation.

6 We use advance technologies and have
7 a conservative response criteria. Here's an
8 example of an anomaly dig, and this is some of
9 the documentation that is done once we expose an
10 anomaly to show our evaluation.

11 And so here you see a small dent
12 that's circled with a dotted line. You see some
13 metal loss associated with that dent right here.

14 Okay, right here, some metal loss.
15 This is the dent. And then you have other
16 information to help you evaluate that.

17 You show flow direction here, which
18 doesn't really have any effect on external
19 corrosion.

20 You show the clock position around the
21 pipe, 12:00 is top of the pipe. And so you go
22 around and you have other information documented.

1 MR. MAYBERRY: How are your pipes that
2 clean?

3 MR. HEVLE: I will say all of our
4 pipes are that clean. Yes. This is, this is
5 after the coating is removed.

6 This is after the surface is cleaned
7 for evaluation. So, does that answer your
8 question? Okay.

9 We use an electronic reporting tool
10 for the NDE information. And this is, this is a
11 back and forth process.

12 So we do quite a bit of information
13 sharing with our ILI vendors. The NDE technician
14 who is, who is not a company employee, is a
15 vendor, completes the draft form.

16 They send it back to their QA/QC for
17 review, and then they send it to us for our QA/QC
18 review.

19 We have dedicated personnel, company
20 personnel who review each one of these, what we
21 call pipeline examination reports, PERs, or the
22 results of an anomaly dig.

1 And then once we've completed our
2 review, we send it back to the vendor to update,
3 and they send it back to us to finalize.

4 So there's quite a bit of back and
5 forth to ensure that the information that we're
6 documenting on each anomaly dig is accurate and
7 complete.

8 We look for confirmation of the proper
9 remediation. And then once we're done, this data
10 goes into a database so that we can use that
11 information for other processes going forward.

12 For each anomaly dig, we develop a
13 root cause. We collect enough information at
14 each dig so that we can determine what the root
15 cause of the anomaly is.

16 Some of the, some of the data points
17 we collect, we measure pipe-to-soil potentials,
18 both AC and DC potentials at the anomaly to
19 evaluate the level of cathodic protection, to
20 identify if there is stray current.

21 We examine the coating prior to
22 complete excavation to identify, is the coating

1 intact? Is it adhered to the pipe? Is there the
2 potential for shielding in this location?

3 We measure soil resistivity. We
4 measure pH under the coating to see if we're
5 getting cathodic protection under disbonded
6 coating.

7 We conduct magnetic particle
8 inspection to look for cracks. And we do x-ray
9 where we have internal indications. And then, we
10 identify the root cause of the anomaly.

11 For example, it could be external
12 corrosion due to shielding coating. It could be
13 external corrosion related to AC stray current.

14 It could be a manufacturing defect
15 identified as metal loss. It could be internal
16 corrosion.

17 It could be SEC, various types of SEC.
18 Here's an example of the, anomaly that was
19 identified on ILI, and the root cause we
20 determined to be AC corrosion.

21 And that's this really kind of
22 isolated pit that you see without any other

1 associated corrosion. Was that as clean as,
2 about as clean, yes. All right.

3 Then, we have an annual review of NDE
4 performance metrics, minimum, with our NDE
5 vendors, and we have more frequent review if we
6 identify concerns by our QA personnel.

7 We develop a weighted report, a
8 quality metric by vendor and by technician. And
9 so we provide relative weighting to the types of
10 data that they're obtaining.

11 If they, obviously some forms, when
12 you're filling out a form, some things are more
13 critical than others, and so we provide some
14 weight to that so that we get a good evaluation
15 of the, of the quality of the technician and the
16 quality of the vendor that we're getting.

17 We have an API 1163-based process for
18 validation of the results. That includes a
19 systems qualification process, in-line inspection
20 system selection, qualification of performance
21 specifications, system operational validation,
22 system results verification, reporting

1 requirements, and quality management system.

2 Those are all parts of the API 1163
3 standard. Here's a diagram. I'm not going to go
4 into detail.

5 Part of the verification, and Chris
6 did talk about unity plot. I wanted to mention
7 it again.

8 This is an important tool in
9 evaluating the, and validating the results of an
10 in-line inspection.

11 On the vertical axis, here you have
12 what the tool called. And on the horizontal
13 axis, you have what you went out and actually
14 measured.

15 And these, in this case, these are
16 percentages of wall thickness from 0 to 100. And
17 if your tool exactly matched what you went out
18 and measured, every point would be on this 45
19 degree line.

20 And you see, there's, and this is,
21 this is a, just an example. You see there's some
22 deviation from that in where maybe the tool

1 called it a little deeper than what we actually
2 measured, or vice versa.

3 And the lines that you see there, the
4 bands outside of the 45 degree line, are bands
5 for tool tolerance and are specification for
6 accuracy.

7 And so if the, all of the green dots
8 don't fall on the line, as long as they fall
9 within our acceptable criteria, then we're good.

10 If they don't, then we have different
11 levels of validation processes that we would go
12 through, up to and including a whole bunch of
13 additional digs to validate the data.

14 And finally, we close the project.
15 The field engineer, who's responsible for running
16 the ILI project, develops a closure report that
17 documents the completion of all of the required
18 anomaly digs, and ensures that all of the
19 documentation that's required is complete.

20 And once we are done with that, ILI data
21 goes into our GIS system. We, if we ran and IMU,
22 we use that to update our center line on our

1 pipeline to make our mapping more accurate.

2 And then we have other processes that
3 use this data. For example, cathodic protection
4 assessments.

5 We, if we identify, if we identify
6 corrosion growth and we have other measurements
7 that indicates we have adequate cathodic
8 protection, we need to evaluate why we think we
9 have adequate CP but have corrosion growth.

10 It may be shielding coating, in which
11 case, we would have a root cause telling us what
12 the reason is there.

13 Or we may, we may, this may drive
14 going out and doing some close interval survey to
15 evaluate what's the level of our cathodic
16 protection.

17 We use this information in evaluating
18 short casings, and determining if we need
19 mitigation within the annulus.

20 We use this in our internal corrosion
21 monitoring and mitigation program. And the
22 results of our data collection and anomaly digs

1 are put in a database so that we can access that
2 soil resistivity, we can access that root cause,
3 we can access AC and DC pipe-to-soil potentials
4 in the, in the database.

5 So finally, we go back and close the
6 loop to an assessment. Again, we calculate the
7 reassessment interval based on these results.

8 We evaluate our preventive and
9 mitigative measures, and we review the threats to
10 ensure that we have an accurate threat
11 assessment.

12 There may be new threats. There may
13 be threats that no longer exist. And then we
14 have some process improvements, including annual
15 vendor metric reviews.

16 These are both on our tool providers,
17 as well as on our NDE service providers. We look
18 at report timing. We look at quality. We look
19 at the accuracy of the data.

20 Are they meeting our specs? Are they
21 following our customer profile? Are they
22 following the required industry standards?

1 All of that is reviewed on a, on a
2 regular basis. That's my presentation. Thank
3 you.

4 DISCUSSION AND Q&A

5 CHAIR BURMAN: Thank you very much.
6 Before we get into some, taking a pause and
7 looking at the different issues that we've dealt
8 with so far.

9 Does anyone have on the phone any
10 specific questions from a technical perspective,
11 or comments on what was just presented? In
12 hearing none, anyone around the table? Anyone in
13 the audience?

14 Okay, great. So we just had, on
15 integrity management, two agenda items that have
16 been very chock full of information.

17 First off, around the table, it's
18 probably not necessarily new information. For
19 others, it is.

20 And you know, part of the issue is on
21 getting back to sort of what's the goal of the
22 working group?

1 What's the data that we're trying to
2 get at? And what's the sweet spot for helping us
3 get information that we need to fulfil the goals
4 and objections, not only from the legislation,
5 but from the items that the group has identified
6 as important?

7 We picked these two items to
8 primarily, from flushing out substantively at the
9 December meeting, then on the planning poll on
10 April 20th, that integrity management issues were
11 very important.

12 But I'm wondering if anyone has any
13 thoughts on, you know, how we're doing in terms
14 of helpful to getting to our goals? Okay. Dan?

15 MEMBER COTE: Thank you, Madam
16 Chairman. First, both presentations, in my mind,
17 were absolutely outstanding.

18 They were delivered crisply, chock
19 full of facts, and incredibly informative for us.
20 So let me say that at the outset.

21 Having said that though, at this stage
22 of the proceeding, I'm not sure that really

1 helped us to drive us to a key resolution.

2 And I see that resolution being, and
3 I promise, this may be the last time I say this
4 this afternoon, then I'll take my Prozac, but the
5 issue is that we haven't identified our key
6 expectations on outcomes, what we're trying to
7 achieve.

8 And on that basis, I guess, Madam
9 Chairman, with all due respect to our agenda, I
10 would recommend that no later than tomorrow
11 morning, we sort of put a hold on our existing
12 agenda, and this Committee have a serious
13 discussion on what it is we really expect to
14 achieve out of this that will promote pipeline
15 safety going forward.

16 That's a key discussion that we need
17 to have. It's a key enabler for all, what I see
18 to be all of our future sub-committee work.

19 And without it, I don't see how we
20 make much progress. And that, and that is
21 intended to be no disrespect to the quality of
22 those two presentations. I really do believe

1 they were outstanding. Thank you.

2 CHAIR BURMAN: Thank you for your
3 willingness to be frank. Well, so, one of the
4 things is, I think that it's important for us to,
5 as we, oh, Alan, you want to speak?

6 MR. MAYBERRY: Well, first off, I
7 agree. I think our goal is to definitely get
8 there.

9 And I think through these, this day
10 and a half, we will get there and we should leave
11 that way. I think the idea here was to educate,
12 obviously.

13 We're laying all of the toys out on
14 the floor, if you will, and we're going to sort
15 through that. So it's educational.

16 But, and it can seem daunting,
17 especially if you don't deal with this, that
18 there's a lot to this process.

19 What we're dealing with, and we need
20 to put a box around it, really as a subset of
21 what you've just heard in the last two
22 presentations.

1 It deals with sharing data that comes
2 out of this, these very complicated processes
3 that operators use to maintain their pipelines
4 with ILI.

5 But how do we put a box around that to
6 deal with, you know, specifically, the mandate
7 relates to sharing information on in-line
8 inspections.

9 So I think, I think we'll get there.
10 We're just laying the toys out and we're going to
11 coalesce by tomorrow. We've got to.

12 CHAIR BURMAN: Okay. Does anyone on
13 the phone have any comments? Anyone at the
14 table? Anyone in the audience?

15 So I'm just going to take a moment of
16 personal privilege and give you my thoughts. I
17 think it's really, also really helpful for me,
18 from an educational perspective.

19 I am getting a lot out of this. I
20 also am cognizant of the time and needing, well,
21 when we're here, for all of us to leave feeling
22 that we're making progress.

1 And I do agree with Alan that between
2 now and tomorrow, we will get there. I will put
3 out for folks that I just think it's important
4 for us, for the rest of the day, and then when
5 we're alone with our thoughts tonight, to really
6 take some time to think about what it is that we
7 are going to need to do.

8 Not just from a substantive
9 perspective, but from a process perspective. We
10 have time on the agenda tomorrow, and if we need
11 to spend that time primarily focusing on the next
12 steps in the processes and where we need to be
13 with some clear, maybe specific examples, I think
14 that's very helpful.

15 I'm going to give you my own thoughts
16 right now, for food for thought. Years ago, I
17 worked in an insurance company, in-house, in a
18 large insurance company, doing toxic tort
19 litigation defense.

20 I managed a whole host of commercial
21 accounts, and had many different outside counsels
22 that we hired.

1 And I got stuck with a job of going
2 through old files, and assigning to different
3 people, you know, what was appropriate in terms
4 of it.

5 And I kept finding, like the first
6 time, then the fifth time, and it was a whole
7 long month process.

8 Found in the files, this, like, kind
9 of weird, what I call, just like, didn't fit any
10 category.

11 It's latex glove issues, and people
12 were suing for exposure to latex gloves. It was
13 before people even talked about it.

14 And I convinced my manager that this
15 wasn't an isolation, that we needed to really
16 kind of drill down.

17 And I think he didn't agree, but, and
18 my colleagues, who then, it was before you did,
19 had computers to run analytics, had to spend time
20 going through all their files.

21 And then it turned out that we had a
22 huge latex glove injury that, issues that we

1 didn't know about.

2 And then we had to really coalesce and
3 figure out if it rose to the level of a new toxic
4 tort issue. And then all of the different
5 things.

6 And it really was from, sort of that
7 few case studies, and then working through it,
8 and kind of everybody getting together who was
9 involved in it, and adding their two cents and
10 trying to figure it out.

11 And I kind of look at that as maybe
12 one of the things that we need to look at in some
13 ways, is how could we identify, you know, whether
14 it's real or, you know, a scenario that we do
15 from a case study.

16 And run alongside what the airlines
17 and done, and figure out sort of where we go from
18 there.

19 And that's sort of what I'd like
20 people to think about for tonight, in terms of
21 what that might look like.

22 I know a few people talked about, you

1 know, having the FAA and their experience, and
2 maybe that's something that we can think about,
3 of how we can get to some real practicalities
4 with that.

5 And then, especially because we're
6 talking about what information do we need, but
7 it's hard to talk about it when we don't have
8 something that we could, you know, look at and
9 run alongside. So that's just my two cents.

10 So now, with that, I think I just gave
11 everybody a homework assignment. So, thank you.
12 And now we're going to go to, unless anyone has
13 any questions or comments on the phone, at the
14 table, in the audience? Okay.

15 Now, we're going to go to Agenda Item
16 4, geospatial pipeline data, and Amy Nelson, from
17 PHMSA, will be talking about it.

18 We are on a time constraint, so we are
19 trying to shave off a little bit of time. So,
20 thank you. Amy?

21 MS. NELSON: Thanks for the
22 introduction. I'm Amy Nelson. I am PHMSA's GIS

1 Manager, and I'll be speaking about the National
2 Pipeline Mapping System.

3 In regard to what we were just talking
4 about, I think it's, the NPMS has a unique niche
5 in which it is a system that does share data
6 among many different groups of stakeholders.

7 Literally tens of thousands of people
8 every month access the NPMS data. So, you know,
9 maybe it'll kind of get the wheels turning about
10 what's effective in sharing pipeline data.

11 People in the room, how many of you
12 guys are familiar with the NPMS? Okay. So, it's
13 a lot of you.

14 I thought I'd, you know, put a couple
15 of introductory slides here. I'll kind of speed
16 through them since most people in the room are
17 familiar with it. Hopefully that reflects the
18 ratio of people on the phone as well.

19 So it's a GIS data set. We have
20 locations and attributes of gas transmission,
21 hazardous liquid pipelines, as well as LNG plans,
22 and a partial set of breakout tanks.

1 Just highlighting that distribution
2 and gathering lines are not included. Operators
3 do have to submit to the NPMS each year.

4 That's in the regulations. I have a
5 citation coming up. And I'll also be talking
6 about the ways in which we display the NPMS data.

7 So having said that, you know, you
8 might think that we have this warehouse of NPMS
9 staff processing this data from all of these
10 pipeline operators.

11 But in reality, our team is pretty
12 small. I'd like to, you know, put a face with
13 some of the names, since the majority of you are
14 industry people, operators.

15 If you're talking to my staff, here
16 are some of the key players. We've got some
17 other folks, of course, who are not shown here.

18 The origins of the NPMS, it was
19 actually conceived around 1998. There was a
20 group called the MQAT, and that was industry and
21 the government formulating the program and the
22 data standards.

1 I was not at PHMSA at that point, so
2 I can't speak too knowledgeably about the
3 Committee, although I think some of you guys in
4 the room were here.

5 Submissions were voluntary from that
6 1998 Committee until 2002 when the Pipeline
7 Safety Improvement Act of 2002 was finalized, and
8 then submissions became mandatory.

9 I wanted to point out that PIMMA,
10 which is the online, now it's password protected,
11 mapping application, was launched in spring 2001.

12 At that point, PIMMA, the mapping
13 application, was available to anyone. Anyone
14 could download the data. Anyone could go in
15 there.

16 September 12, 2001, PIMMA is removed
17 temporarily from the web as PHMSA figured out how
18 to protect this data, which, you know, had a new
19 idea of sensitivity behind it at that point.

20 And in 2015, we changed from the
21 statutory requirement in the Pipeline Safety
22 Improvement Act to actual citations in 49 CFR.

1 If anyone's interested, here they are.
2 It's probably good if you're seeing this for the
3 first time, because if you've seen it before, it
4 might be from a certified letter from me, and you
5 don't want to get one of those.

6 So a couple of statistics, just to
7 give you an idea of the magnitude of the NPMS.
8 We've got over 800,000 records in our geospatial
9 database.

10 We have over half a million miles of
11 pipeline. We've got approximately 1,300
12 operators who are required to submit each year,
13 or tell us there's no changes.

14 And this is obviously not 1,300
15 different companies. It's 1,300 different OPIDs
16 or reporting units.

17 A large company could have, you know,
18 20 OPIDs, but there are a lot of really small
19 pipeline operators who just have a couple miles
20 of transmission pipeline.

21 In some cases, less than a mile. And
22 because of classified as transmission, they're

1 still required to submit to the NPMS.

2 So whenever we're looking at
3 information collection, regulations,
4 requirements, we're always trying to balance
5 these really tiny companies who have, you know,
6 one or two full-time employees, and maybe no GIS
7 capability.

8 Certainly no one on staff doing GIS,
9 with, you know, the Kinder Morgans, the Exxon
10 Mobils of the world who, you know, fortunately
11 have very mature GISs.

12 We have about 9,000 government
13 officials and pipeline operators who have user
14 names and passwords to PIMMA, which is the
15 password protected application.

16 In a couple of slides, I'll go through
17 the difference between the different
18 applications.

19 Hopefully, it can be confusing.
20 Hopefully, I will clarify that for everyone. The
21 public viewer is the public facing application,
22 which shows a limited view of pipelines.

1 And I pull web statistics on this
2 every three months, and the last report said we
3 have almost 20,000 unique visitors each month to
4 the public viewer.

5 So what we're currently collecting is
6 dating back from this 1998 Committee. And you
7 know, it's a pretty small data set.

8 So you've got OPID, operator name,
9 system name, whether it's inter or intrastate.
10 If it's a liquid line, whether it's low stress.

11 Is the pipeline in service, abandoned,
12 idle, or retired? The data quality, that's
13 really just positional accuracy.

14 What, you know, is it within 50 feet?
15 Is it within 500 feet? Et cetera. There's
16 different bucket categories for that.

17 The revision status, that's basically
18 just, is this the first time you're submitting
19 your line to the NPMS?

20 That kind of thing that helps us, on
21 the back end, not duplicate lines in our data
22 set. And then LNG plans are required.

1 Just point out, you know, the question
2 that I get pretty much every single day is, can I
3 have your data, from, you know, all different
4 classifications of people.

5 And the shapefiles are only available
6 to government employees, according to their
7 jurisdiction.

8 So if you're a state employee, you
9 could get the shapefiles for your state. If
10 you're an operator, you can get the shapefiles
11 for your OPID that you submitted, which you might
12 think is not, you know, why do we do that? It's
13 not useful.

14 But if you're the new guy and you're
15 tasked with doing the NPMS submission this year,
16 you don't know what's been submitted before.

17 If we give you the shapefile,
18 sometimes it's easier for you to, just to modify
19 those and resubmit them to us.

20 We have a couple of attributes which
21 are optional. They are a subsystem name,
22 diameter.

1 Diameters submitted, somewhere between
2 75 and 80 percent of the OPIDs submit diameter
3 for their pipelines.

4 We also have commodity detail, and
5 that's just kind of finer classification for
6 certain categories.

7 Natural gas is one example. That's
8 optional. Commodity description. So that's like
9 if you were saying it's, you know, it's another
10 gas, you may include what kind of gas it is.

11 Just, you know, very fine details
12 about what the commodity is. And then breakout
13 tanks, those are optional.

14 My guess is, I think last time I
15 checked, we had slightly less than half of the
16 breakout tanks in the nation were part of the
17 NPMS.

18 So talking about positional accuracy,
19 it's currently plus or minus 500 feet for the
20 pipelines.

21 I think, you know, most of us know
22 that that's not considered great accuracy

1 anymore.

2 Back in 1998, you know, it wasn't so
3 great either. The idea, I believe, back then,
4 was to make it a small burden to submit.

5 So to lower the burden to submit,
6 therefore, let's take data that's not as precise
7 as we would like, but it's better to have
8 something than nothing.

9 And you know, now, this has been on
10 the books ever since. We have an information
11 collection in the works.

12 It's proposing to tighten the accuracy
13 standard to 50 or 100 feet, depending upon the
14 pipeline class location, and the high consequence
15 area status.

16 Does it or does it not affect an HCA?
17 And we've gotten widespread buy-in from industry
18 on this point.

19 I think everyone knows that it's time
20 to update the positional accuracy for our
21 pipeline data.

22 So as I was, you know, talking about

1 at the beginning, we have a wide variety of
2 stakeholders. We've got PHMSA staff, emergency
3 responders.

4 So those are kind of a subset of these
5 federal, state, and local government officials.
6 And we have the general public, of course, as
7 well as the industry, you know, as well as people
8 internationally.

9 Here's just a few things that it's
10 used for. Emergency response support is one of
11 our most vital purposes of the NPMS. Also,
12 inspection planning.

13 So within PHMSA and our partners, how
14 are we going to prioritize inspections? What
15 makes sense in terms of an inspection route for
16 inspection planning?

17 Risk assessment is a huge application,
18 hugely important application for the NPMS. Given
19 our limited attributes that we currently have,
20 how can we help determine risk on a particular
21 pipeline segment?

22 Researching and supporting our

1 existing and potential new regulations. How many
2 pipes could this potential rule-making affect?
3 What's the mileage that it affects? Where are
4 these pipelines?

5 Trending analysis, very vital when
6 you're looking at the occurrence of accidents and
7 incidents. Where are they happening?

8 Is there a pattern? Is there a
9 pattern that we can see in a GIS that we cannot
10 see in tabular statistical data?

11 Helping the general public view
12 pipelines in their area. So the public have a
13 right to know about pipelines.

14 I just had to put this in here. To
15 interpret the occasional psychic reading. This
16 is probably the most interesting use of the NPMS
17 I've seen in my 11 years at PHMSA, and about 15
18 years on this project.

19 I had an email, my contractor passed
20 it on to me, from someone who said, you know, I'm
21 looking for a grave site, and I went to a
22 psychic, and she said that it's near a pipeline.

1 So here's kind of a map, based on what
2 the psychic told me. What's the pipeline that I
3 should be looking here?

4 So I actually believe there was no
5 pipeline in our system. So I don't know what
6 happened to this person.

7 But I have to say, that made me laugh.
8 I put in here a couple of maps, just to kind of
9 show some of the applications at PHMSA.

10 The problem I have, when I'm trying to
11 find graphics for these presentations is, I
12 cannot show you guys, you know, maps of
13 pipelines, unless there's just one county and
14 it's at 1 to 24,000 or greater.

15 So, you know, or courser scale.
16 That's our data security policy. So I just pull,
17 I spend like an hour looking at some interesting
18 maps, which I cannot show, but I pulled a few
19 that I could.

20 So this is a hotspot map. At one
21 point, we were doing some research about the, a
22 potential new regional office.

1 And so what we were looking at here
2 was HCA, high consequence area, and accident
3 history hot spots.

4 So places at which there's a lot of
5 HCAs, and there's a lot of accidents and
6 incidents normalized by the pipeline density
7 across the United States.

8 So this, you know, this is not really
9 a risk assessment, but it is a kind of a
10 suitability analysis for, you know, where do we
11 need to send inspectors.

12 If we're looking to set up a new
13 office, you know, what might be a likely
14 candidate here? All right.

15 So this one I just kind of put a big
16 old polygon over the pipeline so I could show you
17 some of the emergency response that we do.

18 This is from Hurricane Matthew. I
19 think that was last year. And you know, these
20 maps can be very sophisticated.

21 We can pinpoint the operators in the
22 hurricane swath. This was, you know, the data

1 from the, from NOAA, showing where the hurricane
2 path might be.

3 So we're mapping the critical
4 infrastructure. Here, it's a likelihood of power
5 outages.

6 And during hurricane season, we're
7 doing this all the time, when there are
8 significant tropical storms or hurricanes.

9 I just want to shift gears just a
10 little and talk about the high consequence areas.
11 So we've got five different categories of HCAs.

12 Commercially navigable waterways,
13 highly populated areas, and other populated areas
14 are viewable to the general public.

15 So those are not protected. The first
16 one comes from the Army Corps of Engineers, I
17 believe. The second two come from census data.

18 It's those last two, drinking water,
19 unusually sensitive areas in ecological USAs that
20 are protected.

21 They are only available to liquid
22 pipeline operators. And we are very much engaged

1 right now in a project to update that data, which
2 some of you may know, has not been updated since,
3 it was 2001, 2002 when we formulated the last
4 data set.

5 So I cannot take questions about that
6 offline. So just, you know, one of the HCA data
7 sets that I can show you, here's just a map of
8 Alaska and the commercially navigable waterways
9 on it.

10 We don't have the pipelines on this
11 map, but you know, there's been some questions
12 about, like, which pipelines cross CNWs.

13 And you know, here's just an example
14 of some kind of, you never know what the day's
15 going to bring at PHMSA, but it might bring an
16 analysis kind of like this. All right.

17 So to sort out the different
18 applications, really all you need to know is
19 there's a public viewer, and there's PIMMA.

20 And you know, if you guys are all
21 state, government, pipeline operators, you would
22 be eligible for a PIMMA user name and password.

1 And here on this screenshot of our
2 home page, you can see, down at the bottom left,
3 you can apply for PIMMA access.

4 Again, remembering that if you're an
5 operator, you can only see your pipelines. If
6 you're a state official, you can only see your
7 state.

8 And if you don't fall into that
9 category, or if you want to take a look at a
10 different state, go to the public map viewer on
11 the right hand side here.

12 Click the use public map viewer
13 button, and then you'll be able to see one county
14 at a time.

15 And you'll be stopped once you zoom in
16 past a certain level. The pipelines will
17 disappear when you get too close.

18 We do a lot of outreach in the NPMS.
19 We think it's very important to track how many
20 people we're reaching, and to kind of figure out
21 where to focus our efforts.

22 And I might just, you know, bring that

1 up for like a wider discussion for the working
2 group.

3 You know, once you've got the data,
4 how do you, how do you do the outreach? How do
5 you publicize what you have and let people know?

6 This map is a couple years old. It
7 was produced in May 2014. And we just map the
8 PIMMA users by county.

9 So it's a little too small for those
10 of us in the room, maybe, to see that legend down
11 there.

12 But you can see that we've got some
13 counties where we've probably been more effective
14 to reaching out, and some less.

15 I mean, you've got to normalize this
16 by the population, actually. So you know, there
17 should be more users in areas of the country that
18 are more populated.

19 But what I'd like to do is create a
20 map showing, you know, three years later, who
21 are, how many users do we have? Because it
22 certainly goes up every year.

1 We got 9,000 users now. This is
2 probably about 6,000 to 7,000 users, is my guess.
3 And so in what areas do we have more users?

4 When we're doing outreach in a state
5 that doesn't have many PIMMA users, can we
6 highlight the NPMS and access to PIMMA?

7 This is PIMMA Plus. I said there were
8 just two, I was kind of lying. There's PIMMA
9 Plus, but it's kind of a secret. No, it's not a
10 secret.

11 It's just available only on the PHMSA
12 intranet. So unless you're sitting at PHMSA and
13 you've got a login, you can't see it.

14 But I want to tell you, the only thing
15 that's different, really, is that you can see
16 inspection unit data.

17 So inspection unit the stretch of
18 pipeline that an inspector inspects during one
19 inspection.

20 So when an inspector goes out, they,
21 you know, they do their inspection. They create
22 data for that inspection.

1 That data is tied spatially to a
2 pipeline now. It took us the better part of two
3 years to map all of the inspection units on the
4 pipelines.

5 So now we've got a way, and if I could
6 show you the pipelines, I would, but I can't,
7 that we could lay out the pipelines and click on
8 a pipeline.

9 If it's one that PHMSA inspects, and
10 remember, a lot of them are ones that our state
11 partners inspect.

12 But if PHMSA inspects it, you can pull
13 up the inspection records for that pipeline. So
14 really, the only difference here is that in that
15 drop-down menu at the top, you've got show unit
16 attributes.

17 This will tell me what the inspection
18 unit number and name is, you know, who the
19 pipeline operator is, and then I can basically
20 query the inspection records.

21 So PIMMA Plus, you know, has the most
22 of anything. So it's got the query inspection

1 unit part, then PIMMA has query pipeline history,
2 which is who used to operate this pipeline, or
3 what data did the operator submit, you know, over
4 the course of several years?

5 That goes back to 2010. That's when
6 we started building the history, and we could not
7 retrofit the history.

8 It just wasn't possible with the way
9 our data is. So 2010 is year zero, and every
10 year we add on another layer of operator
11 submissions.

12 So if you want to determine,
13 differentiate the performance of a pipeline, no
14 matter who operated it, you know, from the
15 operator's performance, you can really see if
16 this is just a bad pipeline, there's something
17 wrong with it.

18 Something's not right about this
19 pipeline. No matter who operates it, there has
20 been, you know, there's been bad inspection
21 issues.

22 It's useful for PHMSA to do that, to

1 differentiate between a bad operator who might,
2 you know, have problems no matter which pipelines
3 they operate.

4 But you know, more importantly, it
5 lets us see who used to operate this pipeline.
6 Because internally, you know, an inspector might
7 know that, you know, this was an Exxon pipeline,
8 but hey, it's not anymore.

9 So who did they sell it to? So we're
10 trying to have that chain of events built in the
11 NPMS to see how the pipelines attributes, how the
12 operators changed over time.

13 It's actually a really big part of our
14 job, because it takes a lot of work to build this
15 history.

16 Because every time we get a
17 submission, we've got to kind of be like
18 detectives and fit it into the puzzle to say,
19 well, you know, is this actually a duplicate
20 line, or is this just, someone bought it and they
21 re-surveyed it, and so it's coming out right next
22 to the pipeline.

1 And as you guys know, there's some
2 corridors where there's an enormous density of
3 pipelines. And there might be 5 or 10 different
4 pipelines running within a mile.

5 And so we're trying to figure out,
6 with this pipeline history, scripts, custom tools
7 we have, you know, which, did the pipeline move?
8 What, did it actually move in the ground? Was it
9 re-surveyed? Was it rerouted?

10 And so we match it as the years go by
11 to the appropriate operator. Okay. The public
12 viewer lets you query the incidents and
13 accidents. Obviously gas and liquid operators.

14 So that's something that we made
15 available to the public because it's based on
16 publicly available reports. The operators submit
17 the coordinates.

18 So you know, that part is not
19 protected. So the public viewer has that, and of
20 course PIMMA Plus has the inspection units, the
21 history, and the incidents and accidents.

22 And on the right hand side, where you

1 see the map layers, I just, I'm just showing that
2 in PIMMA Plus, because it's just for PHMSA staff,
3 we've got the eco-sensitive areas, and the
4 drinking water sensitive areas.

5 And here, I just turned on the
6 populated areas around Dallas. They're kind of
7 the tan blobs on the screen, just so you can kind
8 of see what this interface is like.

9 And it's, you know, the same basic
10 interface that we have for the public viewer. So
11 this is just showing one county. And the blue
12 pipelines are gas. The red pipelines are liquid.

13 And it looks like we've got some
14 liquid accidents turned on. And we have the gas
15 incidents turned on as well here.

16 So when you go to the public viewer,
17 this is the type of thing you'll see. We updated
18 the, both the public viewer and PIMMA interfaces
19 within the past, about year and a half.

20 I also want to highlight, we have
21 iPhone apps now. One of these is brand new. The
22 PIMMA app launched, I think it was in May.

1 And we have a public, I mean, sorry,
2 the other way around. PIMMA app launched late
3 last year, and public viewer app launched in May.

4 So if you remember, we'll just go back
5 to the homepage screenshot here, down at the
6 bottom, you can see the PIMMA iPhone app and the
7 public viewer iPhone app.

8 So if you click on that, it's not
9 actually going to bring you to the app store.
10 It'll just say, hey, go to the app store and
11 search on this phrase, and you'll find it.
12 Because our website is not really designed to be
13 used with a touch screen.

14 So that just gives you information
15 about how to download those apps. And please
16 download the public viewer app.

17 My statistics say we've only got about
18 100 users of that. The PIMMA app has, I think it
19 was 800, maybe 900 users last time I checked,
20 which was at the beginning of June.

21 So let's get those numbers up.
22 Download the apps. It's fun. You can, you know,

1 you're traveling and see which pipelines are near
2 you. You can identify on the pipeline operators.

3 So if you're looking at the public
4 viewer iPhone app, you can just search, really,
5 for NPMS public viewer on the app store. And you
6 will not need a user name and password.

7 So you just see the interface here.
8 You're going to select a state and a county. You
9 can query the pipelines.

10 You can turn on and off the layers
11 that you are able to see. You can change the
12 county and state that you are viewing.

13 And I usually get a question, are you
14 going to develop it for Android? No. We're not
15 currently planning on doing that.

16 Basically, two reasons. First, the
17 Android market is, what you call, fragmented,
18 which means that if you develop an Android app,
19 it's not kind of a one size fits all, like it is
20 for iPhone apps.

21 And the second reason is that the ESRI
22 technology, which we use, is not very compatible

1 with Android, and we'd have to kind of redevelop
2 some of our language in open source.

3 So we currently do not have plans to
4 do that. If, I suppose if there was enough
5 demand, we might consider that, but right now
6 it's not really cost effective for us.

7 Just another screen shot from the
8 public viewer iPhone app. So here, I'm just
9 turning off both the gas and the liquid pipelines
10 at the location where I'm standing.

11 And if I wanted to, I could see the
12 accidents and incidents. I can identify on any
13 of those, which will show me like the operator,
14 the commodity, and then the system name.

15 And like we saw, that's pretty much,
16 you know, the basic usable attributes that the
17 operators are submitting.

18 And if you have a PIMMA user name and
19 password, just search on pipeline information in
20 the app store.

21 You'll, you know, need your PIMMA user
22 name and password. And then, I specially created

1 a screenshot so it doesn't show you more than
2 you're allowed to see, but it looks, you know,
3 pretty much the same.

4 You can do a couple of different
5 things. Like you can send yourself screenshots
6 from it.

7 But you know, basically, it's
8 basically kind of the same functionality. You'll
9 just see everything for your jurisdiction, as
10 opposed to just limiting yourself to one county
11 at a time.

12 And also, once you get closer than the
13 1 to 24,000, it's not going to shut off the
14 pipelines.

15 I also wanted to touch on what we call
16 OSAVE. It's the operator submission and
17 validation environment.

18 It's a new way in which we're
19 collecting data from the operators. It just
20 launched this year, and we do have operator
21 webinars every year.

22 We had four this year. I think we had

1 three back in 2016. So you know, if you, if you
2 don't know what these are and if you think no one
3 on your staff is attending them, if you're a
4 pipeline operator, you know, check with me and I
5 can send you information.

6 Because what we do is we take about
7 two hours, and we say, hey, here's problems that
8 we're seeing in submissions.

9 Here's how you can avoid, you know,
10 having your submission be in limbo forever, and
11 us emailing you about problems. And we also
12 highlight kind of what's new with the NPMS.

13 So the big thing that was new this
14 year is our new environment where an operator can
15 go in. They can, in the top left hand corner,
16 review their current data.

17 So it's only for operators, and you
18 have to have your PIMMA account to log into this.
19 You can review your current data.

20 So if you're the new guy on the job
21 and you're saying, what is the NPMS? I don't
22 know, but I have to do this submission.

1 Well, now I can see what was submitted
2 last year instead of going through this data
3 request process where, you know, it takes a
4 couple days for us to validate you and send you
5 the data, and we FTP it to you.

6 You can see it on your screen here,
7 okay? You can view your submission history at
8 the top right hand corner.

9 So you can see what was submitted for
10 your OPID in the past several years. If you just
11 got a contact information change, you know, maybe
12 the technical contact was replaced, maybe your
13 primary contact was replaced, you know, it used
14 to be that you kind of have to just ask our staff
15 just to change that for you, or you'd have to do
16 the whole submission process.

17 So this is an easy way just to change
18 your contact info. It's always good to make sure
19 that it's accurate also.

20 And if you're making a submission
21 saying that there's no changes, you can do it
22 very quickly and easily in the bottom right hand

1 corner there.

2 OSAVE has a lot of functionality
3 because this is not really the proper audience.
4 I just wanted to, just wanted to kind of
5 highlight that we do have, you know, this way of,
6 and it's not sharing data. It's collecting data.

7 But you know, is there a way that we
8 can leverage some of these ideas and some of
9 these problems that we worked out at PHMSA, you
10 know, making it compatible for these 1,300
11 operators, thinking about what operators might
12 want to do to submit data to us.

13 You know, is there anything that can
14 help us with this working group? So here in
15 OSAVE, you see just a, it looks like the PIMMA
16 and the PIMMA Plus interfaces, right?

17 But up at the top, you've got some
18 different options. Like you're filtering your
19 pipeline data. You're reviewing your data.

20 There are ways in which you could just
21 like tag a pipeline and say, hey, we don't
22 operate this pipeline system anymore.

1 And that might be a lot easier for you
2 than sending us a shapefile with that system
3 removed, and kind of explaining what all happened
4 to it.

5 Or if you're just changing, like, say,
6 the commodity a pipeline carries, or changing its
7 system name, you can do that online.

8 You don't have to go through the
9 process of sending us the transmittal letter and,
10 you know, this and that, like the five components
11 of a submission.

12 So we were trying to make it easier
13 for operators to submit their data to us, and
14 especially data that has small changes that
15 really shouldn't require the operator's expense
16 of preparing a whole submission.

17 Or, you know, honestly, PHMSA's
18 expense of going through all the QC checks, going
19 through all the processing, putting that back in,
20 when you're just changing something pretty minor.

21 So far, we've gotten very positive
22 feedback on this. We are asking all operators to

1 consider using this instead of the old method.

2 And you know, the majority of them,
3 the vast majority have been happy with this, and
4 they think it's a big improvement over FTPing us
5 shapefiles. Okay.

6 Looks like I, a couple blanks there.
7 Just an example of how an operator could
8 pinpoint, if you're looking for a specific system
9 because something changed about that system, you
10 want to find it on the map and you might find it
11 by doing a query based on, like, is it inter,
12 intrastate, based on its diameter, things like
13 that. All right.

14 So try to make up some time for us
15 here. This concludes my presentation. Just
16 showing you on the left, this graphic that we
17 have at DOT, again, back to that idea of
18 promoting awareness of GIS, which is, you know,
19 really the, one of the biggest problem about when
20 you're trying to promote awareness of any new
21 system, any new initiative, I was on detail to
22 write a strategic plan for the entire DOT about

1 GIS last year.

2 And one thing that I thought was
3 important was to have a graphic. Because, you
4 know, I have this outside my office on a poster,
5 and people come by and they say, oh hey, what is
6 that?

7 And it's a good opportunity to talk to
8 them about, you know, what is geospatial? What
9 is GIS? Because a lot of people don't know.

10 And I understand, this is not, you
11 know, a GIS group. But you know, could we use a
12 graphic to, just to kind of show that we are
13 trying to share information?

14 Something that, you know, connects to
15 people at a level, as, an almost like
16 subconscious, but like, promotes interest and it
17 just kind of sends a message in a very simple,
18 direct way.

19 So that's all I've got, and you know,
20 please, if you have questions now, that's great.
21 If you want to talk me offline, that's great too.

22 DISCUSSION AND Q&A

1 CHAIR BURMAN: Thank you so much, Amy.
2 Does anyone on the phone have any comments or
3 questions? Anyone around the table? Yes?

4 PARTICIPANT: Yes, I just, out of
5 curiosity, I just have one question. It's really
6 cool to have this underground geospatial network
7 or mapping.

8 So besides the network you guys are
9 working on now in GIS, is any plan, or you guys
10 already did that to integrate additional
11 information, like usage information?

12 Just like highway mapping, you have
13 like traffic information. How about those kind
14 of underground pipeline systems? Do you have any
15 usage information on that?

16 MS. NELSON: We do share information
17 with a lot of the, of other modes, and we do some
18 analysis projects.

19 Most notably, I would say railroads,
20 pipelines and railroads that share a common
21 corridor.

22 And you know, if one crew is out

1 working on the railroad, they should know there's
2 a pipeline in that same corridor.

3 So that is not something that we've
4 brought into the NPMS, but it's something that,
5 you know, internally, we do have plenty amassed
6 where we bring in information from other modes.
7 It's just not kind of within our purview to
8 display it on these NPMS applications.

9 PARTICIPANT: Sure. One of the
10 reasons I ask you this is because in some
11 scenarios, like natural faults scenarios, things
12 happen very quickly.

13 And you know, if the input depends on
14 operators submission, sometimes it might be not
15 the real time.

16 So is there any like, you foresee any
17 capabilities of doing, like, self-sensing or
18 integrated sensors the pipelines to, for the
19 improve this kind of mapping --

20 MS. NELSON: I don't --

21 PARTICIPANT: -- on the state-wide?

22 MS. NELSON: Yes, I don't think that

1 would be something that PHMSA would be able to
2 do.

3 Just to run you kind of through the
4 work flow when we do have an accident or incident
5 reported, we did set up an ArcGIS online
6 environment, which is something that the regional
7 office can all tap into, and they can all put
8 information on there as it becomes refined.

9 And so first you hear, oh, there's a
10 report of an accident. It's near this highway.
11 And then you get a coordinate maybe a couple
12 hours later.

13 And then, you know, one region is
14 going out there, and they've got information they
15 want to add to the map.

16 So the ArcGIS online environment
17 allows us to collaborate and to refine the map,
18 you know, more of in real time and share it with
19 the folks who are working on the emergency
20 response.

21 PARTICIPANT: Thanks.

22 MS. NELSON: Sure.

1 CHAIR BURMAN: Okay, great. Does
2 anyone else have any more questions on the phone?
3 At the table? In the audience? Okay, great.

4 Now we will move on to our next agenda
5 item, which is operator assessment tool and GIS
6 implementation. And actually, I think we're
7 actually back on track, time-wise.

8 And then, just so people know, we're
9 going to take a break after David. So, thank
10 you.

11 And just keep in mind also, food for
12 thought, thinking about a lot of the information
13 that we're hearing, how can it be helpful for
14 your homework assignment when we move forward
15 tomorrow in looking at process and next steps.

16 MR. NEMETH: Hi there. My name's
17 David Nemeth. I'm with Energy Transfer, not
18 Kinder Morgan. My name tag says Kinder Morgan,
19 but I am with Energy Transfer.

20 I'm in the technical services group,
21 and our group does the GIS system, engineering
22 records, and as-built services.

1 And I wanted to thank the Committee
2 for providing me the opportunity to speak here.
3 And what I'm going to talk about is our use,
4 well, kind of a little bit of a history of GIS in
5 the, in the pipeline industry, and data
6 integration. Here we go.

7 This is our pipeline system. We have
8 about 80,000 miles of pipe on-shore, off-shore,
9 liquids, gas, gathering, mid-stream, long-haul
10 transmission.

11 Range of installation is from the '30s
12 to the present. So quite a wide variety of
13 construction techniques, pipe, commodities, all
14 of that.

15 So it's definitely a challenge and
16 wide network that we have. One of the cardinal
17 sins of a presentation is to put a lot of words
18 up there, so I wanted to make sure that I did
19 that. No, I'm kidding.

20 What I'm going to talk about, we'll
21 wind up with this. There is a lot of words on
22 here, and mainly what I wanted to show here is

1 that GIS has become an enterprise system.

2 I mean, it used to be pretty small.

3 And this wasn't that long ago that GIS only
4 happened by a few people.

5 It was used by a few people, but now
6 it's become pretty mainstream and offers a lot of
7 capabilities.

8 And some of those items across the top
9 there, we're going to talk about. So what is
10 GIS?

11 Amy did a great job of talking about
12 that. GIS, we put the where in everything.
13 Because everything is somewhere.

14 It's a system designed to capture,
15 store, manipulate, analyze, manage, and present
16 spatial or geographic data.

17 And the other main thought here is GIS
18 can relate un-related information by using
19 location as the key index variable.

20 So if two things or three things are
21 loaded at the same spot, then you can analyze
22 those together without having a foreign key or a

1 direct link between those, between those
2 features.

3 Google. That's GIS. The navigator in
4 your car, that's GIS. So it's become, it's
5 become very mainstream fairly quickly.

6 A little bit of history. This is
7 where we started. And like I said, this wasn't
8 that long ago.

9 We started with paper records, paper
10 alignment sheets, boxes full of data. And this
11 was our source data, along with, what we had were
12 maps that were showing one mile of pipeline.

13 And we had all these books. And
14 literally, let me go to the next slide. That's
15 the next slide.

16 That's how many books there were.
17 That much information that we had to go through.
18 And we sat down an army of people to sit there
19 and key that in.

20 But that's really not the people that
21 we sat down. Because in 1990, there wouldn't
22 have been that many Apple devices out there.

1 But we did. We brought in probably 30
2 or 40 people to sit down and manually key in all
3 of that pipeline information.

4 And then we would relate that to the
5 pipeline through the spatial link. People
6 probably remember this.

7 That's Eric back in 1990, where you go
8 into a special room, you had to have special
9 access.

10 It was freezing in there and the
11 computers were huge, and they took up the whole
12 room, pretty much, and it had to be, had to be
13 specially cooled.

14 So back when all of this started, it
15 was very low tech. Not very many people had
16 access to it, so it was low availability.

17 There were high volume, thousands of
18 miles of pipe that was non-digital. And
19 virtually there was no digital data.

20 It was paper. It was survey notes.
21 It was material lists. Those types of things,
22 that we go back to now for our verifiably,

1 traceable, complete records. But those were all
2 hard copies.

3 We would digitize the center line. No
4 GPS. The military had GPS, but they hadn't
5 released it to us yet, but there was virtually no
6 GPS that we could use.

7 We had manual surveys, meets and
8 bounds surveys, linear surveys. Like I said, we
9 needed an army of data entry people to capture
10 the data in that special cooled room.

11 Whereas, 30 years later, or 20 years
12 later, this is what it looks like. I mean, it's
13 your data.

14 It's a server, portal to that server
15 for people to use, and then applications for
16 access like NPMS.

17 So it's gotten a lot simpler, a lot
18 smaller. It's higher available. There's free,
19 and free is very relative, believe me.

20 So this is kind of the history of
21 pipeline databases, a little bit. In 1994, kind
22 of the first pipeline database effort that was

1 made was an ISAT model, integrated spatial
2 analysis techniques.

3 There was a team of industry people
4 that got together and came up with database
5 tables, database columns, what we wanted it to
6 do, what we wanted to analyze, those types of
7 things.

8 And to be honest with you, the first
9 effort was to generate a map so that we could use
10 digital data to generate a map.

11 And kind of within our circle, we had
12 a little joke that 10 years and \$10 million
13 later, we can have a map.

14 So, but it's come a long way since
15 then. That was, that was kind of the start of
16 that.

17 And then pods came along, which was a
18 data standard that some folks use. The next one
19 was 2003, ESRI released ArcGIS pipeline data
20 model. And then most recently, 2015, utility and
21 pipeline data model.

22 So these are all, you can go out to

1 their website and download these models for free,
2 but the issue that you have there is the model's
3 free, but it's the data that's going to cost you,
4 you know, to sit down, put all that data in.

5 And once it is digital, migrating it
6 from one model to another isn't as difficult, but
7 it's the investment.

8 It is the data that is, that is the
9 investment. There's also land bases out there.
10 Like I said, when we started, we had people sit
11 down, digitize seven and a half minute USGS quads
12 for thousands of miles.

13 And that was our land base. And then
14 as data became available, digital data became
15 available, we replaced that with imagery or
16 electronic data that was free.

17 And the government, you know, the
18 government has provided some of that. Our data
19 source now, instead of those books and all those
20 records for new pipelines, is right here.

21 A lot of our new pipeline projects
22 come in on a USB drive. It contains the survey,

1 the material, the pipe data, the valve data,
2 everything we need as-built the pipe.

3 And then we get delivery of the hard
4 copy records as well. We do this so that we can
5 decrease the amount of time that it takes us to
6 put that data in the database, from when the pipe
7 is in the ground to when that data's available in
8 our database for our users to use.

9 We're getting much better at that.
10 We used to wait a little longer than we do now to
11 get that data, but we're pushing that ball
12 forward so that as construction goes, we're right
13 behind them.

14 We're getting GPS surveys on every
15 weld, lat, long, and elevation of those welds,
16 and getting a point every 40 feet on a pipeline
17 makes it really accurate.

18 So we're, we've come a long way from
19 where we were just not too long ago. So today,
20 there's, it's high tech, it's high availability.

21 We have 4,000 or 5,000 users that
22 access our data across our company. High volume

1 of data.

2 Every weld, all of the coding, all of
3 the right of way, any, you know, all of that
4 information that you need to as-built the
5 pipeline pretty much comes in electronically.

6 The free land base, like I said,
7 imageries available, LIDAR is available, spectral
8 imagery.

9 So there's a lot of analysis that you
10 can do from some of that free information.

11 There's a new release that one of the vendors
12 just put out that has just a ton of data.

13 It's called Living Atlas, there's
14 probably 2,000 different layers of information
15 available out there that is just, it's mind, it's
16 mind-boggling.

17 You really can't sit down and go
18 through it all. It's got date of, you know, date
19 corrosion values of the ground.

20 It's got bedrock, you know, depth on
21 the ground. All sorts of nationwide data. It's
22 highly accurate. Our center line is highly

1 accurate now.

2 Digital property polygons, and almost
3 to the point where you could do all of this on
4 your cell phone.

5 Like Amy said, they just released an
6 iPhone app for NPMS, so it's come a long ways.
7 I'm going to talk a little bit about Energy
8 Transfer's GIS implementation.

9 Our mission statement, engineering
10 records as-built and GIS team's mission is to
11 promote safety, compliance, reliability, and
12 environmental stewardship through data
13 acquisition, data integration, and information
14 publishing.

15 Probably the most, well, one of the
16 most important things up there is the information
17 publishing.

18 Across our organization, we publish
19 almost 100 percent of our data. The reason we do
20 that is typically what we've found is, people
21 aren't afraid to tell you when you're wrong. And
22 that makes our data better.

1 So they'll send us mark ups or they'll
2 send us information that says, hey, this needs to
3 be changed to this, and we'll do that.

4 Our group process more than 2,000
5 projects per year across our organization. Large
6 capital projects.

7 Some of you are probably familiar with
8 those, acquisitions that we have. So all of that
9 data gets integrated into our GIS.

10 This is just the data model here,
11 showing that there's different tables. Really,
12 databases aren't that complicated.

13 They're tables, and those tables
14 contain columns that contain data. And how you
15 reference those tables together is kind of the
16 magic, I guess.

17 But, like, for instance, the pipe
18 segment table, what's in there is what you would
19 expect.

20 The OD, wall thickness, grade, long
21 seam, manufacturer, date installed, those types
22 of things.

1 And that's the information that we
2 populate when we get that information in from
3 our, from our projects. Not only the capital
4 projects, but maintenance projects.

5 So some of the data that's in there,
6 there's facility data, inspection data,
7 operational data, survey data, land owner data.

8 All of that is integrated into our
9 GIS. Kind of our thought is, we integrate just
10 about every piece of information that we get.

11 All of our corrosion control data is
12 in there, the CIS surveys, DCVG surveys, cathodic
13 test points, rectifiers, all of that information
14 is integrated into the GIS.

15 All of our inspection data, in-line
16 inspection data. So geometry tool data, MFL
17 data, any of those in-line inspections.

18 Our CIS data is integrated into the
19 database, along with all of the facility data.
20 We do analysis for MAOP, class locations and
21 HCAs.

22 That's all located and housed in the

1 GIS, as well as the operational data. For
2 instance, pipe inspections, when they go out and
3 expose the line.

4 All of those are integrated into the
5 database. And the reason that I'm bringing this
6 up is we're going to get to a point where we've
7 integrated all of this data, and I'll show you
8 the, one of the products of that data
9 integration.

10 Some of you might have seen that
11 before. The historical data, if we cut out a 20
12 foot piece of pipe, that stays in the database,
13 just in a different status.

14 So we have in service pipes, we have
15 archived pipes. So different statuses for the
16 pipe. This looks probably familiar.

17 This is similar to what Amy showed
18 you. This is our pipeline network over the
19 imagery of the US.

20 We zoom in a little bit to one of our
21 compressor stations. And these are feature
22 layers. So those are the different pipes.

1 In this area, there's four pipes going
2 east to west, and two pipes coming in from the
3 south.

4 If we click on one of those pipes, and
5 it's kind of hard to see there, but you'll get
6 information about those pipes.

7 You'll find out what the OD, the wall
8 thickness, that kind of information is, when you
9 click on those pipes.

10 You can click on them and get other
11 information by pipe segment. So each, you know,
12 zero to five is 26 inch, 3-12, 5 to 10 is 26 inch
13 500 wall.

14 So very, very detailed information
15 available across the organization. The
16 inspections that we've done, I know you can't see
17 it very well.

18 Is there a little pointer on this
19 thing? This one? Oh. Right there, we've gone
20 out and dug up that piece of pipe, and there's a
21 link to the inspection right there, so that when
22 you pull that up, it shows you what they found

1 when they did that inspection.

2 The pipe-to-soil, the coating
3 condition, the attributes that they discovered
4 when they exposed the line. Excuse me.

5 Anomalies that are within the range of
6 that exposure so that, while that line's exposed,
7 if there are critical anomalies, they can
8 remediate those.

9 And then we're able to run web reports
10 from those. This particular report is what we
11 call an integrity control event report.

12 Chris did a great job with that
13 presentation that he did, and those tools are
14 just a wealth of knowledge from somebody in GIS.

15 I mean, it tells us, do we have our Ts
16 in the right space? Do we have our wall
17 thicknesses in the right spots?

18 Do we have any feature along the
19 pipeline that that tool sees, it tells us if it's
20 in the right spot.

21 As well as, when we get that tool data
22 in, that's how we align that data with the

1 pipeline.

2 We align it from the launcher valve to
3 the receiver valve, and then all of the gate
4 valves in between, all the Ts and taps, all the
5 features that we can see in that tool run, so
6 that when we calculate burst pressure and the
7 characteristics that our integrity group want,
8 it's accurate and it's running those calculations
9 on the right pieces of pipe.

10 And this is a report that we get after
11 load that data. It tells us how accurate is that
12 information from the tool compared to what we
13 have in the database?

14 Our integrity group goes through and
15 verifies any of that data that is out of the
16 range that they want, and then they'll reload
17 that data and we'll run the stored procedure to
18 calculate burst pressures.

19 So along with all of that data that we
20 have, the facility characteristics, CIS data, the
21 corrosion control data, we have coupling data
22 that we have in there.

1 And the coupling report that we've
2 created for our integrity engineers is pretty
3 interesting because it uses the ILI data and the
4 geometry tool data to calculate the bend at the
5 coupling.

6 If there is a bend at the coupling,
7 and how critical is that bend so that they know
8 if they have to go out and fix it.

9 Casing data, crossing data, repair
10 data. Again, the regulatory class location, HCA
11 data, those types of things.

12 And then we take all of that and we
13 generate sheets along the pipeline, and they can
14 go into this map, click on one of those links,
15 and they'll get this sheet right here.

16 And this is after we've integrated all
17 of that data. And this sheet changes fairly
18 frequently.

19 We've recently added low potential
20 areas, if there were any that haven't been
21 remediated.

22 But typically they get remediated very

1 quickly. But LPAs, and we'll zoom in a little
2 bit so that you can kind of see.

3 We have current ILI run, previous ILI
4 run, corrosion growth rate by joint, anomalies
5 per joint, total weld, or total metal loss by
6 joint, previous CIS, current CIS, and then low
7 potential areas, and the, and then pipe
8 characteristics.

9 So we integrate all of that data,
10 excuse me, along with our inspection data, and
11 our integrity engineers can go through these
12 sheets fairly quickly and see if they have any
13 issues with, that are consistent.

14 For instance, if you have low CIS
15 readings here, and a lot of anomalies up here,
16 you know that something's going on and they need
17 to go out and check it out.

18 It's not, it's not to tell them where
19 to go dig. It helps them to find where to do
20 further analysis.

21 So the HCAs and class location areas
22 are on here as well. So this sheet is used a lot

1 by our integrity engineers.

2 Our groups, the GIS engineering
3 records and as-built group's tasks that we
4 continuously perform, this is our every day job,
5 class location determination, HCA determination.

6 We house all the MAOPs and MOPs, DOT
7 annual reports. Amy knows that, right Amy? The
8 NPMS filings, Texas Railroad Commission reports,
9 T-4 permits, QA/QC, the data that comes in, the
10 as-builts.

11 We get a lot of special mapping
12 requests that, what if we do this, or what if we
13 do this? So we take care of those.

14 Shallow cover, low potential areas,
15 river crossing approach. So some of those
16 operational inspection things.

17 We have hooked our data to SCADA, all
18 of the telemetry data comes into GIS and is
19 displayed in the gas control so that they know
20 what's moving through the pipes.

21 Threat assessment and risk assessment
22 is done in this database, generate the alignment

1 sheets and the pipeline integrity sheets.

2 So it's pretty extensively used
3 throughout our company, because I think of the
4 data integration that we do.

5 Our internal customers here,
6 operations group, that's probably by far our
7 biggest customer in the pipeline integrity group.

8 Corrosion services, those first three
9 are our primary customers that we like to keep
10 happy. The environmental group as well.

11 We're doing a lot more with the
12 environmental group than we've ever done in the
13 past.

14 Engineering construction, right of
15 way, our enterprise asset management system,
16 regulatory group, aerial patrol.

17 So all of these folks have data in the
18 database, and some of these people house their
19 data in the database, and they update it, and we
20 don't do anything with it other than maybe
21 display it on a sheet or help them to render it
22 on some report or map that they want.

1 External customers, industry groups,
2 industry peers, DOT, PHMSA, the regulators,
3 general public and emergency responders.

4 We have all sorts of metrics that
5 we've, that we've published. Some of those are
6 executive metrics.

7 Some of those are for the integrity
8 group. Some of these are a number of anomalies
9 by pipeline, a number of anomalies by severity, a
10 number of tool runs per year by company.

11 So there's a lot metrics. All of the,
12 all of the activities that the integrity group
13 has for the next five to seven years are created
14 in this database so that they know where their
15 tool runs are going to be, and we know where
16 those tools runs are going to be.

17 Again, low potential area metrics.
18 Some of the other metrics that we have. And this
19 slide right here, we've updated, but I wanted to
20 show you this because it kind of more, this slide
21 and that slide say the same thing, but somebody
22 told me that this slide looked messy.

1 So we made it look like that.
2 Personally, I like that one a little better
3 because it shows what we do.

4 Threat assessment, risk assessment,
5 class location, HCA. And all of it is funneling
6 to and from that enterprise database in the
7 middle.

8 So that is what that is representing.
9 And all of those things that we talked about are
10 these things up here.

11 So we use it, we use it quite
12 extensively. Some of the, some of the lessons
13 learned, and kind of to summarize, I think more
14 than a few challenges remain, but I didn't want
15 to put that, so I just put a few challenges
16 remain.

17 One within our company is bandwidth.
18 You know, some of the locations that we have need
19 more bandwidth so that they can read these maps
20 and do some of this analysis a little quicker
21 than at 800K.

22 So we're working with our IT group to

1 increase the bandwidth out to those folks.

2 Certainly more data integration.

3 I don't think that you could over-
4 integrate data. You know, you need to be able to
5 analyze it and see what you have there, but with
6 this Living Atlas coming online and some of the
7 information that's available now, there's some
8 real opportunities to learn a lot.

9 So we're looking forward to that. VTC
10 challenges, verifiable, traceable, complete
11 records. We've had really good luck with that.

12 Here's an interesting statistic. We
13 did, we took 750 miles of pipe and we were
14 reversing the flow, and out of that 750 miles of
15 pipe, there was seven feet that we couldn't find
16 the records on.

17 And we're talking MTRs, OD, wall
18 thickness, grade, long seam, date installed,
19 hydro test, date, duration, pressure, medium.

20 Seven feet out of 750 miles. I mean,
21 we thought it was going to be good, but we really
22 didn't realize that it was going to be that good.

1 So we were pleased with that, and we
2 replaced that seven foot of pipe, and now we have
3 100 percent of the data.

4 So that was, and to be honest with
5 you, that's not un-typical of our transmission
6 systems. So we're pleased with that.

7 The other thing that we've learned is
8 words count. As we integrate pipeline companies,
9 and the way that we speak to each other about
10 data, hierarchy is probably the most important
11 thing that we talk about.

12 How do I communicate with a guy in the
13 field that pipeline A pipeline A, and I call it
14 100 line. I mean, we're not speaking the same
15 language.

16 So it's important that as we integrate
17 data and as we talk to folks that are going to
18 use the data, you know, what do they, what do
19 they refer to it as?

20 You know, they have systems out there
21 that they call this pipeline system. Well, a
22 pipeline system to me is Panhandle Energy or

1 Trunkline Gas.

2 I mean, that's a system to me. But to
3 them, a pipeline system is this group of
4 pipelines. The small subset of pipelines.

5 So it's important that we communicate
6 with them, you know, and how we communicate with
7 them. Same thing with features.

8 You know, is it a trap? Is it a
9 launcher? Is it a scraper barrel? So just some
10 of those types of things that we kind of take for
11 granted.

12 I mean, if somebody's talking about a
13 trap or a scraper barrel, you kind of, you know,
14 launcher, receiver, those are, those are kind of
15 synonymous. But there are things out there that
16 aren't quite as evident.

17 So the language is important, and how
18 we communicate with them. We've taken a great
19 effort and a lot of training to go out and say,
20 if you're going to convey pipeline data to us,
21 you know, can you convey it this way, you know,
22 so that we know what they're talking about, they

1 know what we're talking about.

2 You know, and that's after meeting
3 with them and determining the best way to do
4 that.

5 The good news for GIS, the cost is
6 coming down. I didn't really want to put dollars
7 in there, but the cost is coming down.

8 To have an army of people digitizing
9 USGS quads when now it's available online, the
10 standard databases are out there for free, that
11 you can download those schemas for free.

12 So the cost is coming down, but it is
13 the data. It's the data that is the investment.
14 And then lastly, you know, as our commitment to
15 continuous improvement, and it's kind of the same
16 cycle as integrity, is we need to keep improving
17 as well.

18 Study, listen, learn, plan, gather
19 data, analyze data, think about what we want to
20 do, do that, solve the problem, test it, solve it
21 again, test it, study it again, and then start
22 back of the beginning, is just continuous

1 improvement.

2 One thing that's nice about, you know,
3 one thing that I find nice about working in the
4 GIS group is, you know, we might have an issue
5 with a piece of data, but if somebody comes to us
6 and we correct that data, it's never wrong again.
7 It stays right.

8 So we welcome any of that kind of
9 feedback from our, from our users, from anybody
10 that looks at our data.

11 We welcome the feedback from Amy every
12 year that we get when our NPMS submission isn't
13 quite what it should be.

14 So, and we try to. We try to get it
15 perfect every time, but it's a lot of data out
16 there, and we're going to continue to grow that
17 analyze that. I think that's my last slide.

18 CHAIR BURMAN: Okay, great. We're
19 going to take a pause right now before we go to
20 the other folks in this agenda item.

21 So we will come back in 10 minutes.
22 Sound good? Okay. Good. Thank you very much,

1 everyone.

2 (Whereupon, the above-entitled matter
3 went off the record at 2:42 p.m. and resumed at
4 2:58 p.m.)

5 CHAIR BURMAN: Hello, everyone. We're
6 back. We are doing well with time, but we're
7 going to turn to Nick now, and ask him to focus,
8 not necessarily on some of the things that has
9 already been said, but really kind of drilling
10 down on other things in this area. Okay?

11 MR. HOMAN: Thank you. My name's Nick
12 Homan. I work for Marathon Pipeline. We have
13 about 6,000 miles of pipe that we operate,
14 primarily, well, it's all liquid, hazardous
15 liquid pipelines.

16 Primarily crude oil and petroleum
17 products. We basically take crude oil in the
18 refineries, after refineries process it into
19 transportation fuels.

20 We deliver it via pipeline to
21 terminals, ultimately for delivery to the local
22 gas station to provide transportation fuel for

1 many of the consumers in the US. Our systems
2 cover about 14 states.

3 And what I'm going to cover this
4 afternoon with the Committee, and I appreciate
5 the opportunity to present today, is really how
6 we take all this ILI data from our systems and
7 combine it with GIS data, and integrate it, which
8 allows us to make decisions on where our pipeline
9 requires repairs, and so we can proactively keep
10 our pipelines operating safely and deliver these
11 products I just described.

12 So with that being said, there's been
13 a lot of good information already reviewed today.
14 So on the slides where it may have been covered
15 already, I'm going to move through it and kind of
16 focus in on what we do at Marathon.

17 And I will say, there's many different
18 ways to integrate data, different tools. So the
19 way we do it is how we've found it to work for
20 us.

21 Other operators may use different
22 software, different systems, and that is just

1 fine.

2 They find it, ways where it can be
3 efficient for them to integrate the data. So
4 with that being said, one of the things we try to
5 do at Marathon, if you're familiar with
6 Heinrich's safety triangle, this is kind of how
7 we look at our data, our integrity data, and what
8 we're trying to do with our pipeline safety
9 management system.

10 As it was described earlier, it's a
11 continuous do-loop, and one of the things we're
12 trying to do is focus at the bottom of the
13 triangle.

14 Those are where, that's where we get
15 the data from our vendors who are partners, that
16 provide the ILI data.

17 We identify the conditions that we
18 need to go evaluate within our own integrity
19 engineering group.

20 And then from there, we decide, okay,
21 these are the field conditions that we have to go
22 out and investigate through excavation, and

1 ultimately repair these anomalies before they get
2 to the near miss or release area.

3 So we're really focused on the bottom
4 of the triangle, trying to be proactive so that
5 ultimately we don't have any releases.

6 And similar in the safety triangle,
7 you're looking at near misses in your facilities
8 such that, you know, somebody has a first aid,
9 you go investigate, hey, we got like 30 first
10 aids.

11 What's going on here? And prevent
12 somebody from having a serious injury and
13 ultimately a fatality.

14 So we use the same methodology at
15 Marathon, and it's been successful from our
16 perspective to focus our efforts.

17 On the next slide, on Slide 3, by the
18 way, for the folks on the phone, you can see at
19 the top, what I'm going to do today is kind of
20 walk you through our do-loop.

21 You know, it's basically based on API
22 RP 1173, the pipeline safety management system.

1 You know, we have a plan-do-check-adjust.

2 And one of the things I want to
3 emphasize is our relationship with our technology
4 providers, and some of them are in the room, and
5 on this Committee, it's key to us being
6 successful.

7 Because without the technology they
8 provide and the data they provide us to go ahead
9 and rehab and, you know, proactively fix our
10 lines, you know, we'd have nowhere to start.

11 So as we talk through this, you're
12 going to see, it's really a partnership between
13 us and the technology providers.

14 So this next slide here, slide 4 is,
15 you know, is, really is a variation of what Chris
16 covered this morning very well.

17 But this is a, kind of a tool we use
18 at Marathon, just to keep everything straight
19 with all of the various technologies that are
20 available.

21 And this is really the first step in
22 a process where we work with the vendor to figure

1 out which technology to run based on our risk
2 assessments that have identified our threats with
3 a specific pipeline.

4 So you know, you can see on the left
5 hand side, you have the magnetic flux tools at
6 the top, the ultrasonic tool kind of range in the
7 middle, and then the caliper which were your
8 geometry-type tools near the bottom.

9 And across the bottom of the diagram,
10 you can see the various threats that we're trying
11 to identify and, you know, moving back up to the
12 top, you can see which tool would be optimal for
13 identifying that threat.

14 So a lot of times, we've got multiple
15 threats we want to identify in a pipeline. For
16 example, dents, and then dents with metal loss,
17 which is an immediate condition if it's in the,
18 on the pipeline Or if you look over to the right
19 hand side of the bottom, cracks.

20 Cracks in the seam weld are big, are
21 a big issue and a big challenge on some versions
22 of manufactured pipe, you know, pre-1970s, ERW-

1 type pipe.

2 So working with the vendor, and what
3 we know about our pipeline, we try to pick the
4 right technology.

5 We go through a competitive bidding
6 process, so we use many different vendors, and
7 we're looking for the best overall quality
8 package for the analysis.

9 So then once we pick the tool, a
10 little more about just tools in general. These
11 have been covered in pretty good detail already
12 in the earlier presentations.

13 But we do, out of courtesy of ROSEN
14 Group, provided us pictures of their, one of
15 their MFL caliper tools in the upper left hand
16 corner.

17 You can see where the different parts
18 of the tool are. And then a, and then a UTCD
19 ultrasonic crack tool, in the lower right hand
20 corner.

21 The one thing I did want to point out,
22 one of the key things with tool technology is,

1 like any other technology in the world today,
2 things are getting faster, smaller, and more
3 efficient.

4 And you know, the batteries actually
5 are really important to tool runs. And I'll give
6 you an example.

7 We're getting ready to run a tool on
8 a 600 mile, 40 inch pipeline, and you know, if
9 you do the math, at three miles an hour, it's
10 going to take us about 20 days to get through
11 this pipeline.

12 So one of the big challenges we had
13 are making sure we had enough batteries. Because
14 once we put it in, and the batteries run out half
15 way, we've got to start over, and that's a bad
16 situation.

17 So once again, that's where the
18 vendors provide a lot of value as our partner,
19 saying hey, here's our problem.

20 We've got to work together to figure
21 this out. And on the liquid side, and this one
22 in particular, you know, you know, you can't,

1 there's only, our pipelines run based on supply
2 and demand.

3 So if there isn't enough demand on one
4 side, you can't put in more crew to move it
5 faster. And if you move it too fast, then you
6 won't get good tool data.

7 So there's a lot of engineering and
8 thought that goes through running, getting a
9 good, thorough in-line analysis of your pipeline
10 system.

11 The other thing I'll say about that
12 tool on that pipeline, I wanted to hit on, was,
13 you know, that tool's going to be about 35 feet
14 long. It's going to weigh 13,000 pounds.

15 And if you think about how much data,
16 and this is really, I think, important for the
17 Committee, how much data is going to come out of
18 this tool run, if you do the surface area math,
19 it's like 35 million square feet.

20 And then, I was like, well, okay,
21 that's a number, but I did the math back there.
22 If you like, you know, American football, that's

1 like over 600 football fields you're going
2 through with a magnifying glass, looking for, you
3 know, I think it was mentioned before, a quarter
4 inch by quarter inch size anomaly.

5 So it really is amazing, and it kind
6 of sets up for the next step, and that is getting
7 into the analyze and integrate data portion.

8 So the analyze raw data, we're relying
9 on the vendors to look at those 600 football
10 fields with their algorithms.

11 And if you, and I think there was some
12 good pictures earlier on of the signals that come
13 out of these tools.

14 They're really, you know, they're
15 almost graphs and visual-type pictures that the
16 vendors have very good algorithms to say, hey,
17 based on their testing, you have an anomaly here.

18 So we rely heavily on their analysts
19 and the qualifications of their analysts to do
20 their job well, such that when they provide us
21 the data, it goes into our, at Marathon we have
22 a, have a database system that we use to, you

1 know, once we've confirmed the run and met all
2 quality requirements, we check the data to make
3 sure it fits our data analysis requirements.

4 And so once, that piece is vital to
5 getting us the right points, so that we can do
6 the next step, and that is use our own GIS data,
7 which David covered very, in good detail, and Amy
8 here previously.

9 Our system's similar, and you can see
10 the various different data types we're
11 integrating with the ILI data.

12 You've got the pipe properties, you
13 know, you've got wall thickness, grade,
14 manufacturer, foreign line crossings are really
15 important.

16 You know, you could have AC-type
17 infrastructure that could cause you to have a AC-
18 type threat.

19 Coatings, you know, do we have a
20 shrink sleeve type coating that shields CP, our
21 corrosion protection, and holds moisture?

22 And all of a sudden, we've got a lot

1 of corrosion anomalies in that location. That's
2 going to be a point of interest.

3 You know, other, our HCAs are kind of
4 wrapped in the land use data and topography. So
5 we're, you know, all of these things on this
6 list, we're pulling together and integrating to
7 help us decide where we're going to go dig
8 outside of the Section 8's required conditions by
9 code.

10 And really, the additional integration
11 digs were required by code. It's just a matter
12 of figuring out what are the right locations to
13 go dig.

14 So a lot of information, pulling it
15 all together. And then we, basically, kind of
16 have a, I would say an engineering review meeting
17 at Marathon.

18 And then, I know most of the other
19 operators do the same thing. We're, we take all
20 this information and basically on, starting on
21 the left hand side, on Slide 7, you know, we take
22 the GIS, we take the ILI data, and the other data

1 sources.

2 Might be operational data, you know,
3 pressures at that location, cyclic fatigue-type
4 data.

5 We push it into this database where we
6 have tool tolerances, because that's, you know,
7 that's another important point.

8 You know, basically every tool has a
9 tolerance, and so you have to weigh that in
10 statistically to make sure you expand your bounds
11 of analysis such that you repair the right
12 features before you have an issue.

13 We look at historic ILI data. You
14 know, one of the things that we see after we've
15 run tools repeatedly, you know, we've got systems
16 we've been running them on for numerous years.

17 You've got to make sure you don't go
18 back and re-dig a spot you already put a sleeve
19 on, because that just wastes money and it's very
20 disappointing when that happens.

21 So that's where GIS and GPS data is
22 very important, and that's really helped us avoid

1 those type of situations.

2 And then finally, you know, the system
3 basically kicks out your regulatory digs, your
4 data integration digs, which are also regulatory.

5 And then, you know, there are other
6 things you can glean from the data of, hey, you
7 know, right now, this anomaly might be 30 percent
8 deep.

9 We're, you know, we were going to
10 monitor it and we'll run, you know, run another
11 tool and we'll check it again in a number of
12 years and see if there's growth.

13 And that helps you decide whether
14 you've got an active corrosion issue, or if it's
15 a, you know, just a, you know, latent and not
16 growing.

17 So that's another piece of this
18 engineering evaluation meeting that we have to
19 really utilize all of the data that we get.

20 And then, what I'm going to run
21 through on Slide 8 here is just some of the
22 software that we use to integrate this data.

1 This is, the symbols really aren't
2 important, but it's really a data map, and this
3 is where we're getting into big data, and try to
4 use big data analytics at Marathon.

5 And I know many other operators are
6 doing the same thing. But basically this is a
7 software called Ultrex, and it helps us organize
8 all these different data sources such that we can
9 pull them into a data viewing software, which is
10 called Tableau, so we can make these decisions.

11 So just walking through an example, in
12 this situation, you know, the first thing we do
13 is say, all right, here's our ILI GPS.

14 Okay, so now we know where this
15 anomaly is located. In the past, you know, a lot
16 of times, you know, and you still do it, but you
17 relied on matching up joints based on the welds,
18 the girth welds on the joints.

19 We've had good luck with ILI GPS, and
20 we shift, have shifted that as our primary data
21 source.

22 Then number two, in this situation

1 we're looking for an AC-induced corrosion threat,
2 which was covered before.

3 But you know, when you have power, a
4 lot pipelines run down power corridors because
5 that's a, to be honest with you, that's the most
6 efficient right away, you can combine two energy
7 supply sources in the same right away.

8 The only downside for us is, you know,
9 because the AC corridor can induce a magnetic
10 field, that can induce AC voltage on your
11 pipeline.

12 And if you actually have really good
13 coating like FBE, it's even worse because you
14 might have one small holiday, and then all that
15 AC voltage and current comes off at that holiday
16 when the, when the pipeline and the power lines
17 separate.

18 And so it is a real threat that we use
19 this data integration to track and try to
20 prevent.

21 Because I will tell you, the metal
22 loss on that kind of threat is, you know, it can

1 be up to 20 mils per year, thousandths of an
2 inch.

3 So it can catch you before you run
4 your next tool, and that's why it's really
5 important to integrate the data.

6 So we're looking for that kind of
7 stuff for this threat. We throw in the ILI and
8 metal loss data as the next step.

9 And then we say, all right, the AC
10 corrosion has kind of a characteristic, and this
11 is that it's more of a, it's a small, well, there
12 was a great photo here earlier of, you know, it's
13 a small circular location.

14 So we're looking for metal loss
15 anomalies with a, you know, maybe a half inch by
16 half inch-type geometry.

17 And so by combining all that data, we
18 can say, hey, here's a location that looks like
19 we might have an issue.

20 And you know, you could say, hey,
21 we've got, under number two, we've got power
22 lines, and then we've got some metal loss, but

1 maybe not a lot of metal loss.

2 And then the geometry matches what
3 we're looking for. And then the final thing we
4 do is we have the AC, you know, we do annual AC
5 survey readings in our pipelines looking for what
6 kind of AC do we have off the test stations.

7 And if we got high AC voltage readings
8 there, we say, ah-ha, we've probably got an
9 issue.

10 And then we go into this slide 9, and
11 this would be from our Tableau software where all
12 this data behind the scenes comes out in this
13 dashboard.

14 And basically what we're doing here
15 is, first off, we look at, we have kind of an
16 algorithm that says, here's our AC risk score
17 based on the parameters I described earlier.

18 And in that graph, the important thing
19 is if it's a skinny, the skinnier the line is,
20 the bar is, and the taller it is, that's where
21 you likely have an issue.

22 And that's because it's saying you

1 have a small number of anomalies focused in a
2 location where you might have high AC voltages on
3 your line.

4 And then the, you know, associated
5 with the power line location. So we would say,
6 hey, that location, that GPS is somewhere we may
7 need to look.

8 And then we also kind of look at it
9 another way, co-locations by segment. So we're
10 saying, hey, here's where we've got power lines
11 associated with our pipeline, and the higher the
12 dot in that graph in the lower right hand corner
13 is another symptom of, we might have an issue.

14 We're able to adjust the parameters so
15 we can pull in the anomalies that we want to look
16 at.

17 And then finally, with number four, we
18 say, hey, we've got about 60 anomalies on this
19 pipeline that we need to take a look at.

20 Let's go out and do a dig program and,
21 you know, we might dig, you know, five of them to
22 see what we've got to verify that our algorithms

1 were working correctly.

2 If it is, we've likely prevented a
3 future release. And so we're at that bottom of
4 the triangle, you know, we were talking about
5 before, before we have a near miss and then a
6 release.

7 On Slide 10 here, just, now we're
8 moving into, hey, we've looked at all this data.
9 We've integrated it.

10 Now let's go out in the field and make
11 some repairs proactively so, just sets of various
12 pictures for the group.

13 We use Google Earth combined with our
14 GIS to, you know, locate our pipelines and, you
15 know, and one of the things that wasn't in that
16 example, but another thing that happens during
17 our integrity engineering evaluation meetings is
18 looking for third party, potential third party
19 damage.

20 That's another data integration you
21 can do, and that's where Google Earth come in
22 handy, because you might have a shallow dent, but

1 you didn't have any metal loss.

2 But if you look on Google Earth, you
3 might say, hey, there's a driveway there. And
4 that's kind of, that's kind of a signal, we
5 better go check that out because there's
6 potential that, you know, maybe the tool didn't
7 pick up the metal loss, or maybe the, it's so
8 slight it's just starting, but those are latent
9 defects that can fail down the road, and you want
10 to, you want to get ahead of them before they
11 fail.

12 Just moving across the top, you can
13 see, you stake the dig location, you excavate it.
14 So a lot of big equipment.

15 You know, some of these anomalies can
16 be 15, 20 feet deep. Big pipe requires big
17 excavations to meet OSHA requirements for safety.
18 Get in, do the anomaly inspection.

19 That's another important piece that
20 one of the previous presentations highlighted
21 that, you know, and this gets back to feeding
22 back to the vendors so they can adjust their

1 tools.

2 If you don't have accurate in-the-
3 ditch NDE, you can, you may not be able to
4 correlate your data properly to help the tool
5 vendors adjust their algorithms.

6 So, you know, and you've really got to
7 guard against it because if you're a project
8 engineer in the field, you're just trying to get
9 that anomaly repaired and get a sleeve on that
10 anomaly.

11 You may not be as focused on getting
12 the data we need to calibrate the tools. So at
13 Marathon, we have a lot of discussions, and I
14 know the other operators do the same, about the
15 NDE in the field is just as important as putting
16 a sleeve on and getting it back in service.

17 So a very important piece of the do-
18 cycle here. Coating removal on the right. Just
19 sheet piling, showing some excavations on the
20 lower left.

21 Putting on a B sleeve on the second
22 picture there. You know, so that's a traditional

1 repair, pressure containing sleeve that you use
2 for a lot of your anomalies. You re-coat the
3 pipe.

4 And the last one, I just wanted to
5 point out, there are times, and lot of our fellow
6 operators have more pipe in the, in the swamps of
7 Louisiana and the Gulf Coast, but there are times
8 you've got to do underwater repairs.

9 We actually had one completed in the
10 mid-west on the Wabash River. Of course, we get
11 tool data back the week, you know, in the spring,
12 in the mid-west where it's rained 10 inches, and
13 of course we've got an anomaly we've got to
14 repair right on the edge of the Wabash.

15 Not in the river, but in the flood
16 plain of it. So we had to call out a company
17 from the Gulf to come up, 15 feet of water.

18 They blew out the dirt and were able
19 to put a sleeve on it for us, and we were able to
20 get back in operation.

21 So a lot of, a lot of good work, and
22 a lot of team work in execution. So once again,

1 that's why you want to integrate the data
2 correctly, because if they went in there and
3 removed that dirt and were in the wrong location,
4 that would've been very disappointing.

5 So, important to get your data right.
6 So finally, I just want to finish with just a,
7 just a few thoughts, and this is the finish of
8 the loop, coming off the end.

9 It's really important. You know, we
10 do unity plot analysis that you've already seen.
11 One of the things, and, that we're able to do
12 because we ran tools repeatedly over the years on
13 multiple lines, is you, on a potential line, you
14 might have, already have repairs that you've
15 repaired, and you know the depths of those
16 anomalies.

17 Well, those are good calibration
18 points for your most recent tool run, because
19 it's really data you have even before you go out
20 and dig from that report.

21 So that's something we do to line up
22 our unity plots. Another thing we do is we use

1 the calibration spools.

2 So depending on what threat we're
3 looking for, sometimes we'll put in a spool of
4 pipe at a station where we have manufactured
5 cracks in it.

6 And the tool vendors do the same thing
7 on their loops. But we like to do that sometimes
8 because, you know, depending on the type of crude
9 we're running or product we're running, we want
10 to get a real time calibration of the tool.

11 And actually, we found that it helps
12 save us money on digs because, you know, it
13 really tightens up their algorithm when they send
14 the data back to us, such that we're digging the
15 right anomalies.

16 And then you'll, finally, we do a lot
17 of probabilistic statistical analysis. So one of
18 the things we'll do is we'll look at the tool
19 tolerances, and then we'll do a statistical
20 analysis, you know, getting us, we call it
21 probability of exceedance.

22 Basically, based on all the parameters

1 of variability from the tool and other pieces of
2 the puzzle, we might say, hey, we need to do
3 three more digs to get to a 95 percent conference
4 interval that we're not missing something out
5 there.

6 And we've had pretty good luck with
7 that. We've seen that most of the times, when we
8 got to look for something that's over 80 percent
9 depth, only 3 percent of the time, we actually
10 find that it was that, over that.

11 So we feel like we're catching that
12 extra air or, you know, variation from the tools
13 in the system.

14 So with that, just, sorry, one last
15 slide. Did want to hit on, we do a lot with the
16 industry, and I know there's some of our industry
17 folks in here.

18 We do a lot with API, AOPL, PRCI has
19 a really nice facility, the TDC center where you
20 can do pull tests and develop various technology.

21 So they're really good partners for
22 us, and they have done experiments where, you

1 know, they've gathered a lot of data and are a
2 good resource for completing those types of
3 activities.

4 And I just have 811 on there because
5 it's important, as you guys saw on the safety
6 share, that you want to call before you dig or
7 else you'll have a video like that come out.

8 So credit to PHMSA, that was a nice
9 video, so glad to see that. So that's everything
10 I have.

11 CHAIR BURMAN: Thank you. That's
12 really, really helpful.

13 We're going to have, before we open it
14 up for discussions and comments, Michael
15 Stackhouse present next. Then I also do want to
16 warn people now for Agenda Item 6 4:30 to 5:00
17 Alan Christie, and myself have been talking and
18 we have some more homework assignments so you'll
19 want to be here because otherwise you'll be
20 tasked with it.

21 MR. STACKHOUSE: Good afternoon. Mike
22 Stackhouse. I work for Phillips 66. Thank you

1 for the volunteering. I don't know who did it
2 but somebody volunteered me to present to you
3 guys. I thank them.

4 I've been in the industry for about 32
5 years. Thirteen of it was as an ILI vendor. I
6 know a few of these guys. I know Bryce and Chuck
7 in the background for a number of years. I
8 worked with them side by side in the ILI
9 industry.

10 I think I'll bring a unique approach
11 to the ILI process because I know their side of
12 it. For the last bit of my 10 years has always
13 been as an operator. That unique approach
14 understand that there is no us versus them.
15 There is no tool. There is no analyst. It is a
16 management system.

17 You've heard that a little bit today.
18 Before you guys throw a bunch of lettuce at me
19 because I'm going to go over some of the same
20 slides, I think it's a different approach to the
21 same slides. Hopefully you will bear with me.

22 And another thing, Mr. McMillan made

1 the statement about passion. Because I've been
2 in the industry 32 years I have a ton of passion
3 for asset integrity because all 32 years has been
4 in the asset integrity field.

5 The other thing is I'm going to show
6 you a bunch of example of data and I need to make
7 this one statement that none of the data is
8 representative of any specific asset. They are
9 just examples for examples only, but there are a
10 lot of really good data in there and I might say
11 that about five times. Okay?

12 I'm going to talk a little bit about
13 the system life cycle. I know you've seen that
14 before but I'm going to put a different spin on
15 it hopefully. There's a lot of human elements in
16 it. There's some challenges and then, of course,
17 the integration.

18 Where we're at currently, kind of
19 current state, mapping functionality, things like
20 that, data integration. You are going to hear
21 that a little bit more. Maybe just a little bit
22 more with the data. Then I'm going to talk about

1 the future side of it.

2 I would also like to talk about the
3 industry. We do a ton of sharing already. We
4 have annual meetings where we share our
5 incidents. We have quarterly meetings where we
6 share our instances and lessons learned.

7 I think the industry has really
8 evolved over that 30 years getting better and
9 better at sharing information so I hope you guys
10 really understand there is already a ton of
11 sharing. I think Eric mentioned that earlier.

12 But with the same flavor, or the same
13 spirit, of the integrity management, we always
14 recognize that there is continual improvement.
15 We can always get better at it. The other thing
16 is it's going to be tough to cover all of this in
17 20 minutes but I'll try. I have just as many
18 slides as Mr. McLaren but we'll go through them.

19 Here is the life cycle of the in-line
20 inspection. I'm not going to go through every
21 bit of this because the previous members actually
22 did a lot better job than I will.

1 What I want to point out is each piece
2 of this talks about a management system of the
3 in-line inspection process. I apologize I'm not
4 going to talk much about ECDA but since my goal
5 was to talk about in-line inspection and GIS.
6 That's what I brought with me.

7 First of all, technology selection.
8 That piece in itself is a whole process within a
9 bigger process. There's its own plan, do, check
10 and adjust on what are the threats, are we
11 selecting the right technology to assess the
12 right threats.

13 That is a huge key challenge because
14 we're talking about a 400 mile pipeline that's 42
15 inches, like Nick was talking about, that may
16 have multiple threats. We are picking the right
17 tools for the right threats. We are finding the
18 right threats with the right tools. That in
19 itself is a whole challenge.

20 There's a lot of human elements in it.
21 There's a lot of teamwork with the ILI vendors.
22 There's a lot of teamwork within the industry

1 talking about these issues. In itself it is a
2 process. This is the ILI system cycle but every
3 bullet point has a process behind it.

4 Tool setup. I put in FEL, front-end
5 loading. Did we get the right information to the
6 ILI vendor. Did we get the right information
7 from our GIS to set up the tool right. Is our
8 asset assessment ready.

9 We always talk about piggability but
10 I've actually been throwing out this term called
11 assessment ready. It may be piggable but is it
12 ready to run a pig or is it ready to be assessed.
13 That's a whole process in itself.

14 We talk about pipeline cleaning.
15 Yeah, the pipeline has to be cleaned before you
16 run a tool. Do you have the right speeds. Do
17 you have the right product. You know, if you're
18 running propane. Some tools can't run on
19 propane. Some tools can run in diesel. Some
20 tools can't run in a mixture of water and oil so
21 it's really is your asset ready to be assessed.

22 There is a tool for temperature,

1 speed, surges. All of that affects the quality.
2 If you don't get the questionnaire right, if you
3 don't select the right tool, if you don't get the
4 right tool parameters, you affect the overall
5 data quality.

6 Post-run acceptance. I won't go
7 through each piece of that. Vendor analysis.
8 There's a lot of resources and qualification on
9 the vendor analysis. They usually send a prelim
10 report to you and then that comes to the
11 operator. Does the operator have the
12 qualification to look at the prelims.

13 Are we bringing in the right
14 information from the previous repairs. The final
15 report up here are the qualifications to review
16 that and do you have the right defect evaluation.

17 Ditch selection which I call
18 engineering critical assessment. That's the data
19 integration portion. Bring in the excavation,
20 data correlation, and the ditch qualification.
21 That's a whole other human being and a whole
22 other process for qualifications and issues that

1 could affect the overall data quality of the ILI
2 system. Remember, it's not a tool. It's not a
3 vendor. It's not an arbitrator. It's a system.

4 I'm going to step back in time.
5 Remember we talked a little bit about me being 32
6 years in the industry. This is how we used to
7 look at the data. This is an ILI data strip
8 chart. It's 200 feet long, 12 inches wide.

9 We used to scroll through it looking
10 at the data. We had these little optical
11 comparators and we would measure the pig
12 amplitude and we would use that amplitude to
13 predict what the depth would be.

14 If you look down here there's a little
15 odometer and it's basically kind of a square
16 digitized format of the odometer and each square
17 was a foot. You could put about five miles on
18 one scroll of paper.

19 How we used to integrate data was we
20 would have two of these. Alan would have one and
21 he would scroll through and I'd have the other
22 one and we would count joints. We would sit

1 there and count 1, 2, 3, 4, 5. We would
2 integrate data that way.

3 What would drive me nuts is if I got
4 to 315 and Alan was asleep because that's
5 happened to me before. Then you got to start all
6 over. That's the early ages of integrating data
7 and integrating two different tool runs using
8 these strip charts. I spent a lot of time with
9 that bureau right there.

10 So what are we trying to do? Could
11 you take this strip chart and integrate it with
12 other information so I can compare two of the
13 strip charts put can I actually compare the GIS
14 information or the depth of cover or close
15 interval survey.

16 The close interval survey is every
17 three feet they take a measurement of the
18 cathodic protection and they use a GPS to do
19 that. How do you overlay that to a strip chart
20 looking like this? We've gotten a lot better at
21 it to be honest with you.

22 The data is a lot more digital. It's

1 a lot more refined and you can actually -- by the
2 way, you got a lot more sensors in this. What is
3 that, like 12 sensors? They are a lot smaller
4 now, too.

5 Every single pipeline, every single
6 joint, has its own fingerprint on these EKG
7 lines. These EKG lines are a lot more digital
8 now. They are a lot prettier but I will got to
9 go back to this. Every pipe and every joint had
10 its own fingerprint. What are we trying to do
11 with the data integration? What are we trying to
12 do with these fingerprints?

13 We're trying to bring forensic science
14 investigation into the data before a leak
15 happens. We are basically a bunch of CIS people,
16 or CSI people, looking at information before the
17 I happens, before the incident happens.

18 Remember we talked about every
19 pipeline has a fingerprint. I'm going to give
20 you a very simple chart for us. This is
21 basically from zero footage to 13,000 feet of
22 pipeline looking at ILI data from, it looks like,

1 12 percent and up. These little red dots are ILI
2 anomalies.

3 This is one way we use the data to
4 integrate other information. You can see here
5 the blue line. We have elevation profile.
6 Luckily this was pretty flat. This line here is
7 basically cumulative damage report where we can
8 talk about where the damage is happening. Each
9 one of these little dots are basically anomalies.

10 What we use this for is looking for
11 hot spots, looking for data trending, and looking
12 for that fingerprint of that pipeline. You can
13 see these areas where they are blank. Luckily we
14 went out there and changed out those pieces.

15 That is a real clean spot, newer pipe.
16 You can see we've got some more work to get the
17 rest of those out of there. This is another way
18 we've integrated the data. We've trended the
19 data and
20 looking at the footprint. We also have another
21 one where we talk about remaining wall thickness
22 of an asset.

1 You saw the PAS information. You saw
2 the GIS information. You saw a lot of the ILI
3 information. I need quick data. I need data at
4 my fingertips. This is a report that we created
5 so I can have quick information so I can learn a
6 lot about an asset and learn a lot about the
7 integrity activities of an asset.

8 What we have here is we have a
9 pipeline station A to B. Remember, this is not
10 indicative of any specific asset. You can see if
11 it's a DOT jurisdictional. You can see if it's
12 active line. You can see all the different
13 assessments we've had all the way back to 1994,
14 what types of assessments. You can see in 1994
15 we had the hydro test. How much of it we
16 assessed.

17 Over here you've got normal operating
18 pressures or maximum operating pressures. You've
19 got elevations. Over here you've got the pipe
20 properties, six inch. The manufacturer, the wall
21 thickness, the specified minimum yield strength.
22 I want to make sure I don't use too many

1 acronyms. The seam type and how much of that we
2 have. We've got the vintage, when it was
3 installed. You've got the coating type, how many
4 crossings we have, and the HCA information.

5 This is a real quick snapshot of using
6 that information that is compiled and giving me a
7 quick report about the integrity of activities of
8 an asset. This is basically everything I would
9 want to know if something was happening or if I
10 go to a meeting about an asset. This is what we
11 call the scoop. This is the scoop about the
12 asset.

13 Another report that we do, and you've
14 seen a lot of the alignment inspection
15 information prior to this presentation, but this
16 is how I close out an in-line inspection. What
17 you see here is you can see station A to B again
18 and how many types of defects I've had on that
19 in-line inspection.

20 Here is the in-line inspection anomaly
21 count before repair system and after repair
22 system for external, internal, manufacturing, and

1 then the totals. Over here I've got the deepest
2 anomaly and the most severe anomaly.

3 Here I've got deformations, seam
4 welds, cracks. This down here wraps up the 1163
5 process on how accurate the ILI system ended up
6 being.

7 Again, it's some of the same information, just a
8 tiny different spin on it, with actual
9 information.

10 You saw the unity plots. You saw some
11 real pretty unity plots. I've got unity plots
12 back from 1998 and everything we've ever done
13 since 1998. This is powerful information. It is
14 okay to look at one pig and see how our system is
15 doing and you get a lot of good information on
16 that. What is really powerful is how is your
17 system performing and how can you trend them
18 against each other.

19 If you look over here, I know it's a
20 lot of information. This is the same unity plot,
21 predicted depth and actual depth. Over here
22 you've got what division it's in.

1 Our company is divided up into five
2 different divisions so I can hone in on one
3 division. I can hone in on an ILI vendor. I can
4 query on an ILI type. I can do an anomaly type.
5 I can do an anomaly depth. I can do anomaly
6 characteristics of grooving or general corrosion
7 or slotting. I can do a specific diameter.

8 ANC code. I remember, I think, it was
9 David talking about what you call assets. This
10 is what we call assets. This is AMO 1 and PCO 1.
11 Those are naming conventions. This is our
12 priority codes. When we find an anomaly that is
13 actionable, we put a priority code on it. These
14 are the technologies, wall thickness, and then
15 year of the assessment.

16 What is really unique about doing this
17 is I can start seeing trends of the system.
18 Remember we talked about tool and tool
19 performance, but this is system performance. If
20 I break this up by division, would it be
21 interesting to know that one division has
22 different specifications of the same vendor and

1 the same diameter than another division? It is.

2 That's a failure in the system. It's
3 not a failure of a ROSEN or TDW or particular
4 type of vendor. It's a failure of the system.
5 You can drill down and understand is it only on
6 certain wall thicknesses or is it on the top of
7 the pipe or the bottom of the pipe.

8 We can actually do deformations and
9 we've actually seen where deformation has
10 different tolerances on the bottom to the top of
11 pipe when diameters get a little bit larger where
12 we use those tolerances for a prediction.

13 Chris, I don't know if you remember
14 this but you've seen this before. About 2002
15 when you had an audit with me and I showed you
16 some of this trending. It's not as sophisticated
17 as it is now but this is the same trending we
18 were doing back then to try to really understand
19 and drill down on system tolerances.

20 I had a vision. I wanted to come in
21 my office and I wanted this big old monitor to
22 come out of the ceiling when I get there. I

1 wanted to see where my activity was going on. I
2 wanted to see what was going on that day.

3 We've actually used GIS. We've used
4 our ali. We've used all of the work lists that
5 we've created from in-line inspection. I can
6 come in in the morning and, I think, Amy said you
7 can't put all the lines on one slide so just
8 drill down into the billings area. These are
9 some of our assets.

10 You can see these yellow triangles.
11 These yellow triangles are actually digs. The
12 color code of the digs shows what type of
13 condition they are. These are actually Phillips
14 66 coded digs so we have certain timing on that.

15 If you hover over them you get to see
16 the detail of that work product and that work
17 list. Hopefully you see these triangles coming
18 on and off. If you see some red ones, those are
19 immediate conditions. Those are HCA median
20 conditions and where they are at that moment.

21 We also can see where the hydro tests
22 are going on. We can also see where we've

1 derated assets. We can also see where we are
2 doing the in-line inspection. Hopefully one of
3 these days you'll see a little pig running across
4 that blue line and we get to know exactly where
5 it is.

6 The other area where we use GIS, I
7 think Nick mentioned where you have an
8 engineering meeting talking about an asset. We
9 call it a data integration meeting where we
10 hopefully have gotten all if the digs done, come
11 back in the room and we sit and talk about an
12 asset.

13 We walk that asset with the ESRI map
14 and we look at the aerial photography. We just
15 make sure one last time that we don't want this
16 asset. Let's understand our PNMs, are they
17 effective, and what is the next assessment.

18 What was interesting was I saw this
19 blue lake and I said, well, why is my line all
20 blue and I got a blue lake there? So I asked the
21 question is that an HCA? Really quickly we could
22 see with our layer that it was not an HCA. So,

1 okay. If the product came out of there, where
2 would it go?

3 So we used the overland flow and you
4 could see really quickly that right here all the
5 product would go into that lake. It was not an
6 identified HCA. Using GIS really quickly we
7 created this whole lake as an operator identified
8 consequence area. Within a matter of hours we
9 found out that lake was actually a wildlife
10 management area.

11 Just by walking the line you can start
12 asking some questions and with the GIS
13 information and the information out on the web,
14 we found out that, yeah, that is definitely HCA
15 and we can actually treat this as a higher
16 priority pipeline.

17 When you talk to the guys in the field
18 they say, "Yeah, that's a dry lake. It's dry all
19 the time." Not anymore. That's a wildlife
20 management area. It's really good to use these
21 tools to learn a little bit more in how we use
22 it.

1 We basically created a tab in our
2 internet where you can click on operator
3 identified consequence area and it will bring you
4 through a series of screens and you can actually
5 send your information that you think should be in
6 HCA from anywhere in the company and it will go
7 to our GIS and they will actually be able to do a
8 study for you and see if we need an operator-
9 identified HCA.

10 We talked a little bit about where we
11 were before and where we're at today. I want to
12 maybe throw in a new concept to you. Cognitive
13 integrity management. How do we actually
14 continue to learn from it and how do we learn
15 together.

16 We talked about integrating
17 information, normalizing and standardizing and
18 validating accuracy and then using that insight
19 to trim the information to a higher level of
20 confidence. This group is to come up with how do
21 we better share information. Is it the data that
22 we want to share or is it the learnings we want

1 to share?

2 We partnered with a couple of
3 companies to build algorithms on our learnings to
4 trim the data so we don't make the same mistakes.
5 What are we sharing? We're not sharing the data.
6 We're sharing the algorithms. It's how you share
7 the learning that affect the asset so we don't
8 all make the same mistakes.

9 This is one area that I think is
10 really interesting and we've learned a lot by
11 partnering with a couple of companies including
12 Microsoft, by the way, to share the algorithm,
13 the outputs, of the information without sharing
14 all the data.

15 We have 1.5 billion data records in
16 our system. We have the PODS information. We
17 have ESRI, but we've also spent \$15 million just
18 basically building our own data integration
19 programs. We've all done that separately as
20 operators. We all have individual data records,
21 individual data formats, but I think the
22 algorithms are really a key to what we do with

1 that information.

2 So this company is actually working
3 with us. We've got three different algorithms.
4 It can ingest different ILI vendors. It can do
5 different ILI formats or operator formats. It
6 can actually ingest the information in a matter
7 of minutes and it's machine learning. Every time
8 you put in a new bit of information, it relearns
9 how to correlate it. We're at about a 98 percent
10 match rate on our data and that's better than
11 we've ever been before.

12 How you use that information, how you
13 build algorithms, how you share the algorithms,
14 and then how do you display it in a user-friendly
15 way on a 3-D layer. One of the thoughts here is
16 using some of the Google glasses. I know that's
17 really future, 15 years from now. I might not
18 even be employed by then. You can use Google
19 glasses and you can actually start looking at the
20 pipe from within and using this information.

21 What you can see here is you can see
22 the green was a run five years ago. The yellow

1 is today's run. Where they overlap is where
2 they're matching. We've used this information to
3 monitor change. One piece of it is did it hit
4 PHMSA criteria. The second piece is did it hit
5 Phillips' criteria. The third piece is what is
6 the change doing and how do you monitor that
7 change.

8 This information has really been
9 valuable. We've been pigging excavations that
10 weren't previously pigged that actually are
11 pretty severe and that the system hasn't been
12 catching. It's showing us our weaknesses to the
13 system.

14 Remember, the ILI system. I didn't
15 ILI tool, I didn't say analyst, and I didn't say
16 operator. It's a system failing and we are
17 starting to really get better at predicting where
18 they fail and driving into how do we monitor that
19 and how do we mitigate that.

20 So hopefully we didn't go over the
21 exact same thing. They all seemed a little
22 familiar. Here is the ILI life cycle. It is a

1 management system just like SMS. It truly was
2 one of the first SMS programs that we had in the
3 industry, the IMP, Integrity Management Program.
4 This is a management system with the ILI life
5 cycle and each piece of it has its own plan-do-
6 check-adjust.

7 Thank you.

8 CHAIR BURMAN: Thank you very much.
9 All of that was really very helpful.

10 Anyone on the phone have any comments
11 or questions?

12 Mark.

13 MEMBER HERETH: Michael, thank you for
14 your presentation. Thank you all for your
15 presentations today. They were very well done.

16 What drove you to look at machine
17 learning? Was there a specific set of
18 circumstances or was it just general interest?
19 What drove you in that direction?

20 MR. STACKHOUSE: Well, again, I've
21 been doing this for about 30 years and I've
22 gotten a lot better personally at understanding

1 where our systems fail and I've gotten a lot
2 better at predicting where they fail and getting
3 to areas before they fail. Finding them before
4 they find me.

5 I wasn't real good at doing it
6 manually and I wasn't real good at teaching it
7 either. That's the real hard part is how do you
8 teach it. It took me 30 years to understand
9 those fingerprints, those footprints of every
10 different join or every different ILI anomaly. I
11 needed a better way to do it and a quicker way to
12 do it.

13 I can go through there and integrate
14 two different tool runs. It would take me about
15 six hours of one asset and I'm really, really
16 good at it. This can do it in a matter of
17 minutes and we ingested 1,700 tool runs over a
18 weekend. That's huge.

19 Remember, it took six hours for me to
20 do one asset with two runs. That's brutal when
21 you've got 18,000 miles of pipe. Good question.
22 I want to do it quicker. I want the information

1 faster. I want my scoops quicker, too. Good
2 question.

3 CHAIR BURMAN: Thank you.

4 MEMBER WARNER: Michael, just a
5 follow-on to that. You mentioned that you were
6 finding ILI system issues or process issues that
7 were standing out when you did that analysis.
8 Are you free to give us an example of one of
9 those process issues so we can kind of frame it
10 and understand what you mean by that?

11 MR. STACKHOUSE: Yeah. I briefly
12 touched on it without going into too much detail.
13 If you take those yearly plots, which are
14 basically performance, and you look at them and
15 slice them/dice them the 100 different ways that
16 we can now, you start really learning the trends
17 of different fragments.

18 I mentioned the divisions. One
19 division was running the same vendor, the same
20 diameters, and have better performance than
21 another division. Why is that? I was able to
22 slice and dice that little bit of information and

1 I was able to see that over a certain amount of
2 years one division was using third party NDE a
3 lot more than another division where they were
4 doing manual pig-to-pig measurement or pig aging.

5 Maybe that ended up being one of the
6 failures to the performance. Right? That's an
7 easy one but we have different ways of slicing
8 and dicing it now and we can be a lot more
9 predictive at using that information to better
10 the system but looking at it as a system.

11 Too many times we say, "Well, I sent
12 that information to the ILI vendor and he didn't
13 do anything with it." That's kind of a he
14 said/she said. What are we doing together to
15 improve the system and how do we really look at
16 the system as the issue and not a person, not a
17 tool, not a vendor, not an operator.

18 CHAIR BURMAN: Thank you.

19 Does anyone else on the phone have any
20 questions or comments?

21 At the table? Alan.

22 MR. MAYBERRY: Thanks. Alan Mayberry.

1 I was going to ask do you have any suggestions
2 for us as we work on this issue regarding sharing
3 information?

4 MR. STACKHOUSE: You know, I think we
5 all know we need to share information more, but I
6 think a real key thing is how do we share it
7 faster. Let's be frank, when there's a leak
8 there's three people that know about that leak
9 and know all the details about that leak. You've
10 got the operator, you've got PHMSA, and NTSB and
11 they are learning a ton.

12 They may take five years for the rest
13 of the industry to learn about that leak and
14 that's too long. I think that's a huge issue.
15 You guys are learning, NTSB is learning, and that
16 one operator is learning. How do we share that?
17 There's a ton of facts that we can all share but
18 we can't share it.

19 MR. MAYBERRY: Obviously you have a
20 wealth of knowledge on this. I find from our
21 perspective so often we hear in the aftermath of
22 failure why I just ran a pig. I just ran a tool

1 a couple of months ago, a few months ago.
2 Looking back our vision is better but how do we
3 get ahead of that? How do we share the lessons?

4 MR. STACKHOUSE: Truthfully, the
5 integrity management rule was perfect for making
6 us do more, but it also limited us from doing
7 more. I think that was a big issue. Yes, we
8 took care of a lot of corrosion. Yes, we
9 assessed our pipe a lot more, but how do we
10 actually dive into the data a little bit deeper
11 and go find the bad actors before they find us.

12 Yeah, we ran the tool just before but
13 none of the actual anomalies hit the criteria
14 that are previously established. It's the
15 underlying ones that we don't quickly look at
16 because we are too busy trying to fit them in
17 these other buckets.

18 That's an issue. What we've done is
19 we've actually created -- you know, I think all
20 our operators have PHMSA criteria digs and they
21 have company criteria digs. A lot of times those
22 company criteria digs come after the PHMSA

1 criteria dig.

2 That is the spirit of the integrity
3 management. What we've done recently we've
4 actually pushed some of our new criteria digs in
5 parallel to the PHMSA criteria digs because some
6 of those are the ones we're finding are a lot
7 worse and are we really truly attacking what we
8 need to attack in a timely manner. I think there
9 are some defects that are currently called
10 criteria digs that aren't injurious.

11 I'll give you some examples. Small
12 dents on small diameter pipelines with D-over-T
13 ratios aren't as significant as large diameter
14 higher D-over-T ratios. Should we really be
15 spending our time on the eight-inch pipe that has
16 a small dent, or should we be spending our time
17 on less-than-1-percent dent on the 42-inch pipe?

18 So great program. It made us do a lot
19 and it made us do it faster. I remember talking
20 to an Integrity Management person before in the
21 early years and he goes, "I can't wait to run
22 that pig in 10 years." Right? That's the way we

1 were thinking before.

2 Now we are doing it at five years and
3 we are starting to say, "Wow, I'm glad I'm doing
4 it on five years." It's a great program. Now we
5 just need to figure out how do we tune it in and
6 dial it in and not go spend a lot of resource
7 scenarios where we all know we shouldn't be
8 spending them and using learnings to get to them
9 faster. Good question.

10 CHAIR BURMAN: Well, thank you because
11 I think you really hit the nail on the head on
12 sort of where we are as a working group and the
13 need to figure it out. I think that we all would
14 probably still if we took the vote on is there a
15 need for the voluntary information sharing to be
16 yes. The details are about how do we scope that
17 out and deal with those issues in a way that
18 actually gets to this before another 30 years.

19 With that I think we are done with the
20 agenda items except for the next part which is
21 sort of recap and closing with some homework
22 assignment. We did take seriously the focus on

1 trying to drill down and figure out sort of our
2 next steps for discussion tomorrow.

3 With that I'm going to turn it over to
4 Alan to give his thoughts. We've been working
5 together up here and staff behind the scenes and
6 then turn it over to Christie who is going to
7 have staff present a little on some of the
8 thoughts and mission statements. Thanks.

9 MR. MAYBERRY: Well, like I said
10 earlier, we had laid a lot of the pieces out
11 today. I think the intent for today was to be
12 educational. Some of the highlights of what I've
13 heard today certainly related to -- you know,
14 there's a lot of information already being
15 shared. I'm not surprised that happened.

16 Certainly in the groups I've engaged
17 in, whether it's API, INGAA, HCA, there's a lot
18 of collaboration that occurs. Nonetheless, like
19 I was just speaking of, we do struggle with the
20 aftermath of where we see situations where in-
21 line inspection tools were recently done and now
22 it's easy to see, well, if we had only considered

1 it this way.

2 What can we glean from that? How can
3 we move forward to leverage things like that and
4 develop a system for sharing information so we
5 can be better.

6 We put standards and I know we worked tirelessly,
7 the staff does, to issue what we call federal
8 minimum standard for pipeline safety. We do
9 stress that it's a minimum standard.

10 Most often, you know, usually often
11 times -- I should say always an operator needs to
12 do what it takes to ensure safety. In many cases
13 that may involve going above that standard. It's
14 merely criteria but, in some cases -- in all
15 cases an operator should consider what does it
16 take to keep the proverbial tiger in the tank.

17 To kind of put boundaries on what we
18 are dealing with here, I know we have a lot of
19 things out on the table related to a very
20 complicated process that operators go through.
21 We are dealing with in-line inspections
22 specifically.

1 We are dealing with -- it's been
2 called up by name in the statute, dig data
3 specifically. I think the kind of boundaries we
4 are kind of working within are in that realm of
5 what are we doing with the information that we
6 find at the operator level to share lessons
7 learned.

8 Like I said earlier, I think out of
9 that we can -- you know, we'll have a good
10 framework and really we are dealing with setting
11 up a framework. We are recommending a framework
12 if it's relevant to -- you know, it could be used
13 for a platform for other types of things.

14 Specifically I think it would keep the
15 task at hand related to in-line inspection
16 information, dig data. I think that keeps it
17 simple. Let's start somewhere. Let's start
18 simple and then from that we can improve from
19 there and move on from there.

20 Let's see what else do I have here.
21 I think that's about it. I would be interested
22 in other feedback, too, because we've had the

1 perspective from operators. We have a cross-
2 section of the industry out there from unions to
3 service providers, in-line inspection service
4 providers, people that deal with coatings,
5 corrosion of surfaces and the like, and operators
6 and the public.

7 Your perspective -- I mean, you guys
8 are the ones that deal with this every day.
9 Where are the pains? Where do we need help in
10 setting up a system? We had the perfect
11 opportunity here to start fresh with a system
12 that can really help you and, in the end,
13 ultimately help the public because we are here to
14 prevent accidents and do better to that end.

15 I can't go on or let pass the point
16 about, you know, taking a step back and what this
17 is kind of -- this is really part of a larger
18 picture related to safety management systems.

19 As we look to the future of pipeline
20 safety oversight and management, really we see
21 S&S as a key to that. It's something that we're
22 promoting really voluntarily currently that the

1 industry would adopt safety management systems, a
2 key aspect of that. In addition to leadership
3 commitment is sharing information.

4 I think we have an opportunity to make
5 S&S more successful by developing a good platform
6 for sharing information. I think this is a key
7 component as we move forward towards implementing
8 safety management systems.

9 Within PHMSA and in the regulated
10 community I think the system that we're talking
11 about here ultimately developing, if that is the
12 way it heads, will definitely promote
13 communications with operators to help better
14 manage pipeline safety and ultimately ensure
15 safety.

16 I think that's all I have. I'll turn
17 it over to Christie to share a few thoughts.

18 DR. MURRAY: Thank you, Alan. My
19 thoughts are pretty brief. One, I just want to
20 say that we hope that the discussions so far
21 today have been useful. I understand different
22 committee members are coming into this committee

1 with different levels of information, experience,
2 and knowledge about some of these subject
3 matters.

4 The goal for the sessions that we've
5 had and discussions we've had so far have been
6 really to just try to normalize it out for those
7 who may not have had as much involvement.

8 For those who are novice to some of
9 these discussions, hopefully that gives you an
10 idea of how what we've talked about relates back
11 to some of the language in the mandate that we
12 are asked to take a look at. Also to give you a
13 place to think about where else or where may want
14 to expand on that.

15 There was certainly some really great
16 points about things that have not been tee'd up
17 as a part of that that really need to be involved
18 in the conversation.

19 One of the themes that we took away
20 very clearly today, all day, is that we really
21 want to focus on what is the problem we're trying
22 to solve. What's the goal we're trying to reach.

1 How does that look. What is our charge. What is
2 that goal or statement, mission statement. What
3 does that look like in terms of advising what the
4 committee does next.

5 I have Ahuva sitting here. What she's
6 going to do is show you just three simple
7 examples. She'll explain a little bit more of
8 what a couple of other DOT modes have done in
9 terms of their information sharing to help drive
10 their purpose, description, and a little bit of
11 the output of their information sharing efforts.

12 MS. BATTAMS: It's nice to be back.
13 It's been so long since I've talked to you all
14 this morning.

15 So one of the things that we thought
16 would be helpful was to look at three other
17 voluntary information sharing group programs that
18 are within the DOT that could help us form our
19 mission statement and think about what are sort
20 of end product from sharing information could
21 look like.

22 The FAA has several programs and then

1 the BTS and BSEE also have a joint program that I
2 thought it would be helpful for us to look at.

3 The first one is the FAA's Aviation Safety
4 Information Analysis and Sharing System, the
5 ASIAS. The purpose of that program is to promote
6 the open exchange of safety information to
7 improve aviation safety.

8 What it looks like is four data bases.
9 These are available online. They focus on
10 accident and incident reporting, air registry
11 information, safety reporting, and then
12 statistical information.

13 These data bases are searchable by the
14 public. When you run a search on them you get a
15 list of reports that have been shared by
16 participants. You can run queries. You can pull
17 studies. Really anyone can access the
18 information.

19 So how is the data protected in that
20 case? The data is housed by a third party vendor
21 called MITRE, or METER, I'm not 100 percent sure.
22 It maintains the database and it scrubs the data

1 from any identifying information so an operator
2 submits a report and the vendor removes the
3 information that you could use to identify who
4 was reporting the specific safety incident or
5 accident incident.

6 Even the FAA can only view the
7 aggregate data so that none of the specific
8 operator data is available. Then the output is
9 in these databases. You can run your queries.
10 You can look at more than one database. You can
11 see what's happening across the industry.

12 The second program is the Voluntary
13 Safety Reporting Program which is also through
14 the FAA and there are several of these and I can
15 get more information if you want to talk about a
16 specific one. The goal of these groups are to
17 identify and correct safety hazards across the
18 FAA industries.

19 What happens with this group is that
20 reports are submitted but they are governed by
21 MOUs or VSRP agreements, Memorandum of
22 Understanding. These agreements establish the

1 procedures for submitting the information, what
2 information is going to be included.

3 This information is not scrubbed for
4 anonymity. But the information is also not
5 accessible except for a small group. They are
6 called the Event Review Committee members and
7 they are the only individuals that can see the
8 data. The data is not shared throughout the FAA.
9 The data is not necessarily shared with the
10 public. It is limited to what is identified in
11 the agreement to protect that information.

12 Those groups then will do their own
13 analyst and create a report detailing the
14 information. The report is scrubbed of any
15 identifying information. There is no breach of
16 confidentiality. Then the reports are what are
17 shared throughout the industry and to the public
18 to say this is the trend that we're seeing or
19 these are the issues that need to be addressed.

20 You can scroll up a little bit. The
21 last program is the Safe OCS Confidential
22 Reporting System. This is through the BTS and

1 BSEE. This is voluntarily shared information
2 about near misses on the outer continental shelf.
3 What happens with this program is the BTS
4 controls the reports and the data and if you go
5 on the Safe OCS website there are a couple of
6 links that tell you how to report and you send
7 your report in.

8 An operator can send it in. An
9 employee can send it in. The information that is
10 submitted is specifically controlled so that it
11 is not made public with identifiable data. I can
12 talk more about statutes and regulations at
13 another time for protecting this information but
14 the BTS statute goes very far in affording
15 penalties, both criminal and civil, if this
16 protected information were to be released.

17 Then what happens with the data that's
18 submitted, the BTS develops and publishes an
19 aggregate report so that means they've gone
20 through and sifted through the information. The
21 report only has public information and findings.
22 Then it is shared with the BSEE industry and then

1 other OCS shareholders -- stakeholders, excuse
2 me, that can then reduce safety and environmental
3 risks and continue to build more robust safety
4 culture.

5 All of this information is also
6 available publicly but I can also get you guys
7 specific links if anyone wants to be looking at
8 it for themselves. What I wanted to do in
9 presenting this is to give us kind of an idea of
10 what other programs do so that we can think about
11 our end result.

12 Do we want something where there's a
13 small group of analysts that will look at
14 submitted shared information and then will come
15 out with a public report. Do we want to do
16 something like the ASIAs or a third party scrubs
17 the documents so that the identifying information
18 is still protected.

19 Or, you know, do we want something
20 where there's a little broader governmental team
21 that's analyzing it but still the end result is a
22 public report that aggregates all of the

1 information that has been submitted.

2 Does anybody have any questions that
3 I may or may not be able to answer since I'm not
4 with the FAA or BTS and BSEE?

5 CHAIR BURMAN: So I'm just going to
6 react. First of all, thank you very much because
7 in the middle of this we gave her an assignment.
8 We are really trying to show that we're taking it
9 in and trying to make this real and trying to
10 give feedback that responsive.

11 This is all of us that need to work
12 together. We're struggling with making sure it
13 is at the end of the day something tangible. To
14 the extent that I really do mean it, I really
15 want us to come tomorrow morning fresh to really
16 focus on what do we need, roll up our sleeves,
17 and be comfortable sharing.

18 If people aren't comfortable sharing
19 what's working and what's not, then we might as
20 well just close up shop. As I see it, we kind of
21 have some action items. Probably action items
22 homework which is about six for the start. One

1 is hearing from the FAA's experience.

2 PHMSA put together this not as the be
3 all and end all but trying to give us -- and
4 we'll send this tonight so people have it in an
5 email to give us something to think about.

6 There's plenty of other things that are there and
7 I think from FAA experience we are also going to
8 need more tangibility from them with helping us
9 with some of how this might work in our world.

10 The second action item/homework is
11 clear policy framework. I think we could all
12 wrap our heads around the idea and the framework
13 of it being focused on helping to have more
14 actionable items for pipeline safety issues. But
15 really what does that mean?

16 Michael Stackhouse, I think, really
17 sort of hit it for me in terms of he took what he
18 has been doing and why it's important and then
19 also was willing to give his own opinion on where
20 the IM focus works and where it doesn't. Some of
21 that helps us get there.

22 Then the other homework assignment is,

1 and this isn't necessarily to have this tomorrow,
2 but the common terminology of interest. We heard
3 loud and clear when we came together December
4 19th that common language was important. That
5 keeps being a theme so it's something that we
6 need to figure out how to do. I think one of the
7 subcommittees addressed that.

8 Then the fourth homework
9 assignment/action item is the important aspects
10 of any kind of policy and data sharing because I
11 think we need to have some key take-aways. I'm
12 also going to now -- Christie, I'm sorry. I'm
13 going to give you homework. We should probably
14 put this in an email, too, for folks. All right.
15 Sorry.

16 Then the examples. Maybe one or two
17 example of proprietary intellectual property
18 information concerns. Maybe something really to
19 kind of explain just a little bit more why it's
20 important.

21 I lost count on my numbers but
22 subcommittee feedback and sort of the needs and

1 whether or not there is any interest in tackling
2 some of that. Again, I do know -- I think we
3 have to take a step backwards before the next
4 meeting in identifying some of the work product
5 that may go into the subcommittees so there may
6 need to be a subcommittee for the subcommittees,
7 and then some panel conference calls or some
8 conference calls like we did in April.

9 But before that I think the other
10 important thing is that we do need -- this we
11 heard in December. We also heard it April and we
12 heard it now. We do need to have more real time
13 documents to react to.

14 That also means that not just piling
15 on the work to the PHMSA staff but also us taking
16 some ownership in that as well because, you know,
17 we have to be cognizant of the workload that we
18 are putting on them and that they are trying to
19 make this real for us because it is our working
20 group to be successful or not.

21 With that I will open it up to anyone
22 on the phone who has any comments or questions.

1 Hearing none, anyone at the table have
2 any comments or questions?

3 Dan.

4 MEMBER COTE: Yes, Madam Chairman.
5 Just one for the committee and for PHMSA. It
6 seems to me we spent a good deal of time talking
7 about information sharing and the appropriate
8 vehicle to that which I really see to be the
9 strategic task of this committee.

10 So we've talked a great deal about
11 data. Today the focus was ILI and GPS and
12 technology, or GPS GIS. Let's make this process
13 absolutely agnostic to content in the context of
14 is it just ILI data, is it just GPS data, is it
15 just transmission data.

16 It seems to me that the most -- the
17 strongest product this group can produce is an
18 effective information sharing product for the
19 industry that allows them to communicate
20 seamlessly risks, remediation members, and
21 technology to operators be they distribution or
22 transmission.

1 Now, the specific issues are likely to
2 be a bit different. If we restrict this activity
3 to ILI data, then honestly you just lost most of
4 the distribution operators in the United States
5 who are responsible for the majority of the
6 federal reportable incidents every year.

7 Without having looked at the numbers
8 recently 60 or 70 percent of all the major events
9 that happened that impact public safety just went
10 out the window and lost scope. We will miss the
11 boat if we do that. Let's create a vehicle where
12 we know what the industry is prepared to share
13 among each other in the same the FAA does, what
14 we can determine, what the public should have
15 access to.

16 Since this is voluntary anyway, open
17 it to the industry because I believe the industry
18 based on its business needs and risks will find
19 more rather than less areas to share. If we do
20 that, we will have moved pipeline safety forward.
21 Thank you.

22 CHAIR BURMAN: Thank you. I want to

1 applaud but I don't think --

2 Mark.

3 MEMBER HERETH: I'm Mark Hereth. I
4 want to support the comments that Dan was just
5 making. I sat here as I listened to the summary
6 that was presented about the FAA and BSEE. I
7 really appreciate the quick work that you've done
8 there. That was great work.

9 What's interesting here is the nature
10 of the information and the data that's being
11 viewed there generally relates to discrete
12 activities that have occurred and that are
13 readily observable or definable. I think one of
14 our challenges here is to maybe -- I get this
15 from listening to Michael Stackhouse's
16 presentation.

17 Maybe our focus should be on learnings
18 as opposed to information and data. Because if
19 we focus on data with what we're talking about
20 here, we're not talking about discrete observable
21 events. We're talking about indirect
22 measurements. ILI takes indirect measurements.

1 The NDE technology we use takes indirect
2 measurements.

3 Maybe our opportunity here is to step
4 back and say how can we draw on that FAA model
5 and really look at the learnings we're trying to
6 derive from this process. I can tell you, just
7 one other comment, we had a small group of us
8 meet in the IngaFoundation last year.

9 We got to this concept of the de-
10 identification that you talk about, the work that
11 MITRE does. If we start trying to de-identify
12 data that comes from the 600 football fields or
13 whatever it was that we talked about earlier, I
14 think we're going to get lost in the interstitial
15 fluids of the bark on the tree when we really
16 want to be in the trees. Michael, thank you for
17 that presentation and you all for the summary. I
18 think we may want to think about learnings as
19 opposed to data. Thank you.

20 CHAIR BURMAN: Thank you so much.

21 Michelle.

22 MEMBER THEBERT: Thanks. I just

1 wanted to -- I know we talked earlier about the
2 case study. I think that was a really good idea.
3 I guess my comment is I guess the goal was to
4 figure out what causes these incidents to prevent
5 future incidents so maybe go through each of the
6 factors that Chris had like damage prevention.
7 What information do you need as an operator to
8 prevent damage prevention in the future.

9 Here are the five or six things that
10 would help for that industry to have. Corrosion.
11 Here are the top things you need to have. Kind
12 of figure out what the cause is. Is it equipment
13 failure, corrosion, or whatever. Then from there
14 give the piece of data you need to address that
15 issue.

16 Otherwise, I think -- I mean, ILI was
17 interesting stuff but I don't really know --
18 maybe the other operators know what to do with it
19 when they see all those unity charts or whatever
20 they're called. I mean, it was nice but I just
21 don't know if it's going to be user friendly
22 where the average person can have it.

1 If you say damage prevention and here
2 are the top things in IMP plan that you will do
3 and what particular pieces of information would
4 each operator have to share that could
5 potentially prevent a future incident.

6 I don't know if I'm making sense.
7 It's more logical, I guess, from the data driven.
8 Here is what's causing the problems and here's
9 how we need to address each of these factors. I
10 mean, I don't know if that's anything but --

11 CHAIR BURMAN: I think it's something.
12 I think it's very helpful.

13 MEMBER WARNER: This is Chris Warner
14 from Mears. To follow on with that, I was
15 thinking it might be helpful in correlating the
16 data to start coming up with statistics so that
17 operators could see how their vendors or their
18 process, as Michael was saying, was performing
19 compared to industry averages, highs or lows.

20 I think a lot of us get into using a
21 vendor or implying our own process and we get
22 results but we don't know if we're really getting

1 a good result or not. If the spread on the unity
2 graph is wide, is that typical for the industry
3 or is that not typical for the industry?

4 We may be able to de-sensitize it so
5 we can actually look and see the results that
6 we're getting. Is that following standard
7 industry results or is it actually worse or
8 better. Then we can start sharing the learning.
9 Why is it worse or why is it better. What are we
10 doing different to get the better results that
11 are out there.

12 CHAIR BURMAN: Okay. Thank you.

13 I just want to make a point as a state
14 regulator. I don't want to be defining for you
15 the widgets that you need. I don't even want to
16 be in the room when you're discussing the
17 widgets. I just want to know that the widgets
18 are going to work and going to help. I think
19 that's important.

20 Does anyone have any follow-up
21 conversation either on the phone, at the table?

22 MEMBER JENSEN: This is Leif Jensen

1 from Sunoco Pipeline. When you look at the
2 statute typically -- paragraphs 1 and 3 typically
3 get to the verification data and cooperation
4 between vendor and operator. Part 2 talks about
5 technology.

6 With all that said, I support the
7 comments that were made by those who are related
8 to taking a step back and maybe we take these
9 considerations somewhere down the road and
10 instead focus on the lessons learned and how we
11 can learn from one another, operator to operator,
12 as well as operator to ILI vendor.

13 I think if we take that more generic
14 approach, that gets to Dan's agnostic vision, or
15 agnostic vision, where we're not honing in solely
16 on in-line inspection. That said, when you read
17 the statute verbatim, I don't know if we're
18 deviating from what the PIPES Act actually
19 intended by doing so.

20 CHAIR BURMAN: Okay. So Christie and
21 Alan, I don't know who wants --

22 MR. MAYBERRY: Leif, I was thinking

1 about as well. It's listed under considerations.
2 It talks a lot about data. Of course, you know,
3 we already know in-line inspection. I think
4 there's a way to accomplish that and deal with
5 the larger issue because really this is much more
6 than -- will be much more than sharing specific
7 dig information related to one type of assessment
8 or one type of tool.

9 I think we can work with that to sort
10 of solve both because it's pretty clear it deals
11 with sharing data. Those are listed really under
12 10(c) as considerations, things we need to
13 consider but it doesn't keep us from being
14 creative to, you know, while we're dealing with
15 that more of a micro issue, we deal with the
16 larger issue of sharing lessons learned or
17 sharing other assessment techniques and
18 information like that. I think we can do both.

19 CHAIR BURMAN: Christie.

20 DR. MURRAY: I'm multi-tasking. I
21 just sent everyone homework assignments. You're
22 welcome. I just want to say this afternoon Diane

1 and Alan and I will talk and probably change the
2 agenda up slightly tomorrow so that we can have
3 an opportunity to hear from the committee on some
4 of your thoughts and insights from the homework
5 assignments so that we can really nail down where
6 we really see this going and what's needed with
7 this effort. You may likely see some changes to
8 the agenda tomorrow. Thank you.

9 CHAIR BURMAN: I do just want to say
10 I'm going to use my law school background and
11 everyone will be sort of tasked and called upon
12 to help to see if you did do your homework
13 assignment. And if you're not here, we'll find
14 you. Thank you very much. Don't stay up too late.

15 The meeting is adjourned.

16 (Whereupon, the above-entitled matter
17 went off the record at 4:30 p.m.)
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This is to certify that the foregoing transcript

In the matter of: Voluntary Information Sharing
System Working Group

Before: US DOT/PHMSA

Date: 06-29-17

Place: Arlington, VA

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