

U.S. DEPARTMENT OF TRANSPORTATION

+ + + + +

PIPELINE AND HAZARDOUS MATERIALS
SAFETY ADMINISTRATION

+ + + + +

LIQUID PIPELINE ADVISORY COMMITTEE (LPAC)

+ + + + +

MONDAY
FEBRUARY 1, 2016

+ + + + +

The LPAC met in the Hilton Arlington,
950 North Stafford Street, Arlington, Virginia,
at 10:00 a.m., Massoud Tahamtani, Chairman,
presiding.

MEMBERS PRESENT

MASSOUD TAHAMTANI, Chairman
C. TODD DENTON
TIMOTHY C. FELT
MICHELE F. JOY
RICHARD B. KUPREWICZ
CHARLES LESNIAK, III
RON MCCLAIN
CRAIG O. PIERSON
JOHN D. QUACKENBUSH
CARL M. WEIMER

DESIGNATED GOVERNMENT OFFICIAL

JEFF WIESE, Associate Administrator for Pipeline
Safety

CONTENTS

Committee and Staff Introductions.	8
Voting Protocol.	15
Gravity Pipelines, Gathering Lines, Leak Detection System, and Other Requirements Introduction	16
Gravity Pipelines Discussion	50
Gathering Lines Discussion	69
Leak Detection System Discussion	75
Other Clarifications Discussion.	79
Inspections of Pipelines Following Extreme Weather Events or Disasters.	135
Periodic Assessments	171
Using Inline Inspection Tools in All HCAs.	203
Modifying Repair Criteria.	226

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

2 10:04 a.m.

3 OPENING REMARKS

4 MR. WIESE: Good morning, everyone.

5 My name is Jeff Wiese, and I'm associate
6 administrator for pipeline safety at PHMSA,
7 within the U.S. Department of Transportation. I
8 want to welcome you here.

9 As someone said, be thankful that we
10 didn't hold the meeting last week. Any rate,
11 just a couple things I'm going to get going. The
12 way the day will generally go -- I think people
13 wanted to know, for the purposes of scheduling --
14 we think, based on comments, that there are a
15 number of provisions that are not so
16 controversial.

17 They may have some back and forth on
18 them, of course, but we'll be able to get through
19 those fairly quickly, and we'll try to take those
20 first up. I think by lunch time, we'll probably
21 be able to get through the non-controversial
22 ones, I'm hoping. I'm also expecting that right

1 around lunchtime, the administrator is going to
2 come over. She wanted to talk to you and just
3 say hi. I will give her the prerogative of
4 coming in, when she comes in. With your
5 permission, I'll just take a time out, and we'll
6 let her come in. I know she's jammed all
7 morning, couldn't get here until lunch. We'll
8 give her some time to talk to you and say hi, and
9 we'll just play it by ear from that. This
10 afternoon, I expect there to be a few more
11 controversial provisions, so those may take a bit
12 more time.

13 In talking with other members, I think
14 the members are interested in hearing from each
15 other. It's not just reading comments on a
16 docket. It's hearing from each other, too.
17 That's part of the purpose of an advisory
18 committee, I think, is to inform everyone.

19 I've got a couple of housekeeping
20 remarks I'm going to make, and we'll do some
21 introductions and talk about some basic rules and
22 all that. I did want to tell you that there are

1 several fire exits, should it ever be needed.
2 There are two that will take you into the back
3 hallway of the hotel, and those will take you
4 out. Probably more appropriate is out this door
5 and those stairs that you came up, probably, are
6 the fastest way to get out of here. I'm sure
7 that there'll be people ushering all the way
8 along the way. I did want to say that, comfort
9 moment, the men's and women's restrooms are right
10 outside the door, just look straight against the
11 wall on the side. Cheryl always asks me to just
12 tell you that I'm the designated -- I'm DGO now.
13 I used to be DFO, Cheryl.

14 I'm the designated government
15 official, and I serve as a presiding official,
16 but in fact, I've conscripted Massoud Tahamtani
17 to be the chair today. I think you know what I'm
18 saying when I say I'm not in control as soon as I
19 turn it over to him. I'm at his back and call.
20 At any rate, I do want to take a second to
21 introduce folks here, let everybody introduce
22 themselves for the purposes of the public, and

1 let the staff introduce themselves.

2 With your permission, I'll do that in
3 one second. I did want to say, for audience
4 participation purposes, this is a FACA committee.
5 Our primary purpose is get the advice from the
6 members that have been duly designated as members
7 of this committee, but we will, at appropriate
8 times, after the comments are really settled
9 down, take a moment for really short comments if
10 you have something to add. I generally
11 discourage people from getting up and saying,
12 "Me, too." That really adds no value here, and
13 it just keeps us all here longer. A lot of these
14 people are going to try to fly, so we try to be
15 as efficient as we can be. I will say if you
16 have something significant to add and you're from
17 the public, we'll give you that opportunity, but
18 keep them very brief.

19 Presiding official, that would be
20 Massoud. May I ask you to cut your comments
21 short, if necessary, and I remind you, too, this
22 is all being recorded, so please state your name

1 and your affiliation if you do have comments, so
2 it'll be a matter of public record, as will the
3 rest of this event. We provide a transcript of
4 every advisory committee meeting.

5 This one is docketed at
6 www.regulations.gov. The docket number is PHMSA
7 2015-0173. I'm going to turn it over to the
8 chair in just a minute, but I had a couple of
9 other -- I want to do introductions first and a
10 couple of other quick comments. First of all,
11 I've had a lot of conversation with people about
12 the advisory committee. I'm sorry that some of
13 the other members couldn't make it here. I know
14 Brian Salerno, for example, is on travel, and
15 there's no way for him to be here. There are
16 others who are having to miss. We take these
17 meetings very seriously. For the public more
18 than anyone, I want to add my personal comments
19 that I've seen things about FACA committees that
20 say it's a vote count.

21 It's 5 to 4, five wins. That's never
22 been true here. I've been associated with this

1 committee for a long time, and it's never been
2 true. This committee runs off of consensus, for
3 the most part. I do want to say, and I have to
4 say, the Department reserves the right to make
5 the final decision, but I think -- some of you
6 have been members for a long time, and I think
7 you would agree that we bend over backwards to
8 adhere to the consensus that you work to achieve.

9 I mean that. I wanted the public to
10 understand it's not a vote count. We have to
11 take a roll call vote, but it's not five wins and
12 four loses. I ask you to approach the meeting as
13 you always do, with a spirit of consensus making,
14 look for solutions, help us find a path forward
15 that meets most people or everyone's needs as
16 much as possible. At any rate, I thought that
17 was useful to add some clarification. An
18 important point for all of us, since this hotel
19 might be bad on that, is we do have Wi-Fi
20 connections here. There are sheets on the table.
21 For people in the audience, if you need the
22 sheet, we'll pass it around, just to make sure

1 you have a Wi-Fi code in case your phone or
2 tablet aren't working too well from there.

3 Maybe I'll start, if you would, with
4 PHMSA introductions, and then we'll walk around
5 the table really quickly, do our introductions,
6 and then I'll turn it over to Massoud. Perhaps
7 starting with the woman who makes most of this
8 possible.

9 COMMITTEE AND STAFF INTRODUCTIONS

10 MS. WHETSEL: My name's Cheryl
11 Whetsel. I'm with PHMSA. I work in the
12 Standards and Rulemaking Division, and I'm the
13 committee manager.

14 MS. TSAGANOS: Good morning. I'm
15 Vasiliki Tsaganos. I'm the deputy chief counsel,
16 and I'm also acting chief counsel.

17 MR. WHITE: Larry White, attorney with
18 PHMSA counsel's office.

19 MR. MAYBERRY: Good morning, I'm Alan
20 Mayberry, deputy associate administrator for
21 Policy and Programs.

22 MR. NANNEY: Steve Nanney, PHMSA

1 Engineering Division.

2 MR. ISRANI: Mike Israni, senior
3 technical advisor.

4 MR. GALE: John Gale, director of
5 standards and rulemaking, PHMSA.

6 (Off microphone introduction.)

7 MR. WIESE: The mics are a bit tricky,
8 so make sure your light is on, and it shuts
9 itself off, or somebody shut me off. I'm not
10 sure which one it was. It stayed on that time.
11 I would ask, just for the edification of the
12 audience, we have some other people in PHMSA. If
13 you'll bear with me for a second before we do
14 introductions, maybe start with Julia at the
15 other side. You want to just introduce yourself
16 quickly?

17 (Off microphone introduction.)

18 MR. WIESE: John? No? Other PHMSA
19 here? Oh, sorry, Alicia.

20 MS. COVERT: Alicia Covert, pipeline
21 attorney with counsel's office.

22 MR. WIESE: Any others? No? Okay.

1 (Off microphone comment.)

2 MR. WIESE: It's okay with me. I'm
3 just saying it's cutting out, or somebody else is
4 shutting it off prematurely. We'll start with
5 John.

6 MEMBER QUACKENBUSH: Good morning.
7 I'm John Quackenbush, commissioner with the
8 Michigan Public Service Commission.

9 MEMBER LESNIAK: Chuck Lesniak, City
10 of Austin, representing the public.

11 MEMBER JOY: Michele Joy, Shell
12 Pipeline, representing the industry.

13 MEMBER PIERSON: Craig Pierson,
14 Marathon Pipeline, representing the industry.

15 MEMBER KUPREWICZ: Rick Kuprewicz,
16 representing the public.

17 MEMBER WEIMER: Carl Weimer, public
18 member from the Pipeline Safety Trust.

19 MEMBER FELT: Tim Felt, Colonial
20 Pipeline, representing industry.

21 MEMBER MCCLAIN: Ron McClain with
22 Kinder Morgan, representing industry.

1 MEMBER DENTON: Todd Denton, Phillips
2 66 Pipeline, industry.

3 CHAIRMAN TAHAMTANI: I'm Massoud
4 Tahamtani with the Virginia State Corporation
5 Commission. I have the power to cut all your
6 mics off.

7 MR. WIESE: So that's what you were
8 explaining? He was cutting me off repeatedly?
9 You should all expect that the rest of the day.
10 If Massoud doesn't like the way it's going,
11 you're going to be muted. I think with that,
12 Cheryl, I think we're good. I'll just turn it
13 over, and we'll begin the --

14 (Off microphone comment.)

15 MR. WIESE: Lanny Armstrong and Brian
16 Salerno, yes.

17 With that, we'll begin the official
18 part of the meeting, and I'll turn it over to the
19 chairman, Mr. Tahamtani.

20 CHAIRMAN TAHAMTANI: Thank you, Jeff.
21 Cheryl has given me a whole two pages to read, so
22 bear with me. Jeff didn't mention this. Please

1 mute your telephones. The meeting is being
2 recorded. The committee members know that if
3 they need to speak or comment on an issue, they
4 have to raise their tent card.

5 As Jeff indicated, we will give the
6 public an opportunity to comment for about a
7 minute after discussions by the committee has
8 been completed on a particular issue, and before
9 the motion is made. As I said, this is a meeting
10 of the liquid pipeline advisory committee.
11 Today's action is to vote on the NPRM, which I
12 believe you all know about and what it is.

13 A quorum is present. The rule is that
14 if the majority of the members are here, then the
15 quorum is established. With that said, I believe
16 we are ready. Cheryl, you say to call for a
17 volunteer to help facilitate any suggested
18 changes by the members. Do we need that?

19 MS. WHETSEL: We did it for the gas
20 committee, and it was awesome. I have a feeling
21 you'll probably need it for this committee.
22 Somebody else might want to take notes, and when

1 it comes to taking a vote, we might be able to
2 pull together, you know, the --- what do you call
3 it?

4 MR. WIESE: The motion?

5 MS. WHETSEL: Yes, the motion, sorry.

6 MR. WIESE: I would just add, if I
7 may, that I believe that Bobby and Cam are
8 prepared to do that. Some people have talked
9 about motions already, so I think you can evolve
10 yours as they go and email them to John Gale or
11 Bobby or Cam. What we'd like to do, at that
12 time, is to put the motion up on the screen, so
13 that everybody can see the same thing and make
14 sure what we're voting on.

15 CHAIRMAN TAHAMTANI: After that's
16 done, Cheryl will conduct the official roll call
17 for the vote. With that, I will turn it over to
18 Mr. Mayberry.

19 MR. MAYBERRY: Thank you very much,
20 Massoud.

21 (Off microphone comment.)

22 MR. MAYBERRY: Voting protocol? So

1 I'll return it over to Cheryl.

2 VOTING PROTOCOL

3 MS. WHETSEL: I'm just going to go
4 through the slide presentation. You all have
5 seen it before, I'm sure, except for maybe one of
6 you. The committee action today is going to be
7 on the safety of hazardous liquid pipelines, as
8 published in the Federal Register on October 13,
9 2015.

10 When a decision or recommendation of
11 the committee requests a motion for a vote, any
12 member, including the committee chair, can make a
13 motion. There is a quorum. We've established
14 that. Next slide. The committee action members
15 consider each proposed rule and the draft
16 regulatory evaluation, and the motion should
17 include the terminology from the statute, which
18 is that they have considered the rule for its
19 technical feasibility, reasonableness, cost
20 effectiveness and practicability.

21 There it is. That's the sample
22 language. Next. That's if you're not in

1 agreement. I'm sorry, that's the language for if
2 you're not in agreement. If you wanted to
3 propose a change, you can use this -- these
4 things only last a minute -- use the language at
5 the top, and then just insert -- you all can
6 insert the language, the suggestions that you
7 have.

8 CHAIRMAN TAHAMTANI: Are we now ready
9 for Mr. Mayberry to proceed?

10 PARTICIPANT: Yes.

11 GRAVITY PIPELINES, GATHERING LINES, LEAK
12 DETECTION SYSTEM, AND OTHER REQUIREMENTS

13 INTRODUCTION

14 MR. MAYBERRY: Thank you, Cheryl, and
15 thank you, Massoud. Massoud, I see you don't
16 have a gavel there, but you've been known to use
17 a shoe before, so I'd appreciate it if you might
18 consider doing that.

19 MS. WHETSEL: We don't know why the
20 mics are going off, so you'll have to keep
21 pushing it, I guess. He's going to try and
22 figure out what's happening.

1 PARTICIPANT: I notice that it's if
2 you pause your voice, it seems to deactivate, so
3 just be aware of that.

4 MS. WHETSEL: Keep talking.

5 PARTICIPANT: It seems like you need
6 to be like the Federal Express commercial and
7 just keep talking. We'll get out of here sooner
8 --

9 (Simultaneous speaking.)

10 MS. WHETSEL: That's no problem for
11 me.

12 MR. MAYBERRY: Anyway, as I was
13 saying, Massoud, if you need to, please pull your
14 shoe off and use it as a gavel. Anyway, just to
15 move on, we are here to talk about the hazardous
16 liquid rule, which we issued last fall as a
17 proposed rule.

18 Just looking at the history of the
19 rule, if you look back to 2010 and the backdrop
20 of Marshall, Michigan, where there was a release
21 of over a million gallons of crude oil, later
22 that year, we issued what we call an advance

1 notice of proposed rulemaking that sought to
2 answer or seek input on six areas that are listed
3 there, on this slide.

4 Also later, in 2011, as we were going
5 through re-authorization, we were ultimately
6 re-authorized, in early 2012, with a number of
7 statutes in the legislation that are covered in
8 the rule we'll be discussing today. Shortly
9 after that, later in 2012, NTSB final report on
10 Marshall, Michigan was presented, where a number
11 of recommendations were made to OPS that did also
12 cover the hazardous liquid regulations. Some of
13 those are also addressed in the rulemaking that
14 we're talking about today. Then, of course, the
15 GO also issues recommendations that year related
16 to valves and gathering lines. This rule aims to
17 address and close appropriate gaps that are in
18 the regulations and deal with a number of issues
19 that were lessons learned out of accidents and
20 our inspections.

21 The goal there is obviously to put
22 limited resources where they have the most impact

1 on pipeline safety. That gives you a brief
2 history of the rule. Moving on, the proposed
3 rule that we issued has eight areas, starting
4 with reporting requirements for gravity
5 pipelines.

6 Second, extend reporting requirements
7 to gathering lines; require leak detection
8 systems on all new and existing hazardous liquid
9 pipelines, not just pipelines in high-consequence
10 areas. Four, clarifying the requirements that
11 include integration of data or pipeline
12 information, periodic verification of
13 high-consequence areas, and then periodic
14 verification of pipeline segments. Massoud, if
15 you will, we were looking to consolidate this
16 first four issues or first four areas into one
17 discussion this morning. We should be able to
18 cover those this morning. Those we consider less
19 controversial. I think we ought to be able to
20 get through those fairly quickly. Then for the
21 afternoon, or if we have time, to the extent we
22 could possibly catch one of the others in the

1 morning, too.

2 Moving on, the fifth, into some of
3 what we view as more controversial areas, the
4 fifth one requiring inspections of pipelines
5 after an extreme weather event. Six, require
6 periodic assessment of pipelines outside of HCAs.
7 Seven, require the use of inline inspection tools
8 for all HCAs within 20 years.

9 Then eight, there's some modifications
10 to repair criteria for non-HCA repairs, but also
11 HCA repairs, and other areas, too, like
12 consideration of tool tolerances there, as well.
13 I guess I'll turn it over to John, who will give
14 a summary of comments.

15 MR. GALE: Sure. Thank you, Alan.
16 Just a quick general description of the comments,
17 not to get into specifics yet. We received about
18 73-75 comments. We actually received one comment
19 that had the signatures of 180 public citizens
20 that commented on the rulemaking. One of the
21 things we tried to do for this rule that was a
22 little different than we've done in the past,

1 that we're going to try to do this in the future,
2 is we actually did webinars for the public so
3 they could be better informed on the rulemaking,
4 and we could actually get better comments and
5 even more comments.

6 We think that did occur in this
7 situation. In the ANPRM, we only received about
8 25 comments, so we almost tripled the number of
9 actual comments we got, plus we also got that
10 other comment that included 180 members of the
11 public. But we think we got a good, broad
12 representation of comments on this rule, and we
13 think it's going to lead us to a good resolution
14 for a final rule.

15 MR. MAYBERRY: Thanks, John. I think
16 I threw John a curve ball because you were
17 covering comments later, but anyway, I appreciate
18 that. I also failed to mention -- I got ahead --
19 that John, Steve and Mike and I are pulling a tag
20 team today. As you know, it's not one person
21 that's involved on these rather complex
22 rulemakings, but on the PHMSA team, I'll be

1 supported today by John Gale, who's our director
2 of standards and rulemaking, Steve Nanney, senior
3 engineer, and Mike Israni, our senior technical
4 advisor. All four of us have been heavily
5 involved in this rulemaking.

6 So I was going to ask Jeff to kind of
7 address some of these, if you will.

8 MR. WIESE: I'd be happy to, Alan.

9 MR. MAYBERRY: Thank you very much.

10 MR. WIESE: One of the questions that
11 we get as we speak with Congress, the media, or
12 members of the public, frequently are why are
13 their issues not being taken on? Why is it not
14 right or whatnot? I guess what I wanted to say,
15 I think most of the members by now understand
16 this.

17 The process has a lot of parallel
18 lines, and the timelines don't always sync up. A
19 lot of the things that you'll see in here are
20 things that either came through a mandate or a
21 study, for example, the dilbit study that we
22 funded for the National Academy came out. There

1 are a lot of issues here that various people want
2 to see addressed. I was just asking John if we
3 had a slide on the regulatory agenda, but we
4 don't. I did want to tell you you can see our
5 regulatory agenda on our website. John can
6 probably add detail on where it is, if you have
7 any problems finding it.

8 I did want to tell you there's a lot
9 of different rules going on, but a lot of this
10 was almost set in regulatory stone some time ago,
11 in terms of its topical content. Even though the
12 NPRM didn't get out until this fall, you might
13 know the way that process works, it takes a long
14 time from the time we actually submit something
15 'til it can come out. It takes a lot of people.
16 It's a complex process, a lot of involvement.

17 I just wanted to tell you that it's
18 not that we're turning a blind eye or a deaf ear
19 to these issues; it's just that they're not
20 covered in this particular matter. Any comments
21 to those things, you're certainly welcome to make
22 them, but they're not relevant to this

1 rulemaking. They will be relevant in the future.
2 Before I go on to the other comments, I'd invite
3 --

4 CHAIRMAN TAHAMTANI: Mr. Weimer.

5 MEMBER WEIMER: Just, I guess, a
6 question or a process question about that.
7 Because I've already had -- because of the
8 pre-briefing we got that had this list of
9 out-of-scope comments, I'm trying to understand
10 how some of these are out of scope. Because the
11 ANPRM talked about HCA designation criteria, so
12 why is expanding the definition of HCAs out of
13 scope? The ANPRM talked about emergency flow
14 restricting devices, so why are valve placements
15 out of scope?

16 MR. MAYBERRY: Carl, very good points.
17 Some of this, they just weren't ready for prime
18 time. For instance, we had a mandate in the
19 Pipeline Safety Act to address expansion of
20 high-consequence areas. That report is still
21 pending, so we just weren't ready for prime time,
22 for instance, on that issue.

1 But that really gets to what are we
2 ready to go with now is one issue. Then also,
3 the possibility of perhaps pulling it back to
4 address the issue was another issue that it would
5 just delay the whole process. It's like Jeff
6 said. We're not going to ignore the issue, but
7 we'll take them up elsewhere. Valves is another
8 similar one. It just wasn't ready at the time,
9 but that has since been completed, and we are
10 taking that up in another rulemaking. It just
11 gets down to it just wasn't ready, and then to
12 pull the rule back to address it just would have
13 really greatly lengthened the time. That was the
14 concern.

15 MR. WIESE: I guess, Carl, I'd just
16 add that as I may have said to you before, but
17 for the benefit of everyone else, the scope of
18 the NPRM was set in place a long time ago. While
19 you might not have seen it until October of 2015,
20 I'm telling you that scope was set a long time
21 ago. It went through a lot of evolutions. So
22 stuff that happened between that date and the

1 issuance, you really don't have a choice in the
2 regulatory process but to pull the whole thing
3 back to the starting point and add things and run
4 back through that process.

5 It's difficult, I think, for people in
6 the public to grasp that concept, but the way the
7 regulatory process works, once you submit it for
8 review, it's set in stone. You can take things
9 away from it, but you can't add to it. The point
10 was we wanted to do certain things, but to do
11 that, you have to pull the whole thing back to
12 the beginning and add who knows how much more
13 time to it. It can be frustrating. I don't
14 know, Alan, if you had any other comments on out
15 of scope.

16 MR. MAYBERRY: We talked about a
17 couple of them, but that was basically the gist
18 was some were just not -- there was still
19 additional research being done. We just weren't
20 ready to --

21 (Simultaneous speaking.)

22 CHAIRMAN TAHAMTANI: One last comment

1 by Carl, and then I think we need to really move
2 on with what's on the agenda. If we have time
3 right before when we quit and your flight, then
4 we can get to this.

5 MEMBER WEIMER: I just want to make
6 sure I'm understanding. When you say out of
7 scope, it's out of scope of the NPRM. It wasn't
8 out of scope of the ANPRM?

9 PARTICIPANT: Yes.

10 MEMBER WEIMER: Okay.

11 PARTICIPANT: Right.

12 PARTICIPANT: That's a good point.

13 CHAIRMAN TAHAMTANI: Go ahead, Alan.

14 MR. MAYBERRY: Okay, so we'll get to
15 the first topic, gravity pipelines. Again, we're
16 going to go through -- the pattern you'll see
17 here is the same pattern for all four of these up
18 front. We'll describe the topic, the issue, the
19 proposal, and the basis for that proposal. We'll
20 summarize the comments on the next slide, and
21 then we will go through some possible
22 considerations for changes to the proposal.

1 The topic first up is gravity lines.
2 One other point. I don't want to step on the
3 chairman's toes, but I was proposing that we go
4 through each topic -- and correct me if there's a
5 protocol issue here -- and then maybe a vote at
6 the end of all four, unless we really get bogged
7 down on conversation on each one, but maybe we
8 could at least get some sort of agreement,
9 possibly, and then at the very end, do a combined
10 vote.

11 CHAIRMAN TAHAMTANI: Let me just ask
12 the committee, what's your sense about this
13 approach? You said four of them were
14 non-controversial. We get the presentations on
15 them, discuss them all at the end, or discuss
16 them one by one, and then take one vote on all
17 four, is that, Cheryl, the right protocol, or
18 discuss them, vote on them, and move on? Mr.
19 Pierson, you had a comment.

20 MEMBER PIERSON: Craig Pierson,
21 liquids. Say again the choices that you're
22 offering or think we should --

1 CHAIRMAN TAHAMTANI: I believe Alan is
2 offering that we go through these four
3 non-controversial issues, discuss them as we go
4 through them, and take one vote at the end on all
5 four.

6 MEMBER PIERSON: So you propose
7 discussions as we go down, one, two, three, four,
8 or you want us to just listen to all and then
9 discuss all?

10 MR. MAYBERRY: We'll discuss each one
11 as we go. We'll come up with some thoughts.
12 We'll see where we are with consensus on that
13 thinking. After we get to that point, we'll move
14 to the next one, do the same -- do that four
15 times.

16 CHAIRMAN TAHAMTANI: Sure. Hold on
17 one second. Joy, you're next. Michele, I'm
18 sorry.

19 MEMBER JOY: Okay. This is Michele
20 Joy, industry. I just was suggesting -- I know
21 it's a small point -- but we just do all four,
22 and then discuss them, because I'm worried about

1 time, that we get bogged down. I'm afraid that
2 might happen. That's all. Thanks.

3 CHAIRMAN TAHAMTANI: Chuck, you had
4 something.

5 MEMBER LESNIAK: Chuck Lesniak. I
6 think that it's possible. My concern is that if
7 we assume that we're going to be able to do a
8 vote on all four at once, we get into one or two,
9 and we actually start to have discussion, then
10 we're off track. I think my suggestion would be
11 that we take them one at a time and move until we
12 -- if we get through all four without controversy
13 or discussion, then vote on all four, but if it
14 looks like one or two, we start to have
15 discussion, we'll have to back up.

16 MR. WIESE: This is Jeff. I think we
17 can play it live time, but I'm sort of with
18 Michele. Based on my experience is that if you
19 -- the actual nomination and voting process takes
20 a long time. If these are non-controversial, or
21 they take minor suggestions in the nomination
22 process, we can pull out of that and take one

1 separately at that time.

2 But if you agree at the end of these
3 four that you have some comments, but they're not
4 necessarily extraordinary, it will save us a lot
5 of time to just do one balloting round. I think
6 we'll take plenty of time this afternoon, as we
7 get into the other measure.

8 MS. WHETSEL: Massoud, in summary,
9 they're going to discuss all four, and then
10 they're going to have -- the motion must include
11 all four of the things that you're going to be
12 proposing, is that what everybody has?

13 CHAIRMAN TAHAMTANI: All right. Why
14 don't we go ahead and start with the first one,
15 and if it becomes controversial along the way,
16 we'll change course. Alan.

17 MR. MAYBERRY: We'll see how it goes.
18 Thanks, everyone. Related to gravity lines, the
19 issue with that was they're currently exempted in
20 the code. We believe that there are lines that
21 do pose a risk. They're a limited number and,
22 therefore, in this particular proposal, we're

1 looking to require reporting. Anyway,
2 essentially, we're repealing a gravity line
3 exemption requiring reporting only.

4 The basis is other pipelines operate
5 at low pressure, for instance, the low-stress
6 pipelines that we pulled into regulation back in
7 2010. In some cases, these gravity lines operate
8 at even higher pressure than some of those, so
9 we're looking to make that change. As far as
10 comments on that, I'll turn it over to John.

11 MR. GALE: Thank you, Alan. John
12 Gale, here. Some of the comments we got on the
13 gravity line proposal is fairly similar to what
14 we got on gathering line, as well. The biggest
15 one being that we didn't need all the data that's
16 currently in the hazardous liquid annual report
17 to get the information we need to make the
18 determination that we're looking for, which is
19 should we move the regulations further when it
20 comes to gravity lines? Should we require
21 regulating these lines like other hazardous
22 liquid pipelines? We thought those were fair

1 points. That's why we got a comment looking at
2 an abbreviated form, or maybe even a new form.
3 We also got comments asking that exemptions be
4 provided for tank farms or intraplant mileage.
5 There's also discussion in the comments about the
6 phase in period and how long should that phase in
7 period be? We had proposed six months.

8 The comments we received in were that
9 it should be at least a year. When we're looking
10 at something like this, we look at the timing of
11 it is as important as the actual date, itself.
12 If you want me to look in my crystal ball on this
13 one, we're probably looking at some finer rule in
14 the late summer to springtime area. It would
15 probably be more reasonable to have a phase-in
16 period on this action that's commensurate with an
17 annual report in, probably, the year 2018.

18 If that's the case, that would give us
19 more than enough time, based on the comments. We
20 also got comments asking to eliminate the
21 requirement for the safety-related condition
22 report, but we also got comments asking for us to

1 expand our reporting requirements, to make sure
2 that they cover GIS mapping of these types of
3 lines and require minimum safety standards. But
4 to us, requiring minimum safety standards was an
5 outside of the scope kind of comment, where we
6 only propose the required reporting of these
7 lines, and we can't actually now, in this final
8 rule, adopt actual minimum safety standards.

9 With that, Alan, I'll -- the next
10 slide was -- the goal of this slide, for the
11 members' sake, was to now kind of begin your
12 conversation of this proposal. We've put up some
13 bullets here of some possible changes that could
14 occur with gravity lines, and we've done this for
15 all four of these less controversial items.
16 Should we have a modified reporting form? I
17 don't think we want to get into actual each of
18 the form options. It's a 20-page form.

19 I think that would be an all-day
20 event. But at least acknowledgement that we
21 don't need all of the data that's in the annual
22 and, in some cases, even the accident form, to

1 make a determination should we regulate this.
2 The discussion of mapping, a discussion of the
3 exceptions for lower-risk pipelines, should we or
4 should we not eliminate the proposal related to
5 safety-related condition reporting, and the
6 one-year implementation period.

7 MR. MAYBERRY: Those are
8 considerations that we'll be looking for your
9 input as far as which direction we go.

10 MR. WIESE: I apologize. I said I was
11 going to lay back in this meeting and not say
12 much, but I think it's useful in this -- because
13 you'll see it several times -- it's useful to
14 understand, particularly for the public -- I
15 think the members have seen this time and time
16 again.

17 In the regulatory process, we need to
18 run through a regulatory impact assessment. To
19 prove your case in a regulatory impact
20 assessment, you have to have information. I'm
21 saying that without information, it's difficult
22 to get through that process. You'll often see us

1 do that is to try to gather data initially to
2 understand and characterize the extent of the
3 risk. Then you regulate according to risk.

4 If the risk can be proven and
5 justified in the RIA, you can move forward with
6 your risk control suggestions. If you can't,
7 then you can say why you're not doing it. But at
8 any rate, I just wanted to say, particularly for
9 the public, it's useful to know that -- some
10 people want us to go further, but you have to
11 characterize the risk first. I'm just telling
12 you in this particular case, and in some others
13 you'll hear about, we don't have the information
14 necessary to do that. It doesn't exist in any
15 place else that we know. At any rate, just a
16 strategy suggestion.

17 MR. MAYBERRY: I would add, too, that
18 when we put things up there like no mapping, it
19 doesn't mean no mapping ever; it just means it's
20 a possible point for this current rulemaking is
21 mapping. We'll get some reporting information on
22 it, and then down the road, consider mapping

1 possibly, or we could consider mapping now, but
2 that's up for discussion. We thought for
3 discussion, we'd have no mapping. I think we
4 need to move on, and then get through the others,
5 and then we'll come back, unless you had
6 something --

7 (Simultaneous speaking.)

8 MR. MAYBERRY: We'll move on to the
9 second item, which is gathering lines.

10 Currently, as many know, rural gathering lines
11 are exempted from any code requirements, 195 code
12 requirements. By statute, we have a narrow scope
13 of coverage of gathering lines, and to
14 regulation, only the six to eight-inch-diameter
15 gathering lines that are greater than 20 percent
16 of the specified minimum yield strength, and also
17 located within a quarter mile of USAs, unusually
18 sensitive areas, are regulated.

19 The two parts to the proposal to learn
20 more about this asset, which has been gaining a
21 lot of attention related to pipeline safety. Of
22 course, we certainly have seen a good bit in the

1 news about this class of pipeline -- but
2 modifying the scope to include reporting of all
3 diameters of rural gathering lines. There's no
4 restriction on the diameter.

5 But then also, there's the second part
6 of the rule to pull in requirements for
7 assessment, anomaly, remediation, and then
8 requirements for a leak detection system for the
9 rural gathering lines that are already regulated.
10 So one, reporting of all gathering lines; two,
11 pulling in some further requirements for the ones
12 that are already regulated, as well. Of course,
13 the basis for this would be the 2011 Act, Section
14 21, the 2011 Act, and then there were, relevant
15 to the GAO -- Government Accountability Office
16 had some issues related to gathering lines, as
17 well, so it's responsive to those. Going to
18 comments on rural gathering lines.

19 MR. GALE: Thank you, Alan. John Gale
20 again here. Like I mentioned before, a lot of
21 the comments regarding the form itself that we
22 got on gathering lines is very similar to gravity

1 lines, in that we didn't need all that data to
2 make the determinations we needed to make, and
3 that some kind of modified form of both the
4 annual report and the accident report should be
5 made. We also wanted a one-year phase-in period.
6 There's also comments on mapping again on this
7 one.

8 But actually, if you look in our
9 statute regarding mapping, there's a very
10 specific exception for gathering lines on mapping
11 and that it shouldn't apply to either
12 distribution lines or gathering lines. There is
13 also a request to clarify that offshore lines
14 within state waters are not included, and it also
15 got in, again, to the time period of the
16 reporting, which I mention, again, it's going to
17 be more dependent upon when we publish this rule,
18 and when we can require some of these reports to
19 be made. I'd also like to make one other point,
20 when it comes to the effective date of that. I
21 think we should look at the possibility that
22 annual report have one effective date, but the

1 accident form could have a much sooner effective
2 date. Because that's the data we need most of
3 all to make our determinations, to see what
4 accident history is out there, when it comes to
5 both gathering and gravity lines.

6 MR. MAYBERRY: Thanks, John. For
7 consideration, some possible changes related to
8 gathering lines, some modified reporting forms.
9 Instead of the 20-page reporting form, it would
10 have fewer attributes because we are just
11 starting with the reporting of these lines,
12 possibly to be extended later, depending on the
13 safety history of them.

14 Mapping not covered for the current is
15 perhaps a starting point, and then eliminate the
16 safety-related condition reporting. If we're not
17 pulling the full set of regulations into that
18 class of pipe, is there a need to report
19 safety-related conditions? For everyone's
20 benefit, that doesn't mean you don't report
21 incidents. It would require reporting; it's just
22 a certain type of condition on the pipeline that

1 lasts longer than five days, it's that reporting
2 requirement, which is really a subset of what
3 we're reporting. We don't get that many, but
4 that might be something to consider, since we're
5 not pulling a full set of regulations into the
6 ones that are going to be reported. Then the
7 one-year implementation was up for consideration.

8 CHAIRMAN TAHAMTANI: Michele.

9 MEMBER JOY: Just a quick question.
10 You're proposing no exemptions to this rule, to
11 this proposal?

12 MR. MAYBERRY: We can talk about that
13 when we get to it. Leak detection systems. This
14 is the third of four. The current code requires
15 leak detection systems, or as it's referred to in
16 the code, CPM or computational pipeline metric
17 system.

18 This would extend requirements to all
19 pipelines, not just lines that are in HCAs. The
20 proposal has two parts. For one, all new
21 hazardous liquid pipelines would be required to
22 have leak detection systems, and then existing

1 lines would have a requirement for modification
2 for that. The basis is recent pipeline
3 incidents. A couple are listed there. Then it's
4 just an obvious extension. I think this one's
5 been less controversial. I think there's been
6 more controversy over the robustness of the
7 requirements, as opposed to what's extended or
8 the actual issue of extending them seem to be a
9 natural progression of it's currently required in
10 HCAs, why not require it for all pipelines? As
11 far as comments go, I'll turn it back over to
12 John.

13 MR. GALE: Thank you, Alan. Can you
14 just go up one slide, Alan.

15 Thank you. Some of the comments we
16 got on leak detection. The biggest comment
17 really was regarding the implementation period
18 and how long we were going to give. There was a
19 comment that we should give at least five years
20 for the leak detection requirement. Of course,
21 we also got a lot of comments that were really
22 related to, in our opinion, our rupture detection

1 and valve rule and setting metrics for leak
2 detection, especially in your HCA areas. Of
3 course, we're addressing those issues in those
4 proposals on valves and the metrics for rupture
5 detection in a separate rulemaking action that we
6 currently have under development. We also got a
7 request for accepting certain types of offshore
8 lines because of the difficulty associated with
9 those types of systems on offshore areas.

10 We also had a comment about broadening
11 the applicability really to all existing liquid
12 lines and all lines under construction at the
13 rulemaking. One of the things I wanted to pull
14 up with that is that's what we're doing,
15 basically. We are broadening the exception to
16 all these lines. But the biggest comment, by
17 far, was the time period and how long we were
18 going to give operators to implement this
19 proposal or this requirement when it comes into
20 play. I think that's going to be the most
21 important part of our discussions today on this
22 proposal.

1 MR. MAYBERRY: Thank you, John. As
2 you look forward to go for a solution or
3 discussion points on this topic of implementation
4 period, I don't think -- we didn't have that in
5 the rule, but should that be one, three, or five
6 years, or some other time frame for
7 implementation? We'll be looking for your input
8 on that, as well as applicability for offshore,
9 given some of the physical challenges and
10 barriers to doing that effectively offshore, but
11 I look forward to the discussion on that. Moving
12 on to, I guess we summarized it as clarification
13 of other requirements, this gets to the area of
14 integrating data.

15 Currently, operators aren't fully
16 integrating pipeline data across all data
17 sources, and then we're looking for the need to
18 verify high-consequence areas, which is lacking
19 -- that verification is lacking consistently
20 among all operators. We're looking to modify the
21 integrity management part of the Liquid Rule
22 452(g).

1 We'll require specificity and
2 information analysis, as far as the attributes
3 that are analyzed, and then integration of the
4 data. I'd also add that PHMSA's doing a lot of
5 work in the area of risk analysis, risk modeling.
6 We had a workshop last summer that I expect will
7 be informing this, as well, which will deal
8 directly with -- at least ultimately we will end
9 up with additional guide material on threat
10 identification and specifically integration of
11 data and interactive threats and the like. It'll
12 also discuss or deal with risk models and provide
13 guidance on use of risk models. The basis for
14 this, obviously is our inspection experience
15 indicates a weakness in this area. Operators are
16 collecting a lot of information, but the analysis
17 is found, oftentimes, to be inadequate.

18 Then there's also a proposal to revise
19 452(j) to require periodic verification of
20 high-consequence areas, require segments to be
21 identified annually and determine whether factors
22 have changed, and then re-perform the analysis

1 for significant changes to the HCA segment.
2 Currently in the code, there's no explicit
3 deadline for HCA identification.

4 There's no deadline to implement the
5 actions of that, so it's really adding further
6 specifics and expectations that many operators
7 look for in that area. Again, we get to some of
8 the observations of some of our inspections,
9 where operators have fallen short in a couple of
10 areas that are listed there, as well. As far as
11 comments and other clarifications, John.

12 MR. GALE: Actually, Mike's going to
13 take this one.

14 MR. ISRANI: When we prepared this
15 proposal, we had some learning from past
16 experience that operators are not using all
17 available data sources to analyze it. So in this
18 proposal, we put all the data collection. It
19 lists the minimum attributes that everybody
20 should consider in the rule body, so the comments
21 came on that.

22 Some of the first comment was that we

1 -- to incorporate all the end data integration,
2 we need five years to do that. Second comment
3 was that operators should determine what data
4 attributes should be there and not PHMSA's
5 rulemaking. Those attributes that we have
6 included were already in the appendix of the
7 existing rule; we just brought them in the rule
8 body.

9 We expected operators to go through
10 all of those. Then other comment was revise the
11 language suggesting that GIS is the requirement.
12 In one of the attributes, this was information
13 there that storing information only in GIS not
14 adequate, that operators have to collect all sort
15 of information, all kind of interrelationship
16 between the threads, and then analyze on their
17 own. We're not trying to make it mandatory for
18 you to have GIS system. That's a clarification
19 there. Also, a comment was to include injection
20 wells in the definition of regulated pipeline
21 infrastructure, which we have not proposed yet in
22 this. I don't think our intent was to include

1 because we feel that was the production side.

2 MR. MAYBERRY: Okay, thank you, Mike.

3 One area to consider for this, the implementation
4 period. We can discuss some of the other factors
5 or some of the other comments, really, but we're
6 thinking really it gets down to how long are we
7 going to allow for implementation of this?
8 Should it be one, should it be three or five
9 years?

10 We look for your input on that, as
11 well. I was going to mention there's specifics
12 that are provided in the proposal for attributes
13 that should be considered in the analysis, but
14 they're pretty far encompassing. One of the
15 comments was saying to allow the operators to do
16 that, but look forward to the discussion on that
17 and see what else we should consider as we solve
18 that one. We've gone through four quickly.
19 We're going to get in the groove here and go back
20 to one, I guess. We'll go back to the gravity
21 line, which we first started talking about. Does
22 that work well, Massoud?

1 CHAIRMAN TAHAMTANI: Let me ask this.
2 Based on the discussion and presentations, none
3 of these are controversial, right? Do you all
4 believe that it's controversial enough that we
5 can't just go ahead and put the next slide up and
6 vote on this and move on? Mr. Pierson?

7 MEMBER PIERSON: They're generally
8 non-controversial, but there are some topics --
9 you had some possible changes. I thought it was
10 a great list. Those are the things that we
11 probably want to affirm. Just going down through
12 the list might be the easiest thing to do on the
13 possible changes.

14 MR. MAYBERRY: Like what do we mean by
15 those?

16 MEMBER PIERSON: Right.

17 CHAIRMAN TAHAMTANI: That's a
18 suggestion by Craig. Is that a consensus to go
19 back to those possibilities for each one of them?
20 If that is the case -- Jeff.

21 MR. WIESE: I just wanted to ask -- I
22 should have said this at the beginning, my

1 apologies -- when you want to focus on an issue
2 during your comments, it would be helpful if you
3 could identify the slide number. We have this
4 weird way of putting the number on the lower left
5 corner, so it's vertical, instead of horizontal,
6 but I think you can figure that out. If you will
7 call the slide out that you want to debate, it
8 will make it a lot easier for everyone, including
9 the public, to follow it. You all have copies of
10 the presentation there that you can go through.
11 Apologize for not saying that sooner.

12 CHAIRMAN TAHAMTANI: I think what I'm
13 hearing is that Alan, we need to go back to that
14 list of possible --

15 PARTICIPANT: Gravity lines.

16 CHAIRMAN TAHAMTANI: There's the list.

17 GRAVITY PIPELINES DISCUSSION

18 MR. MAYBERRY: The first topic was
19 gravity lines and require reporting of all
20 gravity lines. Again, possibly for
21 consideration, again, modify reporting forms.
22 What we mean by that is the current reporting

1 form, as John pointed out, is quite long. It
2 covers a number of attributes for pipelines that
3 are fully regulated. The recommendation was
4 rather than require that burden to report that
5 amount was to reduce the amount, since we're
6 only, at this point, stepping in to see what the
7 inventory is out there, is there a consideration
8 for a subset of reporting, an abbreviated form
9 for that class of pipe called gravity lines?

10 CHAIRMAN TAHAMTANI: Again, this is
11 the list of possible changes offered by PHMSA.
12 Let's hear some comments from the committee.
13 Todd.

14 MEMBER DENTON: Todd Denton, liquids
15 industry. I'll comment -- I guess we want to go
16 one at a time, then? Some of the comments are
17 similar for gravity and gathering, the first two.
18 On the gravity lines, we generally agree with
19 what you've got up here.

20 I think one, the first exception that
21 we would request -- and we'll put this in draft
22 motion language and email it, as well -- but that

1 we apply the requirements only to gravity lines
2 that travel outside of facility boundaries for at
3 least one mile, operate at a specified minimum
4 yield strength level of 20 percent or greater,
5 and are not otherwise exempted in 195.1(b). Then
6 as I also mentioned, the modified reporting
7 forms, that we also not require NPMS reporting
8 for gravity or gathering lines and that we set an
9 implementation date of one year.

10 CHAIRMAN TAHAMTANI: Comments? Chuck.

11 MEMBER LESNIAK: Chuck Lesniak. I
12 think the modified reporting forms make sense.
13 My understanding is that this is really -- you're
14 trying to gather data to look at how these lines
15 ought to be regulated. I think modifying the
16 forms to focus on that makes sense. Also, flip
17 side of that is you're gathering data. As part
18 of that data gathering effort, knowing where
19 these lines are is important.

20 I think not doing mapping is a
21 mistake. Historically, that's been a problem
22 with pipelines. Where are they? Personally, the

1 exceptions for the lower-risk pipelines I don't
2 agree with, or the safety-related condition
3 reporting. Again, you're trying to gather data.
4 A one-year implementation period, I think that's
5 reasonable. That's something new that the
6 industry hasn't been dealing with. I think
7 that's a reasonable approach.

8 CHAIRMAN TAHAMTANI: Carl.

9 MEMBER WEIMER: I agree with most of
10 what Chuck said. I think when we're talking
11 about modifying the reporting forms, mainly we're
12 looking at the inventory of what's out there, not
13 a lot of the other questions that are asked that
14 don't really relate, since they're not going to
15 be regulated. I would like to make sure that if
16 we're talking about implementation periods of the
17 reporting, the annual report type stuff, I don't
18 have a problem letting them gear up and report
19 that in a year.

20 It seems like incidents, and even
21 safety-related conditions, ought to be reported
22 as soon as possible because that's really the

1 critical information you're trying to collect to
2 know whether we should do regulations. I agree
3 with Chuck about the mapping. It's kind of
4 amazing to me to think that these companies have
5 pipelines in the ground, and they don't have maps
6 of them.

7 MR. MAYBERRY: I'm just going to ask
8 were there any comments, Chuck and Carl, maybe,
9 on the lower risk pipelines, the exceptions --
10 exempt for those?

11 MEMBER LESNIAK: Yes, I would disagree
12 that that's an appropriate change. Again, you're
13 gathering data. You're not necessarily
14 regulating these lines. Why would exempt
15 something? You're already down to a fairly small
16 subset. Why make this even a smaller subset,
17 particularly given it's just a data gathering
18 effort?

19 (Simultaneous speaking.)

20 MR. MAYBERRY: Just to make sure I
21 covered it, I think it's something that we would
22 -- we're trying to come up with a workable

1 solution. I think it's something we all agree
2 would be good to have. More is better than less,
3 no doubt. It's just what can we get -- what's
4 effective?

5 What can we pass the cost benefit to
6 actually provide a solution, and what's the
7 population out there? What is the population of
8 these lines out there? In some areas, I've heard
9 it might be maybe 30 miles, not that that makes
10 it less important, but there's not -- someone
11 might correct me if I'm wrong on that, but it's
12 very few of these lines out there.

13 MEMBER DENTON: Just to clarify, we
14 are talking about those exemptions just for
15 gravity lines, which I think are very low risk
16 for those exemptions that we're asking for. I
17 don't know what that number is, but gravity I
18 think we're okay with. The gathering lines we're
19 okay with not having those exemptions.

20 MS. WHETSEL: Excuse me. I know it's
21 a pain, but if you could please state your name
22 before you speak because especially with your

1 backs towards the court reporter, we just want to
2 document who's saying what, so if you could do
3 that, that would be helpful. Thank you.

4 MR. WIESE: That was Todd. I'll
5 finger him. I just wanted to add -- and I might
6 invite comments from people on this. Alan's
7 correct, in that we have to go through this
8 balancing act of can we justify the cost of the
9 items. They all have to be costed out in our RIA
10 on these things.

11 But I did want to invite comments from
12 people with more familiarity in this. While we
13 say exemption for reporting for incidents,
14 they're still going to be reported to the
15 National Response Center, and we have access to
16 all those reports. They come in to us on a
17 regular basis. I think we're trying to say to
18 spare the additional cost, what we would have to
19 do is get data out of the NRC, instead of
20 collecting it directly. On that one, I wanted to
21 make a comment. I would welcome any other
22 comments.

1 Mapping, Carl, I have felt like that
2 for years, and we've talked about mapping for
3 many years, but it's surprising to me there's
4 still -- you think about distribution, for
5 example, where there's tons of pipeline out
6 there, there's a lot of the distribution system
7 that's not mapped yet. The bigger cities, yes,
8 smaller cities, not so much, on service lines and
9 stuff like that. I'm just saying that while it's
10 doable, I don't think a lot of it is in hand, but
11 again, I would invite comments on those things
12 from the members.

13 MR. MAYBERRY: Related to the
14 exceptions for lower risk pipelines, would it be
15 workable to say if it travels outside of the
16 facility, it would not be an exception? The
17 exception would be limited to inside the
18 facility. Is that a solution there for that one?
19 Just looking for input.

20 MEMBER LESNIAK: I'll address that.
21 First, on the mapping thing, to me that's a best
22 practice. You've got to know where your lines

1 are. If you don't know where your lines are,
2 you're probably not a quality company, and then
3 you probably need to have some regulations
4 applied to you. Again, from a data gathering
5 standpoint, how can PHMSA know -- that's part of
6 knowing how to apply regulations in the future or
7 if regulations are needed.

8 I think the mapping, to me, is a
9 no-brainer. On the exceptions, I guess it's a
10 question for you all, Alan or the industry folks.
11 Are we going to make so many exceptions here that
12 really, this becomes such a narrow category of
13 lines that we're talking about that this rule
14 becomes meaningless, or are we just accepting or
15 eliminating just a very small percentage by using
16 the suggested language? What do we have left if
17 we use this exception language?

18 MR. MAYBERRY: I think in this case,
19 Chuck, we're trying to get what we can to learn
20 more about an asset that's out there that we know
21 little about right now. We've seen some issues
22 on them, but they've been rare. We recognize

1 there are not many out there, but we're trying to
2 get to a starting point, get the data so we can
3 further assess them and go from there, and then
4 potentially expand it down the road, based on the
5 history. Putting the risk of that in line with
6 the risk of other things, making sure that we put
7 resources where they're most useful.

8 CHAIRMAN TAHAMTANI: Let me just say
9 that I'm so glad this is non-controversial.

10 MR. MAYBERRY: So am I, yes.

11 CHAIRMAN TAHAMTANI: Craig.

12 MEMBER PIERSON: Craig Pierson,
13 liquids. Just answering one of Chuck's points,
14 we know where our pipelines are. They're marked.
15 We can go out there and find them, point to them,
16 excavate them. We know where they are. The
17 issue's mapping and bringing the data into a
18 mapping system. They're two different things.

19 I want to clarify that because a good
20 operator absolutely has to know where their lines
21 are, and we do know where they are. It's a
22 mapping issue, and then that comes to these are

1 lower-risk systems, and that's why -- do we need
2 to go to the expense of putting them into the
3 mapping system? I think we understand the point
4 on the safety-related condition reporting.
5 That's something that I think that we're prepared
6 to include in the reporting.

7 CHAIRMAN TAHAMTANI: Jeff.

8 MR. WIESE: Just a couple of quick
9 comments. I know there are some others. Sorry,
10 I think I jumped up before that. I did want to
11 say appreciate your comments on the short form.
12 By the way, that's a practice we've used before.

13 When you don't know a lot, you don't
14 want to get into a 20-page report. I wanted to
15 reiterate and ask for clarification. We don't
16 think there is a lot of this infrastructure in
17 gravity lines out there. The reporting form will
18 gather that, and it will tell you by state
19 exactly, but you're right. Listen, we run the
20 mapping system, so we like mapping.

21 I'm not saying I don't like it. It's
22 just, like Alan was saying, more of a balancing

1 thing there. I'd be perfectly happy to have it.
2 But I'm just saying that we're not, also, dealing
3 with companies just sitting at this table. In
4 the gravity line case, what generated this one to
5 begin with was a failure on a gravity line that
6 wasn't regulated, and it was a smaller operator.
7 It wasn't one of the companies siting here. When
8 we think about the burden that -- all regulation
9 have a burden associated with them. When we
10 think about imposing it on a smaller operator,
11 it's different. I think the people sitting
12 around the table here know where the pipelines
13 are exactly. I'm not sure -- fair point that you
14 make. It really ought to be sort of a price of
15 admission knowing where your stuff is.

16 CHAIRMAN TAHAMTANI: Thank you, Jeff.
17 Chuck, you want to respond to that, then we'll go
18 to Michele.

19 MEMBER LESNIAK: Chuck Lesniak. Just
20 real quickly, one thing is I think that GIS
21 mapping, I do understand that most of these
22 companies, if not all, they may have guys on the

1 ground that know where their pipelines are. But
2 it needs to be able to be shared beyond that
3 company, beyond those guys on the ground that
4 know where the lines are.

5 If you don't have it in a GIS system,
6 that's very, very difficult. GIS is ubiquitous
7 today. Most small communities, counties have the
8 capability. The industry ought to be able to do
9 this. To me, this is a no-brainer. Then I think
10 on the exceptions, it takes a long time to get a
11 new rule in place. If you think you need this --
12 again, this is data gathering. This is not a
13 regulation that's going to impose a significant
14 burden. Ask for more. Particularly when you're
15 just asking for information, make it more
16 comprehensive than less. Because if you decide
17 later on that wish we really had that information
18 on these other lines, it might take you five more
19 years to get it done.

20 MEMBER JOY: Michele Joy, liquids
21 member. Two issues. One is on the gravity
22 lines. As you indicated, Alan, they are

1 relatively low risk. I think I understand that
2 the intent is to get to those that may be higher
3 risk and out on the right-of-way. They often are
4 running between facilities. Obviously, they
5 don't have a pump associated with them.

6 That's why they're gravity lines. But
7 it is possible they are outside of the
8 facilities, running from a plant to another
9 facility, but very short in length. It's not
10 necessarily very beneficial to gather those up.
11 They're right where we operate anyway. I think
12 it's more beneficial to really focus on those out
13 in the right-of-way. Secondly, I'm
14 reiterating Craig's point on the mapping. We do
15 know where our lines are. We do have markers and
16 things out there. But the sort of data that
17 PHMSA wants to put in mapping takes a lot of time
18 and effort and is costly. You put it into a
19 whole data integration process, and it's not a
20 simple matter. Just wanted to reiterate that.

21 CHAIRMAN TAHAMTANI: Again, about an
22 hour and ten minutes, and we have a longer list

1 on the very first non-controversial proposed
2 rule. What are we going to do with this list,
3 Alan? We made a list.

4 MR. MAYBERRY: There's been a lot of
5 discussion on GIS. I think we have close to
6 consensus on a good bit, but related to mapping -
7 -

8 (Simultaneous speaking.)

9 CHAIRMAN TAHAMTANI: Do we have
10 consensus or close to consensus on this list?

11 MR. MAYBERRY: Or somewhat? Not on
12 the whole list. I'm going to zero in on GIS here
13 in a minute, but everything but GIS, right?

14 CHAIRMAN TAHAMTANI: Alan.

15 MR. GALE: Real quick, should we
16 delete the bullet associated with the
17 safety-related condition report?

18 MR. MAYBERRY: I heard that there's a
19 willingness to consider that, to bring that --

20 (Simultaneous speaking.)

21 CHAIRMAN TAHAMTANI: I think there is
22 a more efficient way of doing this. Next time

1 you and John want to talk to each other, you need
2 to sit next to each other.

3 MR. MAYBERRY: I know. We can send
4 little notes next to each other.

5 CHAIRMAN TAHAMTANI: Ron, comments?

6 MEMBER MCCLAIN: Thank you. Ron
7 McClain with industry. I think industry is
8 willing to go well down this path for gathering
9 and gravity lines, but there are other
10 rulemakings, potentially, on GIS -- I haven't
11 kept up with this current status, but potentially
12 five feet accuracy.

13 I don't think industry's ready to go
14 to that for low-risk lines. I think that's
15 better handled in a separate rulemaking. But for
16 here, I think to commit to standards that aren't
17 yet set for GIS on relatively low-risk lines,
18 that's where industry's struggling with this as a
19 part of this rulemaking.

20 CHAIRMAN TAHAMTANI: Let me ask the
21 committee. We have a list here. It doesn't
22 appear that we have consensus on all the bullets

1 on the screen. I'm asking Jeff and Alan, does it
2 make sense to go down the list and see if we've
3 got some type of consensus to move on to the next
4 two? John?

5 MEMBER QUACKENBUSH: Yes, John
6 Quackenbush. I just wanted to make a couple
7 comments here. I'm okay, based on what I've
8 heard with the modified reporting forms and the
9 one-year implementation period, but I want to
10 make a comment about the other two.

11 On the mapping, it seems that the
12 goal, really, is to collect data on the
13 facilities to determine if there are any issues,
14 and it seems like collecting mapping data isn't
15 necessarily important to that goal. I'd be okay
16 with not mapping. But making the exception based
17 on length of distance seems a little arbitrary.
18 I understand the one about if it doesn't travel
19 outside the facility boundary, but it seems like
20 making an exception for something shorter than a
21 mile is kind of arbitrary.

22 MR. WIESE: Sorry, just going to jump

1 in for a second. I keep saying I'm not going to
2 do that. We're going to try to get consensus on
3 an approach to these as we do this one. I'll
4 remind everyone, including the public, that we've
5 actually met as a policy committee for a number
6 of years, so I think we're all rusty on the
7 voting protocol. It's good to have a discussion
8 with each other. We're also going to try to be
9 efficient.

10 I think we've kind of gotten around
11 where everybody's gotten their view on the table.
12 Remembering that in the end, the secretary
13 reserves the right to make a decision, but want
14 to have a good feeling for your positions. John,
15 I was thinking about your comments just now.
16 They're actually statutory exemptions. I know
17 some of these things, these match some of those
18 exemptions, like the under one mile. But I'm
19 with you. If it's in a facility, it's into
20 containment, it's nice to know about it in a
21 larger sense, but in some of these, maybe not. I
22 think we want to get to a point now where we have

1 your sense on this one and move on to the next
2 one. Otherwise, we'll have you here until 8:00
3 tonight.

4 CHAIRMAN TAHAMTANI: Jeff, by sense,
5 you mean consensus, or simply we've made a list
6 and we move on to the other two or three, and
7 then take a vote at the end?

8 MR. WIESE: Make a comment now, I
9 think -- or make a note here. Because we're
10 going to ask for a motion in the end on these,
11 and you're going to want to be able to say I
12 support that motion, but with this addition or
13 something. We take votes on those at roll call,
14 just so we later have a record of the consensus
15 -- not unanimous vote, but consensus of the
16 committee on things. Does that make sense?

17 MEMBER PIERSON: Craig Pierson,
18 liquids. Just to be clear here, I think we're in
19 agreement. The only thing that we're not quite
20 in agreement on is the mapping and the exception.
21 Everything else, I think --

22 MEMBER DENTON: We're in agreement on

1 this.

2 MEMBER PIERSON: Pardon me?

3 MEMBER DENTON: We're in agreement on
4 this?

5 MEMBER PIERSON: Yes.

6 MEMBER DENTON: Sorry, Todd Denton,
7 industry. We are in agreement with what's on the
8 screen.

9 (Simultaneous speaking.)

10 CHAIRMAN TAHAMTANI: Craig, Todd, the
11 industry is in agreement with this, so can we
12 move on?

13 PARTICIPANT: Yes.

14 CHAIRMAN TAHAMTANI: We'll move on to
15 the next issue then?

16 GATHERING LINES DISCUSSION

17 CHAIRMAN TAHAMTANI: Yes.

18 MR. MAYBERRY: Move on to gathering
19 lines. Again, the proposal, there were two parts
20 of it. One was to pull in reporting under the --
21 related to gathering lines, what we're proposing
22 was to modify the reporting form, similar to the

1 gravity lines, again, no mapping, safety-related
2 condition reporting for this rulemaking, and then
3 the one-year implementation period. Michele, you
4 had asked earlier about exemptions on this. We
5 didn't have any on this. It's related to
6 reporting only. At least the major part of it's
7 reporting, and then pulling in some additional
8 requirements for once they are already regulated,
9 related to assessments. Anyway, just wanted to
10 answer that.

11 CHAIRMAN TAHAMTANI: All right,
12 comments with respect to this list?

13 MR. GALE: Just real quick, Massoud --
14 John Gale here -- we're going to modify this
15 slide to be somewhat consistent with what we did
16 with gravity, assuming that some of the comments
17 and some of the consensus is the same. Is that
18 correct?

19 CHAIRMAN TAHAMTANI: If this list is
20 modified similar to the other one, any comments?
21 John, do you still have comments? Your card is
22 up. Chuck.

1 MEMBER LESNIAK: Thanks. Chuck
2 Lesniak. I'll just be brief. I think my
3 comments are the same as on the gravity is
4 modified reporting, I think that makes sense. I
5 think we ought to be mapping these. I think the
6 safety-related condition reporting ought to still
7 be included, and I'm fine with a one-year
8 implementation period.

9 CHAIRMAN TAHAMTANI: Thank you, Chuck.
10 Michele.

11 MEMBER JOY: I did note -- sorry,
12 Michele Joy, industry. I noted that you've
13 added, since we just went through this, the six
14 months for accident reporting. Clarification.
15 Are these not lines that are non-jurisdictional
16 on which you are trying to learn what the
17 situation is?

18 MR. MAYBERRY: They're jurisdictional;
19 they're just currently not regulated, but they
20 will be regulated with the addition of reporting
21 requirements. The six months would be for
22 accident reporting on those lines that we're

1 pulling in to the reporting requirements.

2 MEMBER JOY: Those that are
3 jurisdictional, but have been exempt previously?

4 MR. MAYBERRY: They've not been
5 regulated. They've been rural gathering lines.

6 MR. GALE: Real quick, our authority
7 is very limited when it comes to liquid
8 gathering. It's very specific. It talks about
9 basically roughly six inches to eight inches in
10 diameter, proximity to an HCA or USA, and
11 operating pressure. But we also have the
12 authority to gather reporting on almost all
13 gathering. This proposal is consistent with that
14 provision in our statute that allows us to
15 collect data on all gathering. We're not
16 regulating it; we're going to just gather data
17 through annual reporting and incident reporting.

18 MEMBER JOY: Do I have to ask for
19 permission?

20 CHAIRMAN TAHAMTANI: No, go ahead.

21 MEMBER JOY: Michele Joy again. I
22 don't think there's any issue with respect to

1 gathering information on all of the systems, as
2 was originally proposed. My concern is around
3 accident reporting only, not that we don't gather
4 that information, but that's very specific
5 guidelines within the DOT. It just feels like
6 it's reaching further than just gathering
7 information.

8 MR. GALE: Just for the sake of the
9 committee, having that accident data is
10 extremely, extremely important as we move down
11 the road to determine if additional regulations
12 or legislative change should be made, if
13 additional gathering lines should be regulated.
14 That would be the same for the gravity lines, as
15 well. Just having the infrastructure data is not
16 enough. We also need the accident history.

17 MR. MAYBERRY: That is a key data
18 point we need.

19 CHAIRMAN TAHAMTANI: Carl.

20 MEMBER WEIMER: Carl Weimer. I think
21 earlier when we were talking about the gathering
22 line in relation to mapping, there was a comment

1 from one of the PHMSA staff that somehow, mapping
2 may be precluded by statute or regulation. I
3 don't understand that. I was wondering if
4 somebody could explain that?

5 MR. MAYBERRY: The statute
6 specifically limits us to distribution and
7 transmission, but not gathering --

8 (Simultaneous speaking.)

9 MR. GALE: Just a point of
10 clarification. It accepts or doesn't allow us to
11 touch distribution or gathering when it comes to
12 NPMS. It's actually in the section of the
13 statute -- I forget exactly what section it is,
14 but in the first sentence there, it says, "Except
15 for gathering and distribution."

16 CHAIRMAN TAHAMTANI: Has this been
17 modified the way it needs to be modified, this
18 list here?

19 MR. GALE: We believe so, Massoud,
20 yes.

21 CHAIRMAN TAHAMTANI: All right, if no
22 other -- all right, move on to the next list,

1 please, of possible changes.

2 LEAK DETECTION SYSTEM DISCUSSION

3 MR. MAYBERRY: All right, to leak
4 detection systems, the implementation period,
5 looking for a discussion/comment on one, three,
6 or five years, and then applicability to offshore
7 pipelines.

8 CHAIRMAN TAHAMTANI: Todd.

9 MEMBER DENTON: Todd Denton, liquids
10 industry. I think you've basically captured our
11 only two concerns or changes that we're proposing
12 here. One, it does not apply to offshore
13 gathering lines; and two, that we would suggest a
14 five-year implementation date.

15 CHAIRMAN TAHAMTANI: So the industry
16 wants a five-year implementation period. Other
17 comments? Chuck.

18 MEMBER LESNIAK: I think the
19 implementation period is reasonable, but I would
20 suggest maybe a shorter period for new lines than
21 five years. I know that there's a design time,
22 but obviously these are not in the ground. You

1 can still make design changes, if necessary, even
2 up to the point, really, to ordering pipe. Maybe
3 a one-year or three-year period for new pipe, and
4 maybe a little bit longer for existing,
5 particularly if you've got to make modifications
6 to that pipe.

7 MEMBER DENTON: I thought that was
8 already captured in the NPRM, but I may be
9 mistaken. I'm not sure we could live with the
10 shorter implementation on new lines.

11 CHAIRMAN TAHAMTANI: Alan, can we
12 comment on ---

13 (Simultaneous speaking.)

14 MR. MAYBERRY: There's not a time
15 frame specified in the NPRM. We've heard five
16 years as a --

17 CHAIRMAN TAHAMTANI: Is that a change
18 that the industry would accept, one to three
19 years for new?

20 MR. MAYBERRY: One year for existing.

21 CHAIRMAN TAHAMTANI: No, the other
22 way.

1 MR. MAYBERRY: New -- I'm sorry, new,
2 yes. I was just seeing what we could get.

3 CHAIRMAN TAHAMTANI: So take a look at
4 the screen. Is that acceptable?

5 MEMBER JOY: Michele Joy, industry.
6 Just a small change, and I think you'll like this
7 one. It's not offshore applicability; it's
8 offshore gathering applicability. We can do the
9 transmission lines; we just can't do the
10 gathering lines.

11 MR. WIESE: This is Jeff. Just for a
12 second, Michele, just to clarify further. What
13 we're saying is you're suggesting that it's not
14 applicable to offshore gathering. I just want to
15 make sure it's explicit, so when we come back to
16 this and try to vote on a motion later, we have a
17 clear record.

18 MEMBER JOY: That is correct.

19 CHAIRMAN TAHAMTANI: Any other
20 comments on this list? Chuck, sorry.

21 MEMBER LESNIAK: One real quick.
22 Being a non-pipeline person, can someone help me

1 understand the issue with offshore gathering
2 versus the transmission?

3 CHAIRMAN TAHAMTANI: Michele.

4 MEMBER JOY: Michele Joy, industry.

5 The gathering lines essentially come off of the
6 platforms. There are multiple platforms that
7 come off of the gathering lines, and they are
8 essentially controlled by the producers and their
9 production platform.

10 What happens is there's a lot of
11 variability in the flow, based on how they're
12 using the wells, how they turn things on and off,
13 whether or not they're doing water injection, all
14 those things that are required in the offshore
15 world. We get tremendous fluctuations on flows
16 coming in on those lines that have nothing to do
17 with whether or not we have a leak. It has to do
18 with the production management. Once it cuts
19 into the main transmission line, then we have the
20 ability to test the pressure, control the flow,
21 and we can tell whether there's anything going on
22 with the pipe, but it's very, very difficult, if

1 not impossible, with respect to the gathering
2 lines, because of the way the flow is controlled
3 by the platforms.

4 CHAIRMAN TAHAMTANI: All right, if no
5 other comments on this, the last list, please.

6 OTHER CLARIFICATIONS DISCUSSION

7 MR. MAYBERRY: Other clarifications,
8 we had the implementation period of one, three,
9 or five years. Looking for comment on that.
10 Again, we're dealing with modifications to 452,
11 as far as information analysis. It has some
12 specific requirements in the new language that
13 speaks to additional attributes, or the
14 attributes that need to be analyzed and
15 integrated. That also speaks to 452(j), the
16 requirement for periodic identification on
17 high-consequence areas.

18 CHAIRMAN TAHAMTANI: Any comments?
19 Ron.

20 MEMBER MCCLAIN: Just a short one.
21 Developing these systems for some operators isn't
22 such a large --

1 (Simultaneous speaking.)

2 CHAIRMAN TAHAMTANI: Ron, would you
3 speak into the mic, please?

4 MEMBER MCCLAIN: Ron McClain with
5 industry. Just developing appropriate data
6 integration systems certainly can be time
7 consuming and expensive. Some operators are
8 further down the path than others, but we believe
9 it really does take five years to build those
10 systems through a level that PHMSA would
11 appreciate in an audit. That's, I think, the
12 industry perspective.

13 CHAIRMAN TAHAMTANI: So industry
14 prefers five years. Jeff.

15 MEMBER LESNIAK: Thank you, Chuck
16 Lesniak. This was a question and comment, I
17 think. This is a clarification of existing
18 rules, and my understanding is that most of these
19 requirements, the intent of these rules is
20 already on the books. If that's the case, an
21 implementation period at all doesn't make sense
22 to me. This is clarifying the requirements of

1 what's already on the books. Industry has
2 already had their implementation period, in my
3 opinion.

4 CHAIRMAN TAHAMTANI: Rick.

5 MEMBER KUPREWICZ: Rick Kuprewicz.

6 You had over ten years to get this right. Most
7 of you already do have it right. It's the ones
8 who aren't doing it right, and we don't need the
9 lawyers loop holing. If I understand this, this
10 is zeroing in on integrity management for
11 transmission. We had many years of discussion
12 before we passed those regulations. It's time to
13 get it done. Quit punishing yourself for a few
14 people who aren't following the rules. One year.

15 CHAIRMAN TAHAMTANI: Jeff.

16 MR. WIESE: I'll just second that. I
17 would say I've been involved in integrity
18 management from the beginning, and data
19 integration was always on the forefront of
20 integrity management. I will add, however, what
21 it didn't say, and I'm struggling with it a
22 little bit, is it wasn't specific as to the exact

1 items and how you had to integrate those. I get
2 the fact that there could be a little bit of a
3 challenge here. I don't want to be glib about
4 that, but I would say that we've been on data
5 integration now for over a decade. I think most
6 of the operators I'm familiar with are doing data
7 integration. It is the specificity of the exact
8 attributes and how those relate that we'll
9 probably struggle over. We're going to have to
10 wrestle with that because I think some operators
11 aren't even seeing some particular threats that
12 others do. It's difficult to do that, but I do
13 second the sentiment that we've been working on
14 data integration for a long time.

15 CHAIRMAN TAHAMTANI: Carl.

16 MEMBER WEIMER: I was wondering if
17 someone can just tell me what's the
18 implementation period in the proposed rule?

19 MR. GALE: I believe, Carl, that we
20 asked for comments on that. I think it just
21 would have been the general proposal of 6 to 12
22 months.

1 MR. MAYBERRY: Carl, I think that
2 speaks to probably the points that were made
3 about they should already be doing it. Really,
4 the proposal was silent on the integration of
5 data on the time frame to implement.

6 CHAIRMAN TAHAMTANI: Michele.

7 MEMBER JOY: I want to echo what was
8 said earlier. There are a lot data integration
9 going on; however, there is a specific list of
10 items that have been suggested items that I think
11 people are at different levels of integration in
12 their companies.

13 I can assure you that from my company,
14 which puts a lot of effort in this, every time
15 modify the software to manage the new data that
16 comes in and the new data requirements, it's over
17 a year requirement just for us to make some
18 modifications. Now we've come out with a list of
19 very specific items that we want to see
20 integrated, and we're in the process of getting
21 that implementation. Some companies, I think,
22 can get there in a year, but I think there are a

1 number of them that can't. It's very expensive,
2 as well.

3 CHAIRMAN TAHAMTANI: Thank you. Is
4 there a happy medium of three years? I'm just
5 trying to facilitate this. I'm not even telling
6 you my views, but I happen to agree with a couple
7 over here and the PHMSA people. This needs to
8 happen. My favorite API RP 1173 says you've got
9 to do all of these things. Having said that, how
10 do we move on from one, three, or five? The
11 industry wants five. You all want one. Do we
12 modify this thing? Right after this, we're going
13 to take a vote on all of the great things you've
14 done for the last hour and a half.

15 Go ahead. I'm sorry.

16 MEMBER KUPREWICZ: From the public
17 perspective of this -- and I've dealt with a lot
18 of different publics, usually with lawyers across
19 the table -- this is an issue where the majority
20 of you have got a good story. If you try to
21 convince the public that you've got to do this,
22 and it's going to take you this much time, it's

1 not going to go over well. We have a great
2 divergence here of opinion before we vote. This
3 isn't a consensus, unless we can come to the one
4 year.

5 CHAIRMAN TAHAMTANI: Ron.

6 MEMBER MCCLAIN: I'm inclined with
7 industry. I don't think three years is a big
8 obstacle. We may have to take a break before we
9 get to the final discussion of this because
10 different people are affected differently. I
11 certainly echo what Michele said. You can be on
12 the bleeding edge of technology. I think a lot
13 of it has developed over the last several years
14 to work pretty well and to be commercially
15 available. But for people starting from scratch
16 -- and hopefully they're not starting from
17 scratch with data integration.

18 Actually, I believe much of the
19 industry does it, and does it very well, but they
20 may not have systems that PHMSA would find
21 acceptable, software driven GIS overlays. That
22 can take considerable time to build.

1 MEMBER PIERSON: Craig Pierson,
2 liquids. I echo Ron's point. I think this
3 discussion is about continuous improvement. It
4 isn't that we're not doing it. There's greater
5 specificity here on what is going to be required.
6 The systems take time.

7 All of us have developed some of these
8 in house systems. It isn't like this is an easy
9 button, where you go get some system that does
10 all this. There has been work. We have been
11 doing data integration. Now we're in a
12 continuous improvement mode, and you're being
13 more specific about the requirements. If it were
14 easy, it'd all be done by now, but it's not. I
15 think I echo what Ron said. We might want to
16 have a caucus on this, but probably three years
17 is something that we'd entertain. But don't
18 underestimate the difficult of it.

19 CHAIRMAN TAHAMTANI: Remember, the
20 three years was just my idea, trying to be a
21 facilitator here. I probably won't vote for the
22 three, just so you know.

1 MR. WIESE: I think we need to get Cam
2 and John -- if we're going to vote, we need to
3 adjust this. Are we prepared to vote on three?
4 Because we're going to go through these and list
5 them that we're going to vote on, right? You're
6 going to put forward a nomination --

7 (Simultaneous speaking.)

8 CHAIRMAN TAHAMTANI: I thought the
9 industry wanted a caucus around another number.
10 Is that where we are?

11 MEMBER MCCLAIN: Ron McClain. I think
12 we could quickly reach a consensus, but again
13 understanding how members, not just us, but other
14 members are affected, if we had a few minutes. I
15 would be okay if we voted on three, took a break,
16 and came back and considered the fourth one.

17 CHAIRMAN TAHAMTANI: All right. We're
18 going to take a ten-minute break, and when I say
19 ten, I mean ten minutes. Be back here. After
20 that, we'll take a vote, and await the
21 administrator's arrival for her talk, so ten
22 minutes.

1 (Whereupon, the above-entitled matter
2 went off the record at 11:39 a.m. and resumed at
3 11:48 a.m.)

4 CHAIRMAN TAHAMTANI: We have the
5 industry caucus, and I believe Ron McClain will
6 speak for them.

7 MEMBER MCCLAIN: At least start for
8 us. Ron McClain with industry. We thought
9 through the task, how difficult it is, and we
10 would be prepared to go with three years, as the
11 slide suggests, for data integration.

12 One of industry's concern is there are
13 21 attributes out there in the rule that even if
14 you do 10 or 15 of them, sometimes to integrate
15 the rest of the data, it takes time, so we agree
16 with three years as aggressive, but it also
17 should give people time to get their systems
18 worked out. Again, most people are integrating
19 data, not necessarily to the 21-attribute
20 standard that the rule calls for.

21 CHAIRMAN TAHAMTANI: Thank you, Ron.
22 Michele.

1 MEMBER JOY: Just to add on to that,
2 just so you're aware, the industry is involved
3 right now in developing a technical rule on data
4 integration. There's been a lot of work done by
5 that group, and that technical rule should be
6 coming out in the next year. This would also
7 give enough time for the rest of the industry to
8 sort of absorb what comes out in this
9 recommendation, and that they have a chance to
10 implement it, in order to meet the overall intent
11 of the DOT's requirements.

12 CHAIRMAN TAHAMTANI: Jeff.

13 MR. WIESE: Just a question. What's
14 the format? When you say technical rule, what do
15 you mean? Alan and --

16 MEMBER JOY: Sorry, technical report,
17 misspoke.

18 MR. WIESE: All right, technical
19 report, thanks.

20 (Simultaneous speaking.)

21 MEMBER JOY: -- gave me TR, sorry.

22 MR. WIESE: You guys can take over the

1 rulemaking, as far as I'm concerned.

2 Yes, okay, technical report. But Alan
3 and his team have been doing the risk modeling
4 work, as well, and these things relate. I think
5 there is good work to be done in that area that
6 hopefully will -- I'm sympathetic to Ron's points
7 about so many of the elements, but we miss --
8 time and time again -- I just will end on this to
9 say that I see a good operator who's not failing
10 on purpose.

11 They come in; they say just pigged the
12 pipeline, but they didn't take into account some
13 other factor, whether it's subsidence or land
14 movement or something else. It didn't factor
15 into their analysis. I think they were trying,
16 but they had a failure, and it was a sizable
17 failure just because they missed an element in
18 there. I don't know. We've got to try to find a
19 happy medium, but I get your point.

20 CHAIRMAN TAHAMTANI: Alan.

21 MR. MAYBERRY: Alan Mayberry. I was
22 just going to add that I've been reminded by

1 staff that we -- just to make sure we go forward
2 correctly on this is we are already -- the
3 expectation is already that operators integrate
4 data. We've actually cited operators for that.
5 I think when we talk about this implementation,
6 we're talking about these attributes that we're
7 talking about, the specific attributes, which
8 adds more specificity than the current regulation
9 does.

10 Just wanted to make that
11 clarification. In fact, B31.8S already requires
12 it, as well. We're not saying we're going to
13 give you a break on integrating data. It's
14 related to these attributes is where some of the
15 time frame will come in.

16 CHAIRMAN TAHAMTANI: I believe we are
17 ready to vote. John, can you put those slides up
18 again very briefly so people know what they've
19 agreed to?

20 MR. GALE: Sure, Massoud. We actually
21 have a slide that hopefully can help the members,
22 if you go down a little bit, Cam.

1 PARTICIPANT: Is it this one?

2 MR. GALE: Yes, that one. But before
3 we move to this, Massoud, we need to give the
4 public --

5 CHAIRMAN TAHAMTANI: My question was
6 -- and again, it's up to the committee if they
7 want to see the four slides where we have
8 modified --

9 MR. GALE: Okay, we can merge them
10 together.

11 CHAIRMAN TAHAMTANI: -- some of these
12 proposed changes --

13 MR. GALE: Maybe while Cameron's
14 pulling that together, do we want to give the
15 public an opportunity to see if there's any
16 comments?

17 CHAIRMAN TAHAMTANI: Sure, it's a good
18 time. Anyone from the public who would like to
19 comment on the four areas we've discussed? I
20 wouldn't blame you, obviously.

21 MR. WIESE: Or would you like lunch?

22 CHAIRMAN TAHAMTANI: Do you all need

1 to see those four slides again?

2 (Simultaneous speaking.)

3 PARTICIPANT: Why don't we just show
4 the four slides together into one?

5 CHAIRMAN TAHAMTANI: Do we need to see
6 them, or do we remember them?

7 MS. WHETSEL: Does the committee feel
8 like they need to read them into the record as a
9 proposal?

10 CHAIRMAN TAHAMTANI: Cheryl, is that
11 a procedural question you were asking?

12 MS. WHETSEL: I'm asking for their
13 preference. We could read it in as they have the
14 slide here, amend it during this meeting. Do
15 they want to do it with the amended in this
16 meeting language, or do they want to actually
17 read it into the record?

18 CHAIRMAN TAHAMTANI: Who's got a good
19 voice? Jeff.

20 MR. WIESE: Sorry, I was going to do
21 my Barry White --

22 (Simultaneous speaking.)

1 PARTICIPANT: -- what you're agreeing
2 on.

3 MR. WIESE: I think we're trying to
4 simplify this, if this is not really apparent.
5 If we look through the four slides, where we made
6 some suggestions here what things we're thinking
7 about going forward, to have a simplified motion
8 that basically says as indicated in the consensus
9 emerging from these four slides -- it would be a
10 simple matter, at that point. Otherwise, you can
11 do motions on each one. That will add a lot of
12 time, but we can do that.

13 CHAIRMAN TAHAMTANI: Chuck.

14 MEMBER LESNIAK: Chuck Lesniak.

15 Because it appears that there may be some
16 disagreement on some of these, maybe it might be
17 appropriate to have a motion to recommend the
18 rule as currently written, without any changes,
19 and go through the changes -- because personally,
20 some of these rules I'm very comfortable with. I
21 don't really want to vote against the rule, but
22 with some of these conditions that we've got on

1 the table, I may. I suspect other people are in
2 the same boat.

3 With each condition, as maybe a motion
4 to amend the rule, and then vote on the
5 amendment. I know it'll take longer, but I
6 really don't want to be in the position of having
7 to vote against the entire rule.

8 CHAIRMAN TAHAMTANI: Michele, you have
9 comments?

10 MEMBER JOY: Michele Joy, industry.
11 I also recommend if we are going to read it in,
12 as Cheryl recommended, that we change no mapping
13 to no integration in NPMS, which is not the same
14 thing. When you say no mapping, I would say no
15 integration into NPMS, which is a much more
16 technical requirement, which is what we're
17 worried about. We have mapping.

18 MR. WIESE: This is Jeff. For
19 everyone else's consideration -- and Chuck, I'm
20 not sure if you've seen the standard on NPMS or
21 the rulemaking that we had out there -- there are
22 a lot of attributes in that. A lot of them we

1 would want for larger pipe, but for some of these
2 smaller pipe, it may not be as critical. I get
3 your point about wanting to know where it is.

4 MEMBER PIERSON: Craig Pierson,
5 liquids. I think as long as we're making some
6 mods there, I think there was a suggestion, Alan,
7 that you made on the exceptions for lower risk
8 that those that were -- would include those that
9 leave facilities. I'm trying to remember --

10 (Simultaneous speaking.)

11 MR. MAYBERRY: Those that leave
12 facilities, right. That was something I threw
13 out.

14 MEMBER PIERSON: Right, and I think
15 that --

16 MR. MAYBERRY: I was just trying to
17 get movement on it.

18 MEMBER PIERSON: Yes, I think that if
19 you can figure out what those words were, they
20 felt pretty good when you said them.

21 MS. WHETSEL: Chuck, is there more
22 than one item that you have issue with? I was

1 just thinking maybe we could just pull one out,
2 rather than have to do each and every one of
3 them. If there's one or two that you have issue
4 with, maybe we could pull those out.

5 MEMBER LESNIAK: Chuck Lesniak. Yes,
6 the exceptions for the lower-risk lines, and
7 personally I'm okay with not integrating into
8 NPMS, but as long as those lines are mapped into
9 a GIS system and that PHMSA gets the data that
10 they need, I'm okay with that. I don't think
11 this necessarily has to go into NPMS. That's not
12 a deal killer for me.

13 MR. MAYBERRY: Okay, I think we have
14 it right now. I was just going to make a
15 comment. I think I also threw out that we're
16 taking off the less than one mile off of plant
17 property.

18 MR. WIESE: John, I think that
19 addresses the point you were bringing up earlier,
20 right?

21 CHAIRMAN TAHAMTANI: Carl.

22 MEMBER WEIMER: Yes, just two

1 questions, and I agree with that change to the
2 exceptions. I think that's a good change. A
3 possible change to Bullet No. 2 would be modified
4 integration into NPMS, so you don't have to
5 collect the whole suite, but you might collect
6 enough that you know where the pipelines are. My
7 other question was I'm still unclear what it is
8 we're voting on. Are we just voting on these
9 five bullets, or are we voting on all the bullets
10 associated with the four topics?

11 CHAIRMAN TAHAMTANI: We're not there
12 yet. I thought we were going to vote on --

13 MEMBER WEIMER: Okay. Because if
14 we're including the three-year integration
15 period, then we still have a problem.

16 MR. WIESE: In an attempt to be
17 helpful, what I heard Chuck saying -- I want to
18 be sensitive to that -- is that he's supportive
19 of a lot of parts of the rule, doesn't want to
20 vote against the whole rule. If we take it one
21 at a time, it'll be easier, right? So trying to
22 accommodate it, I think what we're going to say

1 is your motion is something like you support the
2 NPRM with the following, in this case, five
3 suggested changes. That's the motion for that
4 particular item --

5 (Simultaneous speaking.)

6 MR. WIESE: Yes, for gravity lines.
7 We're going to take them one at a time.

8 CHAIRMAN TAHAMTANI: So would you put
9 the language up that someone could hopefully make
10 their motion? You had it before. You have it in
11 your books.

12 PARTICIPANT: One second. We're going
13 to try to see if you have a merge slide real
14 quick.

15 CHAIRMAN TAHAMTANI: We're not merging
16 anything. We're going to vote. We're not
17 merging anything. We're going to vote on these
18 individually.

19 MR. WIESE: Again, I think rather than
20 overly complicate this, can we not say -- as I
21 was just saying, five items, and you can read
22 them off. We'll have a record of the whole

1 discussion, right? A motion can be very simple.
2 It can just be support the ANPRM, plus the five
3 items, read them off if you want to. We know
4 what the motion is. We have a court reporter.
5 We'll have the record of it. Then we take a
6 vote.

7 MEMBER JOY: Michele Joy. If Cameron
8 will put them back up, I'm happy to make a
9 motion. I move acceptance of the proposed rules

10 ----

11 (Simultaneous speaking.)

12 MEMBER JOY: ---- I move acceptance of
13 the proposed rule, as published in the Federal
14 Register and the draft regulatory evaluation as
15 being technically feasible, reasonable, cost
16 effective, and practicable, with respect to
17 gathering lines, if the following changes are
18 made --

19 PARTICIPANT: Gravity lines.

20 MEMBER JOY: What did I say?

21 PARTICIPANT: Gathering lines.

22 MEMBER JOY: Sorry, with respect to --

1 PARTICIPANT: We can do both.

2 MEMBER JOY: -- gravity lines, if the
3 following changes are made: a modified reporting
4 form, shortened, no integration into NPMS,
5 exceptions for lower-risk pipelines, for example,
6 intraplant lines, one-year implementation period
7 for the annual report, six-month implementation
8 for accident reporting.

9 CHAIRMAN TAHAMTANI: Is there a
10 second? That was the motion. Somebody needs to
11 second it. You second it? Any other discussions
12 that you haven't already made?

13 MEMBER WEIMER: I would move to amend
14 the motion to change the second bullet to
15 modified integration into NPMS.

16 PARTICIPANT: Second.

17 CHAIRMAN TAHAMTANI: Any discussions
18 on that? All in favor, say aye.

19 (Chorus of aye.)

20 PARTICIPANT: Did everybody vote?

21 CHAIRMAN TAHAMTANI: Cheryl, you've
22 got to take a roll call.

1 (Simultaneous speaking.)

2 PARTICIPANT: -- roll call, or do you
3 want to have a unanimous --

4 CHAIRMAN TAHAMTANI: While she's doing
5 that, I suggest you all change your flight
6 schedule today to tomorrow afternoon by 5:00.

7 PARTICIPANT: Already done.

8 MS. WHETSEL: I'm going to go through
9 quickly. Brian Salerno is not here. Massoud
10 Tahamtani, or however you pronounce your last
11 name. I'm so sorry, Massoud.

12 CHAIRMAN TAHAMTANI: You did great.
13 Don't worry about it. Yes.

14 MS. WHETSEL: John Quackenbush.

15 MEMBER QUACKENBUSH: I'm sorry, can
16 you clarify, are we voting on the amendment or
17 the motion?

18 MS. WHETSEL: The motion --

19 PARTICIPANT: The amendment.

20 MS. WHETSEL: -- with the amendment.

21 MEMBER QUACKENBUSH: There was a
22 motion, and then an amendment.

1 PARTICIPANT: It was Carl's amendment.

2 MS. WHETSEL: The amended motion is
3 what we're -- we're voting on the amended motion.
4 Is that correct?

5 CHAIRMAN TAHAMTANI: We are voting on
6 modified integration into NPMS, John, up there.
7 We're voting on that, so please vote.

8 MEMBER QUACKENBUSH: Can someone
9 explain the difference between modified and no in
10 this context?

11 CHAIRMAN TAHAMTANI: Carl, explain
12 your word.

13 MEMBER WEIMER: I understand that as
14 much as I understand what modified reporting
15 forms is, but what it means is it's some kind of
16 mapping under NPMS that doesn't include all the
17 stuff that PHMSA's not interested in.

18 MR. MAYBERRY: If I might add -- this
19 is Alan --

20 CHAIRMAN TAHAMTANI: Hold on a second.
21 I suggest everybody listen to everything that's
22 being said. We can't be doing this back and

1 forth. When a motion is made, a second is made,
2 you have to know what that motion is all about.
3 When we're voting, we are voting. We're not
4 discussing anything anymore. We are still
5 voting. Go ahead.

6 MS. WHETSEL: Massoud?

7 CHAIRMAN TAHAMTANI: Yes.

8 MS. WHETSEL: John Quackenbush?

9 MEMBER QUACKENBUSH: No.

10 MS. WHETSEL: Todd Denton?

11 MEMBER DENTON: No.

12 MS. WHETSEL: Tim Felt?

13 MEMBER FELT: No.

14 MS. WHETSEL: Michele Joy?

15 MEMBER JOY: No.

16 MS. WHETSEL: Craig Pierson?

17 MEMBER PIERSON: No.

18 MS. WHETSEL: Ron McClain?

19 MEMBER MCCLAIN: No.

20 MS. WHETSEL: Lanny Armstrong is not
21 here. Richard Kuprewicz?

22 MEMBER KUPREWICZ: Yes.

1 MS. WHETSEL: Chuck Lesniak?

2 MEMBER LESNIAK: Yes.

3 MS. WHETSEL: Carl Weimer?

4 MEMBER WEIMER: Yes.

5 MS. WHETSEL: We have three yes and --
6 I'm sorry, yes, we have four yes and one, two,
7 three, four -- and six no. The amendment does
8 not pass.

9 CHAIRMAN TAHAMTANI: Put it back to
10 the language it was, please. Now, we had a
11 motion, and we had a second. Any discussions on
12 this? If none, all in favor say aye.

13 (Chorus of aye.)

14 CHAIRMAN TAHAMTANI: Again, you've got
15 to -- they're shy to vote for their voices.

16 MS. WHETSEL: Massoud?

17 CHAIRMAN TAHAMTANI: Yes.

18 MS. WHETSEL: John.

19 MEMBER QUACKENBUSH: Yes.

20 MS. WHETSEL: Sorry, thank you. Todd
21 Denton?

22 MEMBER DENTON: Yes.

1 MS. WHETSEL: Tim Felt?

2 MEMBER FELT: Yes.

3 MS. WHETSEL: Michele Joy?

4 MEMBER JOY: Yes.

5 MS. WHETSEL: Craig Pierson?

6 MEMBER PIERSON: Yes.

7 MS. WHETSEL: Ron McClain?

8 MEMBER MCCLAIN: Yes.

9 MS. WHETSEL: Rick Kuprewicz?

10 MEMBER KUPREWICZ: No.

11 MS. WHETSEL: Charles Lesniak?

12 MEMBER LESNIAK: Yes.

13 MS. WHETSEL: And Carl Weimer?

14 MEMBER WEIMER: Yes.

15 MS. WHETSEL: One no, so it passes.

16 CHAIRMAN TAHAMTANI: The motion

17 carries.

18 MS. WHETSEL: The motion carries, yes.

19 CHAIRMAN TAHAMTANI: Yes, thank you.

20 Next ----

21 (Simultaneous speaking.)

22 CHAIRMAN TAHAMTANI: This is with

1 respect to the gathering lines. Again, we need a
2 motion that read similar to the one before.

3 Michele, you ready?

4 MEMBER JOY: Michele Joy, industry.

5 The proposed rule, as published in the Federal
6 Register, and the draft regulatory evaluation are
7 technically feasible, reasonable, cost effective,
8 and practicable, with respect to the changes for
9 gathering lines, if the following changes are
10 made: there's a modified reporting form that is
11 shortened, no integration into NPMS, a one-year
12 implementation period for annual reporting, and a
13 six-month implementation period for accident
14 reporting.

15 CHAIRMAN TAHAMTANI: Is there a
16 second?

17 PARTICIPANT: Second.

18 CHAIRMAN TAHAMTANI: Any discussions?
19 Carl.

20 MEMBER WEIMER: I would vote to amend
21 the motion by removing the second bullet point
22 altogether, since it's not part of the current

1 proposal, and there's no reason to have it in
2 there.

3 CHAIRMAN TAHAMTANI: Is there a
4 second?

5 MEMBER LESNIAK: Second, Chuck
6 Lesniak.

7 CHAIRMAN TAHAMTANI: Any discussions
8 on that? Any discussions on removing that
9 bullet? Michele.

10 MEMBER JOY: Just a fact check. I
11 don't know the proposed regulations well enough
12 to know is that correct?

13 MR. MAYBERRY: The statute precludes
14 us from gathering that GIS information for
15 gathering, yes. This is Alan Mayberry.

16 CHAIRMAN TAHAMTANI: Chuck, you have
17 comments?

18 MEMBER LESNIAK: Chuck Lesniak. I
19 think this is critical for gathering lines. I
20 could see, on the gravity lines, the discussion
21 on that. Gathering lines are a major issue,
22 particularly in Texas. I think that this data

1 needs to be coming into the agency on gathering
2 lines. I think it's critical. I agree with
3 Carl.

4 CHAIRMAN TAHAMTANI: Any other
5 discussions? Please take the vote.

6 MEMBER PIERSON: Craig Pierson ----
7 (Simultaneous speaking.)

8 CHAIRMAN TAHAMTANI: Oh, sorry, Craig.

9 MEMBER PIERSON: I'm sorry. I think
10 I've gotten confused here in the last few
11 moments. The regulation, the notice of proposed
12 rulemaking does not require or is not asking for
13 the NPMS mapping, is silent to it?

14 MR. MAYBERRY: John, could you clarify
15 that.

16 MR. GALE: The way it was written, I
17 believe it said gathering lines are subject to
18 the reporting requirements of the subpart.
19 Earlier this year, there was a regulatory change
20 on a miscellaneous rule that added requirements
21 for NPMS admissions into the regulations for the
22 first time since NPMS was added into our statute.

1 But in terms of that rulemaking, and
2 in terms of our legislation, we are not able to
3 issue that rulemaking, consistent with our
4 legislation, to expand NPMS to cover gathering.
5 I believe, also, in the NPMS documentation
6 booklet, that explicitly excludes gathering lines
7 from NPMS submissions. I think it's necessarily
8 the regulation. It's the mapping document that
9 operators have to comply with on submitting data.
10 It says it excludes gathering.

11 MEMBER JOY: Non-jurisdictional
12 gathering or all gathering?

13 MR. GALE: All gathering.

14 CHAIRMAN TAHAMTANI: Any other
15 comments? If not, Cheryl, take the vote, please,
16 on the amendment.

17 MS. WHETSEL: I just want to make --
18 we're voting on the amendment? Oaky. On the
19 amendment, Massoud?

20 CHAIRMAN TAHAMTANI: Yes.

21 MS. WHETSEL: John Quackenbush?

22 MEMBER QUACKENBUSH: Yes.

1 MS. WHETSEL: Todd Denton?

2 MEMBER DENTON: Yes.

3 MS. WHETSEL: Tim Felt?

4 MEMBER FELT: Yes.

5 MS. WHETSEL: Michele Joy?

6 MEMBER JOY: Yes.

7 MS. WHETSEL: Craig Pierson?

8 MEMBER PIERSON: Yes.

9 MS. WHETSEL: Ron McClain?

10 MEMBER MCCLAIN: Yes.

11 MS. WHETSEL: Rick Kuprewicz?

12 MEMBER KUPREWICZ: Yes.

13 MS. WHETSEL: Chuck Lesniak?

14 MEMBER LESNIAK: Yes.

15 MS. WHETSEL: Carl Weimer?

16 MEMBER WEIMER: Yes.

17 CHAIRMAN TAHAMTANI: Thank you. The
18 motion carries on the amendment. We have a
19 motion and a second on Cheryl's motion. Any
20 other discussions? If not, Cheryl, take the
21 vote, please.

22 MS. WHETSEL: Okay, this is on the

1 motion for gathering lines?

2 CHAIRMAN TAHAMTANI: Right.

3 MS. WHETSEL: Massoud?

4 CHAIRMAN TAHAMTANI: Yes.

5 MS. WHETSEL: John Quackenbush?

6 MEMBER QUACKENBUSH: Yes.

7 MS. WHETSEL: Todd Denton?

8 MEMBER DENTON: Yes.

9 MS. WHETSEL: Tim Felt?

10 MEMBER FELT: Yes.

11 MS. WHETSEL: Michele Joy?

12 MEMBER JOY: Yes.

13 MS. WHETSEL: Craig Pierson?

14 MEMBER PIERSON: Yes.

15 MS. WHETSEL: Ron McClain?

16 MEMBER MCCLAIN: Yes.

17 MS. WHETSEL: Rick Kuprewicz?

18 MEMBER KUPREWICZ: Yes.

19 MS. WHETSEL: Chuck Lesniak?

20 MEMBER LESNIAK: Yes.

21 MS. WHETSEL: Carl Weimer?

22 MEMBER WEIMER: Yes.

1 MS. WHETSEL: Motion carries.

2 CHAIRMAN TAHAMTANI: Thank you.

3 Please put up the third list. You know how this
4 works. Should I call on Michele again?

5 MEMBER JOY: Michele Joy, industry.

6 The proposed rule, as published in the Federal
7 Register and the draft regulatory evaluation are
8 technically feasible, reasonable, cost effective,
9 and practicable, with regard to changes to the
10 leak detection systems, if the following changes
11 are made: implementation period of five years
12 for existing pipelines and implementation of one
13 year for new pipelines, and that it is not
14 applicable to offshore gathering lines.

15 CHAIRMAN TAHAMTANI: Is there a
16 second?

17 MEMBER DENTON: Second.

18 CHAIRMAN TAHAMTANI: Any discussions?
19 Cheryl, you know what to do. Oh, I'm sorry,
20 Chuck?

21 MEMBER LESNIAK: I'd like to offer an
22 amendment to leave in the applicability of

1 offshore gathering.

2 CHAIRMAN TAHAMTANI: So you want to
3 remove the third bullet?

4 MEMBER LESNIAK: Yes.

5 CHAIRMAN TAHAMTANI: That's the
6 motion. Is there a second? Is there a second?
7 There's not a second. Back to the original
8 motion. We have a motion to second. Any other
9 discussions? None. Cheryl, go ahead.

10 MS. WHETSEL: Massoud?

11 CHAIRMAN TAHAMTANI: Yes.

12 MS. WHETSEL: John Quackenbush?

13 MEMBER QUACKENBUSH: Yes.

14 MS. WHETSEL: Todd Denton?

15 MEMBER DENTON: Yes.

16 MS. WHETSEL: Tim Felt?

17 MEMBER FELT: Yes.

18 MS. WHETSEL: Michele Joy?

19 MEMBER JOY: Yes.

20 MS. WHETSEL: Craig Pierson?

21 MEMBER PIERSON: Yes.

22 MS. WHETSEL: Ron McClain?

1 MEMBER MCCLAIN: Yes.

2 MS. WHETSEL: Rick Kuprewicz?

3 MEMBER KUPREWICZ: Yes.

4 MS. WHETSEL: Chuck Lesniak?

5 MEMBER LESNIAK: Yes.

6 MS. WHETSEL: Carl Weimer?

7 MEMBER WEIMER: Yes.

8 MS. WHETSEL: Thank you. Motion

9 carries.

10 CHAIRMAN TAHAMTANI: Thank you. The
11 fourth list. This is very easy. Craig, can you
12 make the motion, just to see how you sound?

13 MEMBER PIERSON: The proposed rule, as
14 published in the Federal Register and the draft
15 regulatory evaluation are technically feasible,
16 reasonable, cost effective, and practicable if
17 the following changes are made to the data
18 integration portion of the rule, with an
19 implementation period of three years.

20 CHAIRMAN TAHAMTANI: Is there a
21 second?

22 MEMBER JOY: Second.

1 CHAIRMAN TAHAMTANI: Second. Any
2 discussions? Chuck?

3 MEMBER LESNIAK: I'd like to offer an
4 amendment to remove the implementation period of
5 three years and require immediate implementation,
6 or no more than one year.

7 CHAIRMAN TAHAMTANI: That's the
8 motion. Is there a second?

9 MEMBER WEIMER: I'll second it.

10 CHAIRMAN TAHAMTANI: There is a
11 second. Discussions? All right, we're going to
12 vote on changing -- we're going to vote on what's
13 on the screen. Cheryl.

14 MS. WHETSEL: Massoud?

15 CHAIRMAN TAHAMTANI: Yes.

16 MS. WHETSEL: John Quackenbush?

17 MEMBER QUACKENBUSH: No.

18 MS. WHETSEL: So we are voting on an
19 implementation period of one year.

20 CHAIRMAN TAHAMTANI: Right.

21 MS. WHETSEL: All right, just want to
22 make sure. Todd Denton?

1 MEMBER DENTON: No.

2 MS. WHETSEL: Tim Felt?

3 MEMBER FELT: No.

4 MS. WHETSEL: Michele Joy?

5 MEMBER JOY: No.

6 MS. WHETSEL: Craig Pierson?

7 MEMBER PIERSON: No.

8 MS. WHETSEL: Ron McClain?

9 CHAIRMAN TAHAMTANI: Ron, you have to

10 vote.

11 MEMBER MCCLAIN: No.

12 MS. WHETSEL: Rick Kuprewicz?

13 MEMBER KUPREWICZ: Yes.

14 MS. WHETSEL: Chuck Lesniak?

15 MEMBER LESNIAK: Yes.

16 MS. WHETSEL: Carl Weimer?

17 MEMBER WEIMER: Yes.

18 MS. WHETSEL: It is four to six, so
19 the motion carries. I'm sorry, it does not
20 carry. It really was a modification, so what is
21 the --

22 (Simultaneous speaking.)

1 MS. WHETSEL: That was an amendment,
2 right, so what we're going back to is the
3 previous.

4 CHAIRMAN TAHAMTANI: It does not carry
5 on the amendment. It goes back to three years.

6 MS. WHETSEL: So we are now voting on
7 three years?

8 CHAIRMAN TAHAMTANI: Yes.

9 MS. WHETSEL: Okay, just clarifying.

10 CHAIRMAN TAHAMTANI: Hold on a second.
11 We had a motion and a second. Any discussions?
12 Carl.

13 MEMBER WEIMER: Just for discussion
14 purposes, I don't know if we discussed the three
15 years. I can't support this. This is one of
16 those things that will cause me to vote against
17 the entire rule if this is left in. My
18 preference would be just to take this out, remain
19 silent on this issue, and let -- since the NPRM
20 is silent on this, let PHMSA decide what the
21 implementation period, if any, is. But this is a
22 deal killer for me.

1 CHAIRMAN TAHAMTANI: Jeff.

2 MR. WIESE: Part of the reason for
3 breaking this down, though, section by section,
4 was to get a feel for sort of what you're saying.
5 Where are the touch points on this rule? I
6 gather, and I take your comments seriously, of
7 course. I reserve the right for the secretary to
8 make the decision, in the end, as advised by the
9 administrators. I will say, Carl, part of the
10 reason in breaking it down, though, was to get a
11 sense on does most of the rule work, and where's
12 the most work needed? At any rate, otherwise I
13 would have voted up and down on the whole rule.

14 CHAIRMAN TAHAMTANI: Ron.

15 MEMBER MCCLAIN: Ron McClain. I guess
16 I'm not sure that we have a second vote on the
17 entire rule. If we go through each of the
18 sections, I wouldn't think we would vote yet
19 again on the entire rule.

20 PARTICIPANT: We would, or we
21 wouldn't?

22 MEMBER MCCLAIN: We would not. I'm

1 just seeking clarification, I guess, on that. If
2 we've gone through all of the elements, I'm not
3 sure why we would vote on -- now do we vote on
4 the entire rule?

5 MR. GALE: That was the plan. You're
6 correct, Ron.

7 MR. WIESE: I think we reserve the
8 right, any member, to docket their comments. If
9 they feel strongly about an issue, they should
10 say it, but we are going to try to develop a
11 consensus in all cases, and we're paying
12 attention to what the voting is. Again, I said
13 we're not doing voting counting -- even though we
14 have to do roll call, it's not a question of 6-4.
15 We take your comments seriously. I think we're
16 going to vote on these one at a time and not on
17 the package.

18 MEMBER MCCLAIN: So really, it's
19 advisory in the end, anyway.

20 MR. WIESE: Federal advisory
21 committee, yes.

22 MR. GALE: Massoud, based on some

1 comments made by Carl, we've modified the
2 language slightly. I didn't know if that was
3 worthy of some discussion?

4 CHAIRMAN TAHAMTANI: I don't think
5 Carl really made another motion to change the
6 language. You've got to keep it at the three
7 years, unless he wants to make a comment, and
8 we'll put that language back up, but you weren't
9 making a motion?

10 MEMBER WEIMER: No, but I'd be glad to
11 make that motion. I would move to amend the
12 motion to implementation period as determined by
13 DOT.

14 CHAIRMAN TAHAMTANI: We have a motion.
15 You can see it on the screen. Is there a second?
16 Is there a second? I'll second it. Take the
17 vote, since we are getting really good at taking
18 votes. Cheryl.

19 MS. WHETSEL: Massoud?

20 CHAIRMAN TAHAMTANI: Yes.

21 MS. WHETSEL: John Quackenbush?

22 MEMBER QUACKENBUSH: No.

1 MS. WHETSEL: Todd Denton? Todd? Did
2 you say yay or nay?

3 MEMBER DENTON: No.

4 MS. WHETSEL: No? Tim Felt?

5 MEMBER FELT: No.

6 MS. WHETSEL: Michele Joy?

7 MEMBER JOY: Yes.

8 MS. WHETSEL: Craig Pierson?

9 MEMBER PIERSON: No.

10 MS. WHETSEL: Ron McClain?

11 MEMBER MCCLAIN: No.

12 MS. WHETSEL: Rick Kuprewicz?

13 MEMBER KUPREWICZ: Yes.

14 MS. WHETSEL: Chuck Lesniak?

15 MEMBER LESNIAK: Yes.

16 MS. WHETSEL: Carl Weimer?

17 MEMBER WEIMER: Yes.

18 MS. WHETSEL: It's five to five.

19 CHAIRMAN TAHAMTANI: I wish I had not
20 voted, and I could break the tie. What are the
21 rules? Wait a minute, we can't --

22 We have to decide the vote first.

1 MR. WIESE: We have a tie vote on that
2 one. Tim, is your question relevant to your
3 vote?

4 MEMBER FELT: I was going to make
5 another suggestion.

6 MR. WIESE: Of course, we also like
7 Michele better, but on this case, I think we're
8 going to have to take this as a draw, and then
9 have -- you can have another amendment, I guess,
10 if you want to.

11 MS. WHETSEL: Or it can just be tied,
12 from what I understand from counsel.

13 MEMBER LESNIAK: My understanding --

14 MS. WHETSEL: It's an advisory.

15 MEMBER LESNIAK: -- from Robert's
16 Rules, in the event of a tie, the motion fails.
17 We still have the main motion on the table, so I
18 suggest we move to the main motion.

19 (Simultaneous speaking.)

20 MEMBER LESNIAK: Which included the
21 three years.

22 CHAIRMAN TAHAMTANI: Will somebody

1 check the Robert's Rules of whatever it is that
2 we are working under here?

3 Tim, you had an amendment?

4 MEMBER FELT: I was going to suggest
5 an amendment, if anybody else wants to second it,
6 that we look at one year to begin implementation,
7 but three year for a final implementation, and
8 that way it takes away as determined by DOT. In
9 other words, there's a phase-in period.

10 CHAIRMAN TAHAMTANI: So that's your
11 motion?

12 MEMBER FELT: Yes.

13 CHAIRMAN TAHAMTANI: Is there a second
14 to that motion?

15 PARTICIPANT: Second.

16 CHAIRMAN TAHAMTANI: Second. Any
17 discussions? Cheryl, you've got a book in your
18 hand. You need to take a vote.

19 MS. WHETSEL: Yes, I don't see it yet.

20 CHAIRMAN TAHAMTANI: Can you take a
21 vote?

22 MS. WHETSEL: Oh, I'm sorry.

1 CHAIRMAN TAHAMTANI: By the way, you
2 need to pay this young lady a lot more money just
3 for today because she's taken eight votes now --

4 MS. WHETSEL: I appreciate that.

5 CHAIRMAN TAHAMTANI: -- and we haven't
6 moved to the controversial stuff yet.

7 MS. WHETSEL: Again, just for
8 clarification, we are voting on the amendment.

9 CHAIRMAN TAHAMTANI: To this, what's
10 on the screen, one to three years.

11 (Simultaneous speaking.)

12 MS. WHETSEL: It was an amendment,
13 Todd?

14 PARTICIPANT: No.

15 MS. WHETSEL: Was it Todd?

16 CHAIRMAN TAHAMTANI: No, Tim.

17 MS. WHETSEL: Tim. I'm sorry, Tim.

18 MR. WIESE: It has to begin in one and
19 be completed by three. That's the amendment that
20 I heard, right?

21 PARTICIPANT: That's correct.

22 MR. WIESE: Begin in one -- I'm not

1 sure I'd say begin in one, but whatever -- begin
2 now and be complete within three years.

3 MS. WHETSEL: Between one and three,
4 is that what you're saying, Todd -- Tim?

5 MEMBER FELT: Yes, this is Tim Felt.
6 The concept was that there is some data
7 integration that everybody can do right away.
8 We're providing more guidance from the industry
9 perspective. Rather than make it binary, it's
10 either all 21 immediately, or all 21 in three
11 years. This says let's get started with what we
12 can in a year, full implementation of the 21
13 attributes in three years. That's the spirit
14 behind what I was trying to recommend.

15 CHAIRMAN TAHAMTANI: Tim, does what we
16 have on the screen say what you want to say?

17 MS. WHETSEL: I don't think it was to
18 begin in one year.

19 PARTICIPANT: Let him --

20 MS. WHETSEL: I'm sorry.

21 PARTICIPANT: -- articulate his own
22 amendment.

1 MEMBER FELT: The implementation of
2 data integration to begin in one year, in some
3 form, all 21 attributes to be integrated in three
4 years.

5 CHAIRMAN TAHAMTANI: Whenever we get
6 done with this, we have a motion and second, no
7 other discussions here, unless Tim has more to
8 say. Cheryl -- go ahead.

9 MEMBER KUPREWICZ: I just want to
10 enter into the record that this is the
11 fundamental principle with integrity management.
12 It's codified in current federal regulations, and
13 this wouldn't do it from our perspective. I
14 think the public's going to have a real problem
15 with this. Of all the integrity management
16 processes, this was the core. It was involved in
17 a lot of discussions during the regulatory
18 development over ten years ago. None of this
19 should be a surprise. That's it.

20 CHAIRMAN TAHAMTANI: Thank you. Jeff,
21 respond --

22 MR. WIESE: I just want to add a quick

1 clarification -- this is Jeff -- to Rick. We've
2 talked about it, and I generally agree about the
3 subject of data integration. You know that. I
4 think what we're really talking about here are
5 the specificity of all the elements. Before, the
6 operators had a lot of choice on what elements
7 they were integrating.

8 We're now saying you will have to
9 integrate all of those that you can account for
10 or eliminate them positively in your particular
11 case. It provides a little more specificity than
12 the existing rule does, I think. That's the big
13 difference, in my mind. In general, I agree with
14 you. Data integration should have been going on
15 for a decade, and I think it has, in a lot of
16 operators.

17 MEMBER PIERSON: Craig Pierson,
18 industry. That was the point I tried to make
19 earlier, when I said this is an issue of
20 continuous improvement. It's not a start. It's
21 started. It's happening. It's being done. This
22 is an issue of specificity of continuous

1 improvement.

2 CHAIRMAN TAHAMTANI: Having said all
3 of that, we have a motion from Mr. Felt on the
4 screen there. It's been seconded. Would you
5 take the vote?

6 MS. WHETSEL: Massoud?

7 CHAIRMAN TAHAMTANI: Yes.

8 PARTICIPANT: Subject to Tim's
9 agreement --

10 CHAIRMAN TAHAMTANI: I'm sorry, we're
11 taking a vote.

12 MS. WHETSEL: Okay. John Quackenbush?

13 MEMBER QUACKENBUSH: Yes.

14 MS. WHETSEL: Todd Denton?

15 MEMBER DENTON: Yes.

16 MS. WHETSEL: Tim Felt?

17 MEMBER FELT: Yes.

18 MS. WHETSEL: Michele Joy?

19 MEMBER JOY: Yes.

20 MS. WHETSEL: Craig Pierson?

21 MEMBER PIERSON: Yes.

22 MS. WHETSEL: Ron McClain?

1 MEMBER MCCLAIN: Yes.

2 MS. WHETSEL: Rick Kuprewicz?

3 MEMBER KUPREWICZ: No.

4 MS. WHETSEL: Chuck Lesniak?

5 MEMBER LESNIAK: No.

6 MS. WHETSEL: Carl Weimer?

7 MEMBER WEIMER: No.

8 MS. WHETSEL: Seven to three, motion
9 passes.

10 CHAIRMAN TAHAMTANI: I don't believe
11 we need to go back to the original. We do?

12 MEMBER LESNIAK: Yes, the main
13 motion's still on the table. This was just an
14 amendment to the main motion.

15 CHAIRMAN TAHAMTANI: So the amendment
16 has passed to the main motion. It looks -- can
17 you put the other one --

18 (Simultaneous speaking.)

19 CHAIRMAN TAHAMTANI: -- I didn't think
20 there was, but we're going to vote.

21 MS. WHETSEL: I thought the original
22 was three years.

1 CHAIRMAN TAHAMTANI: But the committee
2 wants to vote on the original three years.

3 MEMBER LESNIAK: No, the main motion
4 has been amended, and we have voted on the
5 condition.

6 CHAIRMAN TAHAMTANI: The amended.

7 MEMBER LESNIAK: I think it will be
8 unanimous, but it --

9 MS. WHETSEL: I don't -- I believe we
10 voted on an amended three years. Correct me if
11 --

12 MEMBER LESNIAK: Okay, I think you're
13 right.

14 CHAIRMAN TAHAMTANI: It was three
15 years. It got amended. We voted on the amended
16 motion. I don't think we need to go back to the
17 three years.

18 MEMBER LESNIAK: No, I think you're
19 correct.

20 CHAIRMAN TAHAMTANI: Okay --

21 MS. WHETSEL: We could withdraw the
22 original.

1 CHAIRMAN TAHAMTANI: No, it's just --
2 it sits there. When I run these kinds of
3 meetings in Virginia, we don't take lunch.

4 PARTICIPANT: No bathroom breaks,
5 either.

6 CHAIRMAN TAHAMTANI: No bathroom
7 breaks, either. But I know we're in northern
8 Virginia, and the rules are different here. In
9 terms of progress, I think we have accomplished
10 the non-controversial issues. I want to
11 emphasize that. This afternoon, we have
12 controversial issues. Do you want to take lunch?

13 MR. WIESE: Yes, I think we're going
14 to have to take lunch. The administrators, I've
15 been going back and forth with them. She's on
16 her way over, so I told her to stall and be here
17 at 1:30, which would give you all time to run out
18 and grab a quick sandwich or something, caffeine
19 if you need it to perk up. I think it'd be
20 inhospitable, since we're in northern Virginia,
21 not to give people an hour, but we won't give any
22 more than that. I would say --

1 CHAIRMAN TAHAMTANI: I was going to
2 say 45 minutes.

3 MR. WIESE: Well, can we have a second
4 on that? Kidding.

5 CHAIRMAN TAHAMTANI: Forty-five
6 minutes, please.

7 (Whereupon, the above-entitled matter
8 went off the record at 12:31 p.m. and resumed at
9 1:19 p.m.)

10 CHAIRMAN TAHAMTANI: All right, thank
11 you all very much for being somewhat on time. As
12 soon as we get Cameron to put stuff on the
13 screen, we'll start.

14 PARTICIPANT: The motion on the table
15 is?

16 CHAIRMAN TAHAMTANI: Jeff, you had a
17 comment, please.

18 MR. WIESE: I'm going to ask you in a
19 second. The administrator will be in shortly, I
20 believe. When she comes in, I'm going to beg
21 your indulgence and just take a break and let her
22 talk to you for a second. She wanted to. She

1 couldn't get out this morning.

2 CHAIRMAN TAHAMTANI: Should she sit
3 through some of this, so that she realized how
4 hard we work for PHMSA?

5 MR. WIESE: She probably -- she'll be
6 winging in. I don't think you could keep her out
7 of the debate. I don't know. Once the crowd
8 gets back in, I wanted to ask a couple of
9 fundamental questions that I forgot to ask early
10 on. One of them is media. Do we have any other
11 reporters in the crowd? You're not a reporter.

12 MEMBER WEIMER: I saw the Politico
13 people in the back.

14 MR. WIESE: Oh, good, really? Good,
15 thanks, Carl. Appreciate that. So much to say,
16 so little time.

17 CHAIRMAN TAHAMTANI: All right,
18 Cheryl, we're back in order. Thank you very
19 much, everybody. Did you want a gavel?

20 PARTICIPANT: You have to use your
21 outdoor voice, or your Barry White voice.

22 CHAIRMAN TAHAMTANI: All right, Alan.

1 INSPECTIONS OF PIPELINES FOLLOWING EXTREME
2 WEATHER EVENTS OR DISASTERS

3 MR. MAYBERRY: Okay, welcome back,
4 everyone, and thank you, Massoud. Picking back
5 up where we left off, we're getting into some of
6 the less controversial issues. Actually, it's
7 hard to tell by this morning, but anyway, first
8 one is up is inspections of pipelines following
9 extreme weather events or disasters. The pattern
10 today for the afternoon is we're going to take
11 each one individually, and then decide at the
12 very end -- if I understand -- go through a vote
13 at the end of each one.

14 I'll try to, in the interest of time,
15 be very efficient on this. The first slide,
16 similar pattern to before, the issue, the
17 proposal, and the basis. This involves the issue
18 of after hurricanes or major floods, a
19 requirement to proactively inspect for damage to
20 facilities. The comments summarized here are
21 high level. We're going to get into individual
22 comments by section, too, here, but these are the

1 overarching comments, in general, for the
2 section, so John, if you could ----

3 (Simultaneous speaking.)

4 MR. GALE: Sure, thanks, Alan. This
5 is one of the areas in the rule where we received
6 the most comments. We received requests to
7 clarify basically when did an event end, what was
8 an event that was similar in nature to a
9 hurricane and etc.? We also had comments saying
10 there was no need for these requirements because
11 they were already covered in 195.402. There was
12 also comments saying we needed to be more
13 proactive in our measures. Alan, did you mention
14 something regarding the current integrity
15 management rules on being proactive on that?

16 MR. MAYBERRY: Right. There were
17 comments adding requirements for being proactive
18 to address these threats during events, being
19 better prepared for them. Actually, the current
20 integrity management regulations do address the
21 requirement to know and understand your system.
22 Consistent with that, it would include the threat

1 of flooding or wind damage and the like. What
2 we're talking about here is post-natural disaster
3 proactive inspections for damage. That's what
4 we're talking about here. Primary example would
5 be post hurricane, where you have damage in the
6 Gulf of Mexico. In some cases in the past, we've
7 seen a delay in actually just getting out there
8 to assess the damage and the needed follow-up
9 actions. That's kind of what we're getting at
10 here in this.

11 MR. GALE: Thank you, Alan. We're
12 also asking, of course, to clarify and define
13 what extreme weather event is, clarify and
14 justify the 72-hour timeline, and allow for
15 tailoring for on-site-specific conditions. What
16 we have for you now to help facilitate the
17 discussion is a paragraph by paragraph breakdown
18 of that section in the regulations.

19 Also, we then identify the issue we
20 think that needs to be addressed for that given
21 section, and then a recommendation for an
22 amendment to that section that can at least begin

1 the discussion of the committee. Then we believe
2 it'll be prudent to then do a vote just on this
3 one single proposal here. Alan, if you could,
4 maybe just flip to the next --

5 MR. MAYBERRY: The first section is
6 414, Section A, General. This is the general
7 section of that part of the code. The current
8 text is up there now.

9 MR. GALE: That's the current --
10 that's what was actually proposed. On the next
11 slide, what we identify is some of the things we
12 need to kind of work on, which is the nuances of
13 weather events, the pipeline construction and
14 design, and the requested definitive conditions
15 that would trigger an inspection, or just an
16 occurrence of an event would trigger, and a
17 request -- or the recognition that these events
18 can have widely disparate impacts on lines and
19 operators.

20 Based on that, and based on some of
21 the other comments, and looking as a starting
22 point was a comment we received from API we have

1 in front of you in the next slide is a revision
2 to Paragraph A that we believe would cover some
3 of those issues and begin our discussions on this
4 topic.

5 MR. MAYBERRY: Commenters were looking
6 for certainty on what we're talking about. How
7 would you define a ----

8 (Simultaneous speaking.)

9 MR. GALE: We do this for each
10 paragraph. We could go through all of these, or
11 we could just go paragraph by paragraph, whatever
12 the committee would like.

13 CHAIRMAN TAHAMTANI: I suggest we go
14 paragraph by paragraph. You're focused on it.
15 Let's discuss it and move on. Craig.

16 MEMBER PIERSON: Craig Pierson,
17 liquids. Just to frame the discussion as we go,
18 we want to make this work. This is something we
19 feel like is directionally right. Our comments
20 are more around how can we find ourselves out of
21 compliance, despite our best efforts? That's the
22 nature of our comments. I don't want them to

1 come across that we're resisting this. We want
2 to figure out how to make this work. It's
3 directionally right.

4 MR. MAYBERRY: As far as addressing
5 the certainty part, there's the option of
6 government defining what events we're talking
7 about, or in the case of what we have here is
8 putting the onus on the operator to determine the
9 event. That would acknowledge the variation. I
10 think that would also address the variation that
11 there could be in the ability of certain
12 facilities to handle certain events and other
13 facilities not to handle, but put the onus on the
14 operator to determine what events those would be.

15 CHAIRMAN TAHAMTANI: Rick.

16 MEMBER KUPREWICZ: It says extreme
17 weather event. This is more of a dialogue
18 question -- hurricane, flood, earthquake, a
19 natural disaster or other similar event. I guess
20 the question I'd throw on the table here, where
21 does landslide stand on that? That's a natural
22 event, and I have yet to ever see a pipeline that

1 can withstand a massive landslide. Question for
2 the group to discuss.

3 MR. MAYBERRY: I would anticipate that
4 would be another similar type natural disaster
5 that would have to be addressed.

6 MEMBER KUPREWICZ: I need to capture
7 that in the --

8 MR. MAYBERRY: Right. Well, have
9 other, similar events, but we could somehow --

10 PARTICIPANT: We could add it in.

11 MR. MAYBERRY: We could add that, too.
12 We could actually name that one by -- because
13 that one has been an issue.

14 MEMBER KUPREWICZ: We're saying a lot
15 of -- I'm not here to say what's right or wrong,
16 but I've seen too many discussions where people
17 think landslide, we can actually put a pipeline
18 in a massive landslide area and it's going to
19 ride it out.

20 MR. MAYBERRY: We could add earth
21 movement.

22 MR. WIESE: In my continuing practice

1 of trying to stay out of it as much as possible,
2 I thought I would add that the one thing that I
3 think we'll have to add clarity to later is this
4 thing that the operator determines, too. I know
5 that there are gradations within here, but I'm
6 telling you when we have record floods, that
7 ought to be one.

8 When there's a record and everyone
9 knows there's a record going on, they need to
10 focus on it. We're going to have to provide some
11 additional guidance on this about -- if we had
12 record flooding and somebody said, "I don't think
13 that was an event that might cause a significant
14 likelihood of damage," you understand what I'm
15 saying? It's easy to catch the extremes. It's
16 trying to figure out where the line stops on
17 that.

18 CHAIRMAN TAHAMTANI: But there is
19 where you would come up with some guidelines.

20 Chuck.

21 MEMBER LESNIAK: Chuck Lesniak. In
22 looking at the language, I've got a little bit of

1 a question about significant likelihood. I can
2 just really foresee a lot of arguments in the
3 future about what is significant likelihood and
4 would suggest that you strike significant and
5 just put likelihood. Some of this can actually
6 be predicted fairly well and ought to be being
7 done by the industry, river crossings, for one.

8 Erosion hazard zones can be predicted
9 to a really high degree of certainty, and an
10 operator should know if their pipeline is within
11 the erosion hazard zone of a river, in terms of
12 the bed and banks, so they should be able to know
13 except for this kind of flood, this pipeline's
14 not at risk, or that this pipeline would never
15 likely be at risk because it's very deep. That's
16 information that should be known. I would
17 suggest striking significant. It's just going to
18 be a point of contention, I think, in the future.

19 CHAIRMAN TAHAMTANI: All right,
20 significant is gone. Any other comments about
21 this proposed rule that's been revised?

22 MEMBER WEIMER: Yes, Carl Weimer. I

1 think everybody kind of came to a consensus that
2 there was a problem because there wasn't a
3 definition of what is an extreme weather event,
4 so you're trying to get at it. I'm not sure I
5 like this language because again, you're writing
6 a regulation that has no teeth because you're
7 leaving it up to the operator.

8 If it's the operator that determines
9 what is likelihood, what if they don't determine
10 what is the likelihood, and then they haven't
11 broken the law because you've left it up to them
12 to make that determination. I would've preferred
13 some greater clarity on what an extreme weather
14 event is that triggers this, but I don't have an
15 answer to how you do that.

16 MR. WIESE: Massoud said just a minute
17 ago -- I'm sorry for jumping in. Massoud
18 mentioned just a minute ago that oftentimes --
19 and this is almost a performance-based statement
20 -- we have to provide the guidance through -- I
21 think you know that on a record event, it's easy
22 to tell where to draw the line. That's what you

1 have to do in the guidance, that it's not exactly
2 voluntary. It's fairly clear that it's going to
3 be public on the website, here's the guidance.
4 But I don't know where to draw that line, either.

5 I've just seen a number of events --
6 I'm sure we all have -- that you can point to and
7 say, "That was one." But there are a lot of them
8 in between that are maybe questionable. I don't
9 know what to say, Carl. I don't have the
10 language to suggest a substitute that would list
11 all those, so that's the best I can offer is that
12 we would provide guidance following.

13 CHAIRMAN TAHAMTANI: Other comments?
14 Here's where we want to take a vote.

15 MR. MAYBERRY: Do we want to get
16 through the full part? There are other sections
17 of this. Do we want to vote on this part?

18 PARTICIPANT: How many sections are
19 there?

20 PARTICIPANT: There's four.

21 MR. MAYBERRY: Four, yes.

22 CHAIRMAN TAHAMTANI: Four sections?

1 (Simultaneous speaking.)

2 PARTICIPANT: Does that make sense to
3 the committee, and then take a vote?

4 MR. MAYBERRY: We'll see how it goes.

5 CHAIRMAN TAHAMTANI: Okay, go on to
6 the next.

7 MR. MAYBERRY: The next language in
8 that section would be the inspection methods that
9 are used. That's the existing language in the
10 proposed rule, and then comments on that, as far
11 as the comment that's the standards that we set
12 for inspecting should be articulated, and then
13 also feasible.

14 We went from that proposed language
15 that you saw earlier to add what's in red up here
16 with addressing the method for performing the --
17 at least dividing it in two, the initial
18 inspection, and then at that point determining a
19 need for additional assessments.

20 Anyway, just to reiterate, that whole
21 section reads, "An operator must consider the
22 nature of the event and physical characteristics,

1 operating conditions, location and prior history
2 of the affected pipeline in determining the
3 appropriate method for determining the initial
4 inspection to determine damage and the need for
5 additional assessments required under Paragraph A
6 of this section." It's a nice long sentence.

7 CHAIRMAN TAHAMTANI: Comments?

8 MR. MAYBERRY: Okay, ready to move on?

9 CHAIRMAN TAHAMTANI: If not comments,
10 move on to the next section.

11 MR. MAYBERRY: Next, on the time
12 period, this is one where we had a number of
13 comments on, too, as far as the 72 hour. This
14 current language talked about -- requires within
15 72 hours after the cessation of the event, or as
16 soon as the affected area can be safely accessed
17 by the personnel and equipment required to
18 perform the inspection. Some of the comments was
19 how do you determine when the event is over?

20 Some inspections may need to go after
21 that due to unavailable equipment or lead time
22 for equipment, safety concerns. I know that

1 happens. Operators should have the option to
2 document when time period isn't feasible. As far
3 as how we ended up with that, we modified the
4 text that you saw earlier, so it said the
5 cessation of the event is the time -- defined as
6 the point in time that the affected area can be
7 safely accessed by personnel and equipment
8 required to perform the inspection. I think we
9 have one question.

10 MEMBER JOY: I appreciate the changes
11 that were made, and we're totally supportive of
12 getting in there and inspecting as soon as we
13 can. But as someone who operates in the Gulf
14 Coast, where we often deal with hurricanes, I'm
15 concerned about a requirement that would require
16 us to complete an assessment within 72 hours.

17 We have no problem getting started,
18 but we also have issues sometimes getting
19 equipment. If you have a major hurricane, your
20 helicopters, which you're going to use for your
21 assessment, may be wiped out, so it takes us a
22 while to get them from somewhere else. It could

1 be over a very large area. I guess the main
2 concern is okay with the intent, but to require
3 that this inspection be done within 72 hours
4 feels problematic.

5 MR. MAYBERRY: Would the prior
6 language be better?

7 MEMBER JOY: No, actually, that was a
8 problem as well. Doing it within 72 hours, like
9 I said, everybody's intent on getting out there
10 and inspecting as soon as we can. Obviously, we
11 want to bring our operations back up. But
12 sometimes we physically cannot get in there
13 within 72 hours, just even getting in there,
14 getting the equipment, from the time they say go,
15 then getting it completed within 72 hours is very
16 difficult.

17 I don't have any problem saying you've
18 got to start within 72 hours, and I'm sensitive
19 to the folks who are dealing with maybe smaller
20 issues that may not be over large expanses, where
21 you have a river crossing, or you have some other
22 area that might be easier to determine within a

1 short period of time, but for those of us who
2 have significant areas to address after a natural
3 disaster, I just don't think we'd be able to
4 complete an assessment within 72 hours.

5 MR. MAYBERRY: Would it help to say
6 the initial assessment must commence within 72
7 hours? Because we did have --

8 MEMBER JOY: Yes. We would be fine
9 with that because we feel that we could get that.
10 Even when we didn't have -- I know in one
11 instance, we actually didn't have helicopters.
12 We brought them in from another part of the
13 country. Seventy-two hours, we could get them in
14 there.

15 MR. MAYBERRY: I know we've dealt with
16 restricted air space issues, as well, that we
17 normally help intervene on.

18 CHAIRMAN TAHAMTANI: Chuck.

19 MEMBER LESNIAK: Chuck Lesniak. I'm
20 okay with the commence language. What if PHMSA
21 had leeway to either waive the requirement for
22 declared emergencies, declared disaster areas

1 such as that, or if the pipeline was shut down as
2 an alternative to the 72-hour rule, so that
3 you're certainly reducing the risk profile, at
4 that point, or if PHMSA agrees that really, it's
5 not feasible for anybody to get in there and do
6 assessments within 72 hours, PHMSA could waive
7 the requirement.

8 CHAIRMAN TAHAMTANI: There is new
9 language on the screen, with the word must
10 commence within 72 hours after the -- that's
11 Michele's suggestion. Chuck, what do you think
12 of that?

13 PARTICIPANT: Would this be in place
14 of commence?

15 MEMBER LESNIAK: I think that it still
16 may be problematic for the industry, in that if
17 there's the ability to say under certain
18 conditions, this is just not practical or
19 feasible, and either you can shut your pipeline
20 down, or if they say we really can't get in and
21 PHMSA agrees, then PHMSA could say, "We agree
22 that this is not appropriate for you to get in

1 right now, and we're okay with that."

2 MR. WIESE: Chairman? I might just
3 add that I think we all understand the sentiment
4 involved in that. Through our inspection and
5 enforcement process, you can do that. You can
6 take account of extenuating circumstances, but we
7 would look for them, as somebody had written on
8 one of the earlier ones, to document the reasons
9 why, so that documentation we're looking at after
10 the fact. But you're right, they need the
11 flexibility, and Michele's points, perfectly
12 legitimate. We have all seen cases where there's
13 no way you can get there in 72 hours.

14 CHAIRMAN TAHAMTANI: Ron.

15 MEMBER MCCLAIN: Just regarding the
16 condition that a pipeline be shut down, if it's
17 running with no indications, no leak detection or
18 anything, I would hate to have to shut it down
19 because there's a secondary emergency you cause
20 if you start shutting down pipelines. Jeff, I
21 know you're very aware of that, when Katrina and
22 others came through, the effort to try to get

1 these lines restarted. So there's a balancing
2 act of assessing risk individually. Again, I
3 think as several have said, industry buys into
4 the concept, it's just we don't want to have a
5 rule that works against us, and also the public,
6 during these events.

7 MR. MAYBERRY: Mr. Chairman, I was
8 going to add, another add might be -- I'll go
9 ahead and read the add. It would be in the last
10 part of that sentence. "The affected area can be
11 safely assessed by the personnel and equipment,
12 including availability of personnel and equipment
13 required to perform the inspection, as determined
14 under Paragraph B." Okay, right. "Of personnel
15 and equipment," and put a comma at the end and at
16 the beginning of what was just added, and bold
17 that.

18 CHAIRMAN TAHAMTANI: I guess the
19 question is whether we need to really say all
20 that in this language here. It's not reading
21 well to me. Or in the situation you were talking
22 about, if you can't meet the 72 hours, could you

1 not ask for an emergency waiver?

2 MEMBER JOY: Michele Joy, industry.
3 Yes and no. As Jeff can attest, when we were
4 going through Katrina and all that stuff, you
5 couldn't reach people, and you couldn't get the
6 stuff you needed, so you were then asking for
7 them after the fact. It was just pandemonium.
8 I'm particularly sensitive to that, having spent
9 a lot of time trying to coordinate communications
10 between the pipelines and PHMSA. It was really
11 difficult to get that done. I recognize that
12 there are many other circumstances where yes, you
13 could, so I don't know.

14 MR. MAYBERRY: Can we work with what
15 we have up there, maybe smooth it out a bit style
16 wise, and then -- but we'll get the general gist
17 of what we're looking for there acceptable?

18 CHAIRMAN TAHAMTANI: Any other
19 comments on this? If not, we're going to stop at
20 this point. We have the administrator here, and
21 I believe she wants to share a couple of comments
22 with the committee and the public.

1 MS. DOMINGUEZ: Thank you.

2 CHAIRMAN TAHAMTANI: Welcome.

3 MS. DOMINGUEZ: Thank you. Good
4 afternoon, everybody. I am enjoying the lively
5 conversation.

6 (Simultaneous speaking.)

7 MS. DOMINGUEZ: Okay. I appreciate
8 that we have a fully formed audience, as well,
9 not just all PHMSA folks, but I see a lot of
10 folks from others, as well, so thank you all very
11 much for attending.

12 This is tough work, so I very much
13 appreciate everyone's -- the advisory committee
14 members, in particular, for your preparation in
15 advance of this meeting, for your time today -- I
16 know some of you came from far and wide -- but
17 also for your expertise in lending your voice to
18 a very, very important process, which is our
19 rulemaking process here.

20 The hazardous liquid rule couldn't be
21 a higher priority at PHMSA, in terms of moving it
22 forward. This is a critical part in that

1 process. With the publication of the NPRM, we
2 went about looking at things a little bit
3 differently, looking to get more and more public
4 comment and generate a little bit more
5 information on our end. We held a series of
6 webinars on this rulemaking. We're hoping to
7 educate more and more people along the way.

8 I hope you take it as an indication
9 about how PHMSA's looking to change the way we do
10 business across the board, providing more
11 information, providing more education, providing
12 more transparency in our regulatory process. The
13 advisory committee process is part of that. The
14 work that you're undertaking today is critical to
15 advancing our regulatory regime, and I very much
16 thank you for your efforts.

17 It's not without time on your end,
18 commitment, and I know that our team has worked
19 very hard to go through -- we had a record number
20 of comments this time around. We had over 70
21 comments to this rulemaking, some of them
22 representing multiple stakeholders. You can

1 factor a couple of them there, multiply it by
2 100. I very much appreciate that. It gets to
3 the heart of what we're actually trying to do,
4 which is generate a larger conversation
5 domestically about our rulemaking and make sure
6 that everyone's got a voice at the table. That
7 said, I know that you're undertaking a section
8 here of the rule that I will tell you we've had
9 the chance actually to testify on, which is
10 really looking at how do we make sure, in extreme
11 weather events, we're inspecting pipeline as
12 quickly as we possibly can in safe circumstances,
13 recognizing that there are extenuating
14 circumstances?

15 Appreciate everybody's input on this
16 section, in particular. I will also tell you the
17 portion here that I've also talked about this in
18 context, which is I hope that we drive some
19 technological advancements in this area.

20 While physical inspection of a
21 pipeline is actually critical, we actually need
22 to start looking at some technology about how to

1 advance warn ourselves, the operators, etc., on
2 changing conditions, whether that's in a river or
3 other places, so that we've got technology
4 working for us and informing operators on the
5 condition of their pipeline, but also on changing
6 flow, changing circumstances in any given
7 atmosphere. I'm particularly referring to water.
8 I'm not going to go through -- I know there's
9 other very, very significant portions of this
10 rule. You all are taking it very methodically, I
11 presume. But again, I wanted to say thank you
12 again for your time, your energy, your
13 commitment. For those of you that have taken the
14 time in communities across the country, as well,
15 to comment on this rule, greatly appreciate it.
16 If anybody has any questions, I'm happy to take
17 them, but I just wanted to convey my thanks above
18 all.

19 CHAIRMAN TAHAMTANI: Thank you very
20 much. Any questions? With that, then, Alan will
21 move on to 414 Section D -- oh, we're not moving.

22 MS. DOMINGUEZ: Sorry. I'm going to

1 take one -- while I have your attention -- and I
2 apologize for interrupting you, Massoud --

3 CHAIRMAN TAHAMTANI: No problem.

4 MS. DOMINGUEZ: The one item that I've
5 talked about before, the last time that I had a
6 chance to meet with you all, when you were
7 meeting here a few months ago, that is around a
8 safety management system, a safety management
9 framework. The Department of Transportation writ
10 large, Secretary Foxx has taken on an SMS as a
11 priority item for the Department to look at every
12 single mode of transportation. Some have already
13 adopted an SMS framework.

14 You all, many people in the pipeline
15 community, in particular, and in the HAZMAT
16 community writ large, operate in a safety
17 management framework. We've had the chance over
18 the last year to work cooperatively across the
19 board to develop, through a working group
20 process, Recommended Practice 1173, which really
21 is a framework for a safety management system.

22 I can't underscore how important it is

1 for this industry, for the American public, for
2 PHMSA, for the Department of Transportation to
3 continue in this important investment in a safety
4 management framework. I commend you all. I know
5 you had a good chance to talk about it at the
6 last meeting. Massoud, I know you had some best
7 practices that you shared, and others at the
8 state level, but there's a lot of opportunity
9 here. There's a lot of opportunity for exchange
10 of information. There's a lot of opportunity to
11 further inform ourselves and really identify risk
12 before it identifies us in the form of a failure,
13 in the form of an accident. It's one more step
14 in a system wide data analysis effort,
15 communication effort, transparency, and risk
16 identification.

17 I encourage you all to -- those of you
18 that are engaged in it personally with your
19 companies or with your communities that you
20 represent, we're going to be doing a lot more
21 educating on an SMS framework, but more
22 importantly, adopting an SMS culture, both

1 internal to PHMSA and with the communities that
2 we regulate. If you all can look at our
3 rulemaking process as a part of that, that is a
4 great lens in which to operate, so thank you.

5 MR. WIESE: I want to add one thing to
6 it. There are a number of members of this
7 committee who were on the RP 1173 committee, so
8 our eternal thanks to them for helping. That was
9 two plus years of monthly slogging it out, but I
10 think it was a good effort. It was a really good
11 effort. Today is a meeting where we're really
12 talking about regulation and modifying
13 regulation. It's not nearly as much fun as when
14 we get into a policy discussion, but I think
15 we're anticipating around May, we'll look to a
16 joint session with the gas committee, as well,
17 and we'd like to have -- there will be several
18 opportunities before then, including -- I know
19 that the liquid industry is having some, AGA is
20 sponsoring some, INGAA is, the Administrator's
21 very interest in that, will be coming and talking
22 with you.

1 But I'd like to have a focus on SMS in
2 the May meeting, so we'll be talking more on that
3 issue. I just wanted to prepare you. We'll
4 continue to make progress on this issue all year
5 long, so thanks for your help.

6 CHAIRMAN TAHAMTANI: Thank you, Jeff.
7 Alan, 404-D.

8 MR. MAYBERRY: Thank you very much.
9 Thank you, Administrator. We'll move on to
10 Section D. Did I mess that up? Look at all the
11 progress we've made. Section D.

12 MS. DOMINGUEZ: Was that just for my
13 benefit?

14 MR. MAYBERRY: It's a summary.
15 Section D, the last one of this post-incident
16 part, talks about remedial action. Chuck, this
17 is the area which would get to what you were
18 talking about earlier as one option to mitigate
19 the potential threat. What action does the
20 operator have to take? Here we have the proposed
21 rule language as it was, and then comments on
22 that. John, I overlooked you last time, but you

1 want to say anything about comments?

2 MR. GALE: Sure. There was actually
3 no specific suggestions for any regulatory
4 changes to these requirements. There was
5 reference, of course, back to the duplication of
6 the emergency response plans required by 195.402.
7 Other than that, there was really no suggestions
8 for any changes to this section.

9 MR. MAYBERRY: Right. Our issue with
10 that was really a lack of specifics in that
11 section, so we felt we needed more clarity around
12 the expectations in this. Here you have -- maybe
13 we should have called this one the
14 non-controversial ones, unless somebody comes up
15 with something now, but here's the proposed
16 change, which has no changes.

17 MR. GALE: Alan, we're going to be
18 checking our barometer on what's controversial
19 next time.

20 MR. MAYBERRY: Right.

21 CHAIRMAN TAHAMTANI: I believe that
22 we're ready for a motion and a vote on all the

1 414 revisions.

2 MR. GALE: To help the committee, we
3 actually have some language up there that can
4 help them, or at least they can modify ----

5 (Simultaneous speaking.)

6 CHAIRMAN TAHAMTANI: Michele is
7 experienced at this now --

8 MR. GALE: She's a pro.

9 CHAIRMAN TAHAMTANI: -- we don't need
10 the language on the screen, as a matter of fact.

11 MR. GALE: We made it easy.

12 MEMBER JOY: I move that the proposed
13 rule, as published in the Federal Register and
14 the draft regulatory evaluation are technically
15 feasible, reasonable, cost effective and
16 practicable, as relates to extreme weather and
17 other events, if the language, as was discussed
18 for amendment during the meeting, be adopted.

19 CHAIRMAN TAHAMTANI: As shown in red.

20 MEMBER JOY: As shown in red.

21 CHAIRMAN TAHAMTANI: That was a
22 motion, I think.

1 MEMBER PIERSON: Second.

2 CHAIRMAN TAHAMTANI: Second. Any
3 discussions? Chuck.

4 MEMBER LESNIAK: Can we see the
5 changes?

6 CHAIRMAN TAHAMTANI: All right, go
7 back up to 414-A.

8 MR. MAYBERRY: Okay, that's A.

9 CHAIRMAN TAHAMTANI: You want to see
10 B, C, D or --

11 MR. MAYBERRY: B.

12 CHAIRMAN TAHAMTANI: B.

13 MR. MAYBERRY: C. Some of the --

14 CHAIRMAN TAHAMTANI: Commence needs to
15 be in red.

16 MR. MAYBERRY: Right, all the -- also
17 the "including availability of personnel and
18 equipment."

19 PARTICIPANT: Landslide on A should be
20 in red, as well.

21 MR. MAYBERRY: Including availability
22 of personnel and equipment. That's red.

1 PARTICIPANT: Could you go back to A?

2 MR. MAYBERRY: Okay, yes, we need to
3 catch the comment on landslides. This is where
4 we also talked about we will develop guide
5 material.

6 CHAIRMAN TAHAMTANI: We don't need to
7 put that in there.

8 MR. MAYBERRY: We don't have to have
9 that in here.

10 CHAIRMAN TAHAMTANI: Change it to red.

11 MR. MAYBERRY: Okay, we good? So
12 that's A.

13 CHAIRMAN TAHAMTANI: You want to --
14 (Simultaneous speaking.)

15 MR. MAYBERRY: I'll take control back.

16 CHAIRMAN TAHAMTANI: All right, hold
17 on. Chuck.

18 MEMBER LESNIAK: I think there was
19 some discussion about -- I think it was either
20 Carl or Rick brought it up about the operator
21 determines and that potentially being
22 problematic. It seems to me that I agree. If

1 you're just silent on that, then -- these rules
2 apply to the operator, so why do we need to say
3 that the operator determines? My fear is if they
4 don't make that determination, is the rule still
5 enforceable for the follow-up actions? I've been
6 around lawyers too long, and I start to try and
7 twist things into knots. That's one that maybe
8 could get twisted into a knot. Would it be
9 better to just be silent? I could live with it,
10 but maybe it's unnecessary.

11 CHAIRMAN TAHAMTANI: Jeff.

12 MR. WIESE: I think my specific
13 suggestion is just take out the operator
14 determines that has a likelihood of damage. The
15 rule applies to the operator. They've got to go
16 do this. Why do we have to say that the operator
17 determines?

18 MR. MAYBERRY: We were trying to work
19 around how do we identify -- there was a request
20 to add some clarity over what we're talking
21 about. Please clarify what kind of events. So
22 we were putting the onus on the operator to ----

1 (Simultaneous speaking.)

2 MEMBER LESNIAK: If nobody else has a
3 problem with it, I'm okay with leaving it as is.
4 I'm just raising it as a question.

5 MEMBER KUPREWICZ: Chuck, if you just
6 took out "similar events to have a likelihood of
7 damage to infrastructure," the operator will be
8 able to defend his position. The lawyers will
9 argue regardless of that, but I think you're
10 right. The idea is to capture these events.
11 Prudent pipeline operators are way ahead of this,
12 and in a major event, they're going to try to
13 figure it out. But I think you're right. If we
14 leave that clause in of likelihood of damage to
15 be determined by the operator, you've defeated
16 the purpose of the regulation. I'd recommend and
17 support removing that language.

18 CHAIRMAN TAHAMTANI: Does this change
19 cause some heartburn for the operators?

20 MEMBER MCCLAIN: I think the consensus
21 of discussion and shared looks, we would agree
22 that's okay to take that out.

1 CHAIRMAN TAHAMTANI: I appreciate the
2 shared looks. I wish we could do a lot of work
3 just by looking at each other. That would be
4 great. All right, can you move on and look at B,
5 please? Move on to C. Can somebody else operate
6 this gizmo there?

7 PARTICIPANT: Can somebody other --
8 (Simultaneous speaking.)

9 CHAIRMAN TAHAMTANI: All the red means
10 we've done a lot of work. This is why it keeps
11 showing you this.

12 PARTICIPANT: Just wanted to reinforce
13 that point.

14 CHAIRMAN TAHAMTANI: No change in D.
15 We had a motion. We had a second. Any other
16 discussions? Cheryl.

17 MS. WHETSEL: All right, onward with
18 the vote. Massoud?

19 CHAIRMAN TAHAMTANI: Yes.

20 MS. WHETSEL: Poor Massoud doesn't
21 have a last name. I'm sorry.

22 CHAIRMAN TAHAMTANI: I do have a last

1 name, but it's not used often.

2 MS. WHETSEL: Tahamtani. Oh, yes,
3 okay. John Quackenbush?

4 MEMBER QUACKENBUSH: Yes.

5 MS. WHETSEL: Todd Denton?

6 MEMBER DENTON: Yes.

7 MS. WHETSEL: Tim Felt?

8 MEMBER FELT: Yes.

9 MS. WHETSEL: Michele Joy?

10 MEMBER JOY: Yes.

11 MS. WHETSEL: Craig Pierson?

12 MEMBER PIERSON: Yes.

13 MS. WHETSEL: Ron McClain?

14 MEMBER MCCLAIN: Yes.

15 MS. WHETSEL: Rick Kuprewicz?

16 MEMBER KUPREWICZ: Yes.

17 MS. WHETSEL: Chuck Lesniak?

18 MEMBER LESNIAK: Yes.

19 MS. WHETSEL: Carl Weimer?

20 MEMBER WEIMER: Yes.

21 MS. WHETSEL: Motion passes.

22 CHAIRMAN TAHAMTANI: Alan, are you

1 ready?

2 MR. MAYBERRY: Yes, let's move on.

3 CHAIRMAN TAHAMTANI: By the way, there
4 shall not be any breaks until we get through this
5 whole thing, so be patient. Don't drink. Go
6 ahead.

7 PERIODIC ASSESSMENTS

8 MR. MAYBERRY: The next topic involves
9 periodic assessments. The issue, currently lines
10 outside of HCAs are not assessed periodically due
11 to the lack of the requirement to do so, so have
12 a proposal to modify 416, requiring operators to
13 assess non-HCAs at least once every ten years.
14 Then the basis would ensure operators obtain
15 information necessary outside of HCAs. In fact,
16 information known outside of HCAs should be
17 applied in HCAs anyway and vice versa. Comments
18 related to this part were many, and John, if you
19 want to?

20 MR. GALE: Sure, thank you, Alan.
21 John Gale again here. We actually received a lot
22 of comments in support of this proposal, although

1 there was some requests to make some
2 modifications to it. One was on the use of the
3 assessment methods. The request was to allow
4 additional assessment methods that are currently
5 provided for for all the HCA lines, to prohibit
6 waivers for ILI tools, prohibit direct
7 assessments.

8 There was also a request that we
9 clarify the applicability of this requirement to
10 just transmission lines or line pipe and not to
11 just all pipeline facilities. There was also a
12 request to examine short lines and CO2 pipelines.
13 There was also discussions -- actually, there was
14 a lot of discussion in the webinars about when
15 the first assessment would be required. Would it
16 be ten years? Would it be within a five-year
17 period or some other period of time? There was
18 also requests to reduce the intervals. We
19 proposed a ten-year requirement for requiring the
20 re-assessments, and we received some comments
21 saying that this interval should be five years,
22 and not up to ten years. We also had a request

1 to make some of the inspection reports publicly
2 available, to require some risk assessments on
3 some non-IM pipelines, and to require annual
4 inspections for all federally regulated hazardous
5 liquid pipelines.

6 There was also a lot of discussion on
7 tool selections and to make sure that the tools
8 being selected to do the assessment of a pipeline
9 be related to the risk of that pipeline, so that
10 you're not doing unnecessary assessments.

11 Some possible changes that we
12 identified that we could look at for this
13 proposal was to one, limit the transmission lines
14 to just the applicability of this requirement,
15 two transmission lines, a.k.a. line pipe, allow
16 the hydrotesting as an initial assessment to set
17 the baseline for new pipe to coordinate the
18 language for tool selection between this proposal
19 and what was the language that was proposed for
20 high-consequence lines. Though there is
21 reference to other assessment methods, there
22 would be an inference or a want to move the ball

1 forward when it comes to use of ILI tools. Also
2 look at limiting the applicability of this on
3 offshore pipelines.

4 MR. MAYBERRY: Moving on to the
5 possible revisions to the language in this
6 section from what was proposed, of course the
7 scope would change the same. The possible
8 revision -- I'm sorry, the scope -- there's
9 existing scope up there, but we'd limit the
10 application to transmission lines that are not
11 subject to integrity management requirements in
12 195.452.

13 MR. GALE: Alan, in this case, we
14 actually show two different options here.

15 MR. MAYBERRY: I'm sorry, yes.

16 MR. GALE: That's all we're doing.

17 MR. MAYBERRY: Then the other revision
18 would be this section applies to -- specifies
19 line pipe not subject to IM requirements in 452.
20 The distinction there is it's specific to pipe --
21 the linear asset, the pipeline itself, would not
22 include pressure vessels, rotating equipment, or

1 pump equipment, that sort of thing, but the area
2 of risk that you're trying to address, and that's
3 the line pipe itself.

4 CHAIRMAN TAHAMTANI: All right, we're
5 ready for comments on the suggested changes,
6 Option A and B. You all like both options?

7 MR. MAYBERRY: It's one or the other.

8 CHAIRMAN TAHAMTANI: You have to pick
9 an option.

10 MR. MAYBERRY: It's two options,
11 transmission pipelines --

12 CHAIRMAN TAHAMTANI: Or line pipe, not
13 --

14 MR. MAYBERRY: -- or line pipe, all
15 line pipe.

16 PARTICIPANT: You go first.

17 CHAIRMAN TAHAMTANI: Hey, Craig, I'm
18 running the meeting.

19 MEMBER PIERSON: I'm sorry.

20 CHAIRMAN TAHAMTANI: I said you go
21 first.

22 (Simultaneous speaking.)

1 CHAIRMAN TAHAMTANI: All right, stop,
2 you go first.

3 MEMBER KUPREWICZ: The intent, all the
4 way back in the last 15 years, has always been
5 transmission line pipe. If you've got a choice -
6 - and I hope you never have to do this -- a
7 choice between a problem in your facilities, pump
8 station, versus a mainline transmission line,
9 which one are you going to --

10 (Simultaneous speaking.)

11 MEMBER KUPREWICZ: If you compare this
12 to the industry, it's a transmission line, from
13 my perspective.

14 (Simultaneous speaking.)

15 CHAIRMAN TAHAMTANI: Craig.

16 MEMBER PIERSON: Craig Pierson,
17 liquids, echoing Rick's comments, we prefer
18 transmission.

19 CHAIRMAN TAHAMTANI: All right, then
20 we need to get rid of Option B.

21 PARTICIPANT: They're both Option A.

22 (Laughter.)

1 CHAIRMAN TAHAMTANI: Get rid of option

2 --

3 PARTICIPANT: Option A-2.

4 CHAIRMAN TAHAMTANI: There we go.

5 That's what it is.

6 PARTICIPANT: We'll call it correctly.

7 CHAIRMAN TAHAMTANI: Chuck.

8 MEMBER LESNIAK: Chuck Lesniak. I've

9 got a question. With the languages that exist

10 with no qualifier there, would that then apply

11 both to transmission and gathering lines?

12 CHAIRMAN TAHAMTANI: Alan.

13 MEMBER LESNIAK: By putting in the

14 qualifier of transmission pipelines, basically

15 we're exempting gathering lines?

16 MR. MAYBERRY: Transmission would

17 knock out gathering lines, would exempt, right.

18 MEMBER LESNIAK: I'm not sure I'm

19 comfortable with that. It seems like this was a

20 conscious choice on the part of the Agency to put

21 it in that way. I think gathering lines have

22 been under-regulated and under-inspected

1 historically, and it's a source of a lot of our
2 problems. I think that's a really large change,
3 and I'm not completely comfortable with it.

4 MR. MAYBERRY: Chuck, let me clarify
5 it. It would cover regulated gathering line. It
6 would not the rural gathering, the narrowly
7 defined six and eight-inch gathering would not,
8 as it's written there.

9 MEMBER LESNIAK: But if we made this
10 change, those would be taken out of the --

11 MR. MAYBERRY: Right, that one except
12 there. If we made it line pipe without the
13 transmission, it would cover both.

14 MEMBER LESNIAK: It would cover both?

15 MR. MAYBERRY: Right.

16 CHAIRMAN TAHAMTANI: Ron.

17 MEMBER MCCLAIN: Ron McClain with
18 liquids. I thought when we were looking at
19 reporting on gathering lines, the idea behind
20 that was to gather information and decide what
21 the next integrity or other steps might be. I
22 didn't perceive we were ever really thinking

1 about applying this to all gathering lines until
2 the data was gathered and justified for it, so
3 just a thought.

4 MR. MAYBERRY: Just to clarify that,
5 Ron, we're talking about regulated gathering,
6 which already has a requirement here.

7 MEMBER WEIMER: Carl Weimer. I agree
8 with Chuck. I think I would prefer that we went
9 back and used the words line pipe, instead of
10 transmission, so we make sure we include the
11 regulated gathering lines in the expansion of the
12 use of periodic assessments.

13 CHAIRMAN TAHAMTANI: Chuck.

14 MEMBER LESNIAK: This is just a
15 question for my own edification. Is line pipe
16 defined in the regulations?

17 MR. MAYBERRY: Yes.

18 CHAIRMAN TAHAMTANI: Do we have
19 consensus on what I call Option B, which is the
20 Option A at the bottom there?

21 MR. MAYBERRY: It's 195.2, Rick, sorry.

22 MEMBER PIERSON: Craig Pierson,

1 liquids. If it goes to line pipe, can you
2 characterize what all is now being included that
3 otherwise would not have been?

4 MR. MAYBERRY: That would be
5 transmission pipe. This is kind of the
6 definition. It means a tube, usually
7 cylindrical, through which hazardous liquid or
8 CO2 flows from one point to another. The part
9 that's covered under the regulations are
10 obviously transmission we know about. There's
11 regulated gathering and low-stress lines, as
12 well.

13 MEMBER DENTON: Todd Denton. I guess
14 you're saying that the gathering's already
15 exempt. That's not specifically called out being
16 regulated, so that would -- I think we're okay
17 with that from what I'm hearing. Unless you're
18 saying line pipe catches everything?

19 (Simultaneous speaking.)

20 MR. GALE: When it comes to the
21 gathering lines that we don't currently regulate,
22 the regulations don't currently address, the only

1 requirements we're applying will be the reporting
2 requirements that we discussed prior. In the
3 proposal, when it came to regulated rural
4 gathering lines, we proposed to subject them to
5 the assessment requirements in 416 and the repair
6 requirements in 422. There's actually a proposal
7 in the NPRM to link the two sections together,
8 but it would not require that lines that are
9 currently, today, not regulated to be assessed.

10 MEMBER PIERSON: Craig Pierson,
11 liquids. If you changed it to transmission and
12 regulated gathering lines, does that say the same
13 thing?

14 MR. MAYBERRY: I think so. Yes, that
15 would work.

16 MEMBER PIERSON: Okay, can we make
17 that change, then?

18 MR. MAYBERRY: We could also add --
19 because the narrow definition of line pipe
20 include valves and other appurtenances connected
21 to the line pipe, which would pick up Ls and the
22 like, which you're normally inspecting through

1 those fittings anyway. The big thing there would
2 be your elbows, your weld Ls and that sort of
3 thing, which line pipe wouldn't necessarily pick
4 up.

5 CHAIRMAN TAHAMTANI: Alan, what's
6 wrong with that language?

7 MR. MAYBERRY: That's fine the way
8 that's written there, applies to transmission,
9 regulated gathering pipelines. Okay, we're good.
10 I think we're good with that.

11 CHAIRMAN TAHAMTANI: We're okay? All
12 right, move on before they change their mind.

13 MEMBER KUPREWICZ: I just want to be
14 sure we understand. I think we've got it there
15 with these changes here. As a representative of
16 the public, we also are guided by -- we want
17 regulations that are fairly clear and not open to
18 the lawyers getting all the money after an
19 accident or an incident. This sounds like an
20 attempt to get a clear recovery. I apologize,
21 Chuck. I wasn't trying to exclude the other
22 gathering that are not regulated, but I saw them

1 as not being captured right now. The regulated
2 gathering is captured right now. You may argue
3 about whether it's satisfactory or not, but I
4 think there's clarity with this now, and I could
5 buy into that. Thank you.

6 CHAIRMAN TAHAMTANI: Rick, do you know
7 that there are a number of attorneys in this
8 room?

9 MEMBER KUPREWICZ: Yes, I know when
10 you want an attorney, you want the meanest,
11 nastiest one you can find.

12 MR. GALE: Basically, in the NPRM, we
13 proposed language that put a deference to inline
14 inspection tools. The comments requested that we
15 modify the language to give reference to some of
16 the additional inspection tools that are
17 currently allowed for high-consequence areas.

18 What we've done is, in the next slide,
19 we made a revision, or recommended revision for
20 the committee to consider, which would revise --
21 can we go back one slide, Alan? Thank you. This
22 language is actually more consistent with how we

1 proposed to amend 195.452 on tool selections for
2 high-consequence areas. It references the other
3 assessment methods, like hybrid testing, but also
4 gives a preference to the use of ILI tools when
5 possible.

6 CHAIRMAN TAHAMTANI: This is the vote.
7 We need to go back to the other slide.

8 PARTICIPANT: Can you go back one
9 slide?

10 CHAIRMAN TAHAMTANI: To this slide.

11 MR. MAYBERRY: This is the revision to
12 the periodic assessment language. "Operator must
13 perform the integrity assessment by inline
14 inspection tool, unless it is impractical, and
15 then use Methods 2, 3 or 4 of this paragraph.

16 The methods an operator selects to
17 assess low frequency ERW lap-welded, with a seam
18 factor of less than one is defined as 106-E, or
19 lap-welded pipe susceptible. Must be capable of
20 assessing seam integrity and detecting corrosion
21 and deformation anomalies." There are the
22 different methods. The first one, an internal

1 inspection tool capable of detecting the issue at
2 hand, pressure test consistent with Subpart E, an
3 external corrosion direct assessment, and then
4 other technology is another option. Under other
5 technology, if an operator does choose that
6 method, they will be required to report to OPS,
7 and then there are requirements for sending that
8 notification to OPS. Again, it allows for inline
9 inspection, that's Option 1, pressure test,
10 direct assessment, or other technology.

11 CHAIRMAN TAHAMTANI: All right, so
12 with that now, I think we have a few cards up,
13 starting with Carl.

14 MEMBER WEIMER: Carl Weimer, the
15 public. I think this language sounds fine to me.
16 It makes sense to make what you're required to do
17 outside of HCAs the same as what you can do
18 inside HCAs. I guess I have an overarching
19 question because I've never been clear on the
20 rule.

21 Because my understanding is the rule
22 expands the use of ILI or inspection techniques.

1 Now if we change it like this outside of HCAs,
2 but it doesn't really require integrity
3 management outside HCAs, as far as the whole risk
4 assessment, identifying risk, risk assessment,
5 the choice of the tool. It only requires using a
6 tool. I've always been confused by that because
7 how can you decide what tool to use if you're not
8 doing all the risk identification and risk
9 assessment that goes along with that?

10 MR. MAYBERRY: Fair point. It's
11 picking a part of what's required in integrity
12 management, and it's pulling in a subset
13 requiring assessments that really follow along
14 the same requirements of integrity management.
15 You have to apply the right assessment for the
16 right threat that you have, or for the threat you
17 have on the pipelines, and that's of paramount
18 importance.

19 MEMBER WEIMER: But if you don't have
20 to do the risk assessment, how do you use the
21 right tool?

22 MR. MAYBERRY: That's part of knowing

1 and understanding your system and the facility
2 you have. For instance, the low-frequency ERW
3 pipe, you need to know and understand your
4 system, and then use the tool that is warranted
5 for that threat. It's incumbent upon the
6 operator to do that in this section.

7 CHAIRMAN TAHAMTANI: Other comments?

8 MR. MAYBERRY: I think there would be
9 some allowance for -- you would expect that over
10 the course of the implementation period or
11 ten-year assessment, which is another topic of
12 conversation for this, that there would be a
13 prioritization that would take place for that
14 assessment.

15 CHAIRMAN TAHAMTANI: One of the things
16 that I forgot to ask for public comments before
17 the previous votes, but earlier, you all said
18 that you had no votes on anything, right, pretty
19 much? If you've got any comments, raise your
20 hand. I can't see you, but you've got to raise
21 your hand. Any other comments on this? Now we
22 can vote. Chuck, sorry.

1 MEMBER LESNIAK: Thank you, Chuck
2 Lesniak. This is a question. The rule requires
3 that the operator notify OPS. The operator's
4 going to assert that they meet these
5 requirements. What if OPS does not agree? Can
6 the Agency step in and say, "No, we don't agree,
7 and you actually need to use a different sort of
8 tool"? I think that this puts -- it provides too
9 much leeway to the operator because you could do
10 this indefinitely, choose these alternatives, and
11 maybe it's not the best tool, maybe the Agency
12 doesn't agree. I think the Agency ought to have
13 the authority to say, "No, we disagree. We don't
14 think you've met the intent of the rule, and
15 you've got to use Method 1."

16 MR. MAYBERRY: That's one of the areas
17 we've been addressing. It's a fair point that
18 you have to use the right tool for the thread.
19 We have taken action in those cases where that
20 hasn't been done, the appropriate assessment tool
21 for the appropriate threat. It does no good to
22 use, say, an MFL for a seam issue, for instance.

1 That would be a flag to us, and we've actually
2 taken action in those cases.

3 MR. WIESE: Chuck, it does provide us
4 -- and we went through this with integrity
5 management -- it does provide us with the
6 opportunity to object. If we object, then we can
7 intercede in that case. I agree with you, there
8 is a -- but I think it's the out for the length
9 of time we have and the role for technology to
10 improve. I think we're hoping to direct a lot of
11 innovation and investment in that other
12 technology that makes this better and more
13 efficient and whatnot. Just as an editorial
14 comment, I'm going to say that on external
15 corrosion direct assessment, based on our
16 experience, I would say you need to make sure
17 you're paying attention to the entire process.
18 The first step in ECDA is the records.

19 We've seen some egregious failures,
20 where the operators didn't have the records and
21 still used ECDA. It would be disallowed by its
22 very nature. It's a great technique, so don't

1 read me wrong, but I think it has to be followed
2 pretty tightly. Yes, we can't object, Chuck.

3 MEMBER LESNIAK: Chuck Lesniak. My
4 suggestion would be to add, somewhere under I,
5 that the Agency has 90 days to object. If
6 there's no objection, the operator can move
7 forward with the alternative method, but that --
8 so it still doesn't really change the timeline
9 for the operator.

10 It does put some responsibility on the
11 Agency. If you're going to object to this,
12 you've got to do it in 90 days, or they get to
13 move forward. But if the Agency objects, then
14 the operator's got to stop and reconsider that
15 option.

16 CHAIRMAN TAHAMTANI: Any comments from
17 PHMSA?

18 MR. MAYBERRY: We do that already. If
19 an operator does notify us and we have an issue,
20 we do notify them and let them know.

21 MEMBER LESNIAK: Do you have the
22 authority to say, "You've got to use a different

1 method. We don't agree that this is the
2 appropriate method"? Do you have the authority
3 to require that?

4 MR. MAYBERRY: We have a variety of
5 tools to take action if we think it's going to
6 lead to a safety issue. If it's like the example
7 you used, clearly, yes, we would take action in
8 that case.

9 CHAIRMAN TAHAMTANI: Any other
10 comments? Jeff.

11 MR. WIESE: I think that's a fair
12 point, Chuck. Because it does say -- in
13 integrity management, it says 90 days, right?

14 MR. MAYBERRY: We think it's the
15 language that's currently in IM.

16 MR. WIESE: But point taken. I think
17 we have the opportunity during that timeline to
18 object, and you're just suggesting more specific
19 language to state that.

20 MEMBER LESNIAK: Is there something
21 where an operator just can't say, "We appreciate
22 your objection, but we disagree, and we're moving

1 forward with the method that we've chosen"?

2 MR. WIESE: Oh, yes. We've done that
3 before during integrity management. I'm not sure
4 if it was any of these operators, but operators
5 had come forward with ideas for doing it which we
6 objected, and we engage, then, on the evaluation
7 of that. They don't proceed if we object. I'm
8 not aware of any instance in that case.

9 CHAIRMAN TAHAMTANI: Todd.

10 MEMBER DENTON: Todd Denton. I just
11 want to clarify this language is the same as
12 what's in the HCAs, as far as selection of tools?

13 MR. GALE: That's based on what was
14 proposed, the amendment to 195.452, tool
15 selection for HCAs, that's correct.

16 MEMBER DENTON: I was not seeing
17 cracks in 452. As long as the wording's the same
18 that we've got those options available to us, I
19 think that's our only concern.

20 CHAIRMAN TAHAMTANI: Can someone
21 respond to Todd, or we need to come back to that?

22 MR. GALE: Excuse me, Massoud, we're

1 just checking real quick.

2 CHAIRMAN TAHAMTANI: Okay. Go ahead,
3 Carl.

4 MEMBER WEIMER: Carl Weimer for the
5 public. I just wanted, for the record, to agree
6 with Chuck. The way I read this, the operator
7 just has to notify you. They don't have to get
8 your approval, and there's nothing in this
9 language that says they have to seek your
10 approval.

11 I just wanted that on the record for
12 either this rulemaking -- I'm not going to
13 object; I'm not going to make any amendments, but
14 I think it's a good point. Because the way this
15 reads, they could walk a duck down the right of
16 way and say that's our alternative method, and
17 you can't tell them differently from a regulatory
18 enforcement standard, as far as I can tell.

19 MR. WIESE: For what it's worth, we
20 were just checking the language to make sure on
21 that point. It reads the same as it does in 452.
22 But on the website, as we were working out the

1 guidance -- the protocols and the guidance and
2 the FAQs -- it does provide us the ability to
3 object, which we have done before. I wish I
4 could remember the incidents, but it's not
5 common. Actually, we don't get that many
6 notifications, to be honest with you.

7 MR. MAYBERRY: Jeff, if I may, it
8 creates a difference between the other part of
9 the code, but we could say, "And obtain no
10 objection." We could add that, possibly. It
11 might be an option.

12 MEMBER LESNIAK: Chuck Lesniak. I'm
13 actually okay with being less -- providing more
14 latitude to the industry on that and saying if
15 they don't receive an objection from the Agency
16 -- so they're not obligated to wait for you to
17 respond. If you don't respond in 90 days, that's
18 authorization, but if you do object, that stops
19 the clock, and that you've got the authority to
20 stop that action. I'm just making sure you've
21 got the teeth that you need, but still provide
22 some latitude in flexibility for the industry.

1 MR. WIESE: We're having to reach way
2 back to pull that language out of the dark
3 recesses of our minds, but as I recall that now,
4 remember we were trying to stay out of the
5 approval trap here. When you get into an
6 approval trap, you kick in all kinds of things.
7 But we did run a legal analysis at the time, and
8 I do believe, Chuck, the question that you're
9 raising was positively identified as we had the
10 authority to object, and they couldn't proceed.
11 They would proceed at their own liability if they
12 did. I just wanted to make sure you understand
13 why we went that route to object versus review
14 and approve.

15 CHAIRMAN TAHAMTANI: All right, if no
16 other comments, we are ready for a vote on -- go
17 back and show the changes again on --

18 MEMBER JOY: Michele Joy, industry.
19 Just wanted to take us back to the change we made
20 with all the various Subsection As because I had
21 an issue identified for me that I think we need
22 to address, if we can go back to that earlier

1 section, where we made the change to transmission
2 and regulated gathering lines.

3 Right there. The issue is, as I'm
4 looking at my little code here, there does not
5 appear to be a definition of a transmission line.
6 I looked through to try to find a compromise very
7 quickly, knowing that I do not know these
8 regulations inside out and backwards. However,
9 it occurred to me that maybe the way to solve
10 this is, instead, to refer back to Section 195.1,
11 which essentially lists the pipelines that are
12 regulated by PHMSA. That way all the pipelines
13 that you want to include would be included. Does
14 that make sense?

15 MR. MAYBERRY: That makes sense. It
16 sounds good.

17 MEMBER JOY: Then we get rid of terms
18 that are perhaps not defined.

19 CHAIRMAN TAHAMTANI: Are we going to
20 fix it here, or we're going to trust --

21 MR. MAYBERRY: We're going to fix it.

22 CHAIRMAN TAHAMTANI: -- PHMSA will do

1 it?

2 MR. MAYBERRY: We'll fix it.

3 CHAIRMAN TAHAMTANI: Should it simply
4 say, "This section applies to jurisdictional
5 pipelines that are not subject to"? Because 195
6 point whatever defines --

7 MEMBER JOY: Yes, 195.452, when I
8 looked it up, is essentially pipelines going
9 through high-consequence areas. So what you're
10 saying is essentially everything else is now
11 brought in, but they're all regulated lines.
12 Does that make sense? You've got a universe of
13 pipelines that PHMSA can regulate, and then you
14 have certain ones that are covered under
15 high-consequence areas. Now you're saying you're
16 going to cover pipelines not under -- in
17 high-consequence areas.

18 MR. MAYBERRY: Right.

19 MEMBER JOY: Right?

20 MR. MAYBERRY: Yes.

21 MEMBER JOY: That would do it,
22 wouldn't it?

1 CHAIRMAN TAHAMTANI: If we change
2 transmission --

3 MR. MAYBERRY: To jurisdictional --
4 well, regulated --

5 CHAIRMAN TAHAMTANI: But if they're
6 jurisdictional regulated, or they should be
7 regulated.

8 MR. MAYBERRY: They're both regulated.

9 MEMBER JOY: Pipelines covered by
10 Section 195.1 that are not already covered under
11 195.452.

12 MR. MAYBERRY: Right, pipelines --

13 CHAIRMAN TAHAMTANI: As defined --

14 MR. MAYBERRY: -- as defined under
15 195.1. It's 195.1, right? And are not subject
16 to --

17 MEMBER JOY: And are not subject to
18 integrity management requirements of 195. --

19 MR. MAYBERRY: Right, circulate that,
20 there you go.

21 MR. WHITE: Can I offer a suggestion?
22 You could just say pipeline subject to this part,

1 meaning Part 195. Would that capture what you're
2 doing?

3 MEMBER JOY: Honestly, I can't answer
4 that question because I don't know 195 inside out
5 and backwards, but I did read 195.1, which is
6 labeled, "Which pipelines are covered by this
7 part?"

8 CHAIRMAN TAHAMTANI: I think PHMSA can
9 correct this to take things and make it legal.

10 But I think we have what you need.
11 Okay, so any other comments or questions about --
12 what, there are three pieces?

13 I want to pick another one. Normally
14 people that make motions, they volunteer. Tim,
15 you were offering to make a motion? You had a
16 question? All right.

17 MEMBER FELT: Tim Felt. I guess under
18 slide 40, C-1, I just want to clarify. It says,
19 "Would require internal inspection tools capable
20 of detecting corrosion and deformation
21 anomalies." Are we talking about we need to run
22 multiple tools as part of this assessment? I

1 think the spirit of the conversation was
2 depending on the situation, the risks, whatever,
3 but when I read this, it almost appears that you
4 have to do corrosion and deformation anomalies.
5 I just wanted to clarify what the intent was
6 because it looks like multiple tool runs.

7 MR. MAYBERRY: The idea is running the
8 appropriate tool or tools for the threat.
9 Perhaps it might -- in fact, we were just jotting
10 down here maybe adding assessment of threats at
11 the first line. That might help add some
12 clarity.

13 MEMBER FELT: You could take out the
14 word "and," right?

15 MR. MAYBERRY: Right. It speaks to
16 running all those tools, but we're after running
17 the right tool for the threat. That's why up
18 above, I think it's good to add -- if we say
19 assessment of threats required under Paragraph B
20 of this section. That would point you to --

21 Yes. Up at the top, first line,
22 method, after assessment, insert "of threats."

1 So must perform the integrity assessment of
2 threats required under Paragraph B of this
3 section.

4 CHAIRMAN TAHAMTANI: Tim, you're okay?
5 The and was removed, some language has been
6 added.

7 MEMBER FELT: Appreciate that, yes.

8 CHAIRMAN TAHAMTANI: Michele, you have
9 a comment?

10 MEMBER JOY: No, I'm good. Oh, forgot
11 to take it down, sorry.

12 CHAIRMAN TAHAMTANI: When you're
13 ready, you can make a motion.

14 MEMBER JOY: I don't know if I've got
15 the language right this time.

16 CHAIRMAN TAHAMTANI: They can put the
17 language on the screen, actually, for you. Can
18 you put the motion language ----

19 (Simultaneous speaking.)

20 CHAIRMAN TAHAMTANI: Is it okay that
21 she makes all the motions? There's no rules
22 against it, right? She's just very efficient.

1 Go ahead.

2 MEMBER JOY: The proposed rule, as
3 published in the Federal Register and the draft
4 regulatory evaluation, are technically feasible,
5 reasonable, cost effective, and practicable if
6 the following changes are made to the provisions
7 of the proposed rule related to periodic
8 assessments, as published in the Federal
9 Register, if amended as discussed during this
10 meeting.

11 CHAIRMAN TAHAMTANI: We all understand
12 what that means. Is there a second?

13 MEMBER PIERSON: Second.

14 CHAIRMAN TAHAMTANI: Any discussions?
15 Cheryl, you ready? This is going to pass.

16 MS. WHETSEL: I told them to hurry up.
17 Onward with the vote. Massoud?

18 CHAIRMAN TAHAMTANI: Yes.

19 MS. WHETSEL: John Quackenbush?

20 MEMBER QUACKENBUSH: Yes.

21 MS. WHETSEL: Todd Denton?

22 MEMBER DENTON: Yes.

1 MS. WHETSEL: Tim Felt?
2 MEMBER FELT: Yes.
3 MS. WHETSEL: Michele Joy?
4 MEMBER JOY: Yes.
5 MS. WHETSEL: Craig Pierson?
6 MEMBER PIERSON: Yes.
7 MS. WHETSEL: Ron McClain?
8 MEMBER MCCLAIN: Yes.
9 MS. WHETSEL: Rick is out of the room.
10 Charles Lesniak?
11 MEMBER LESNIAK: Yes.
12 MS. WHETSEL: And Carl Weimer?
13 MEMBER WEIMER: Yes.
14 MS. WHETSEL: Okay, passes.
15 CHAIRMAN TAHAMTANI: The motion
16 carries.
17 MS. WHETSEL: Carry, I'm sorry.
18 CHAIRMAN TAHAMTANI: Put an absentee
19 for --
20 (Simultaneous speaking.)
21 MS. WHETSEL: Okay, did so, all right.
22 USING INLINE INSPECTION TOOLS IN ALL HCAS

1 MR. MAYBERRY: Okay, thank you.
2 Moving on. Next fun topic is using inline
3 inspection tools in all HCAs. The issue there is
4 not all pipelines are going to accommodate ILI
5 tools. The proposal is to add a new provision in
6 integrity management's part of the code to
7 require all HCA pipelines being capable of
8 accommodating ILI within 20 years. That basis
9 would be to further promote public safety and
10 protection of the environment in these high-risk
11 areas promoting the use of these tools. As far
12 as comments go.

13 MR. GALE: Thank you, Alan. Some of
14 the comments we got on this proposal -- it is
15 really the one proposal where we got the most
16 divergent set of comments. We had some
17 commenters that recommended we not adopt this
18 proposal at all. We had proposed, as Alan said,
19 that this provision be put into place within 20
20 years. We had some commenters state that they
21 believed that was too long a period of time and
22 that we should shorten the implementation period

1 from five to ten years. We had a set of comments
2 saying not adopt it at all or to actually move to
3 a more expedited time frame to requiring this to
4 be put in place.

5 We also had proposals to require that
6 we expand this to not just high-consequence
7 areas, but to all pipelines. Of course, as we
8 mentioned before, we would consider that comment
9 to be out of the scope for this proposal. It was
10 a very divergent set of comments on this issue.
11 We really are looking to the committee here to
12 give us a path forward. We're hoping that we can
13 get to a resolution on this proposal.

14 MR. MAYBERRY: Thank you, John.
15 Possible changes for this section. One is do not
16 adopt it, another would be a shorter
17 implementation period of time, shorter than the
18 20 years. Then another option, possibly,
19 required justification for alternative testing
20 methods after 20 years.

21 MR. GALE: I'd like to just point out,
22 also, in part of the proposal, there's a

1 provision in there that allows for those lines
2 that are not capable of accommodating -- they're
3 not inherently capable of accommodating an inline
4 inspection tool, that they could get out of this
5 requirement. One of the things that we're
6 looking at maybe as a workaround was to expand
7 that applicability to maybe take into account
8 some economic considerations 20 years from now,
9 or some period of time.

10 MR. MAYBERRY: There were other
11 considerations to, say, the physical limitations
12 of the pipeline, the ability to actually move a
13 tool and the like. Here's the original proposed
14 language, very simple, has the 20-year effective
15 date or deadline to comply with. Then a possible
16 language for consideration here to address what
17 we're after, to push the use of tools and making
18 lines piggable, but then have a provision if
19 there are factors that would preclude that to be
20 done practically, to allow for that, as well.

21 MR. GALE: We thought this language
22 might help. This is actually language that's

1 currently in the code, the red, for use for the
2 low-stress lines.

3 This is an exception that's currently
4 provided for low-stress lines, when we did the
5 low-stress rule. We thought maybe this is at
6 least a way of beginning the dialogue of some
7 middle ground.

8 MR. MAYBERRY: I guess that's up for
9 comment, Mr. Chairman.

10 CHAIRMAN TAHAMTANI: You want to go
11 back to the general language?

12 MR. MAYBERRY: That's the general
13 language is an operator must -- this is the
14 original language.

15 MR. GALE: I believe the 20 years is
16 there. We're just highlighting the 20 years
17 because it's a point of contention.

18 CHAIRMAN TAHAMTANI: Okay, comments?
19 Chuck.

20 MEMBER LESNIAK: Chuck Lesniak.
21 Personally, I think 20 years is a really long
22 time. But I also agree that there ought to be

1 some flexibility and ability of the operator to
2 demonstrate that it's not feasible, particularly
3 economically feasible for a certain time period.
4 I think my suggestion would be that we
5 significantly shorten 20 years, maybe start the
6 bidding at five years, but then add the language
7 that was suggested on the -- or that the operator
8 determines it would abandon, etc.

9 If the operator of the line can
10 demonstrate that it's not feasible, why would we
11 wait 20 years to start that? I think if you can
12 -- you could do that today and require this
13 today. I think a much, much shorter
14 implementation time is appropriate, but also the
15 ability for the operator to provide some
16 flexibility there.

17 MR. WIESE: To try to help with that,
18 Chuck, I wanted to just sort of ask the people
19 who are more familiar with the regulatory impact
20 assessment, I think 20 was picked for the cost
21 benefit.

22 (Simultaneous speaking.)

1 MR. WIESE: Oh, well, forget that. I
2 think it was picked for the cost benefit as much
3 as anything. The other thing I think that a
4 longer timeline does is it does allow us for the
5 involvement of new technology. Reminding
6 everyone, as we do our fall workshop on research
7 and development, the challenges that we have
8 coming out of these rules should be talked about
9 in the R&D forum, trying to drive stuff like
10 that.

11 I think people would move faster if it
12 was less expensive. I think the industry is
13 pigging about 80 to 85 percent of the system now,
14 right? The remaining 15 percent is the stuff
15 that's very difficult to pig, not impossible, but
16 very difficult and expensive. I just wanted to
17 explain the 20 years, it wasn't arbitrary and
18 capricious, and say there is a role for
19 technology in driving that.

20 MR. GALE: Also, it's important to
21 point out as lines are added, or if lines are
22 replaced, actually, they're required to be made

1 piggable. That was one of the considerations was
2 that these lines are actually going to fade out
3 over time.

4 MEMBER LESNIAK: Chuck Lesniak. I
5 think my response to that would be if you did
6 your RIA based on this, without the ability for
7 an operator to come in and demonstrate that it
8 wasn't feasible, if we're already pigging 85
9 percent of the lines, and the 15 percent that are
10 remaining are just very, very difficult, my guess
11 is a pretty significant percentage of those are
12 going to be able to demonstrate satisfactorily to
13 the Agency that it's just not feasible.

14 But it does, at this point -- we've
15 been doing this for a while now, so why not put
16 the burden on the operator to come in and prove
17 that up to the Agency, and if they can't prove it
18 up to the Agency, then they've got to pig the
19 line. Then we could go with a much shorter time
20 frame.

21 CHAIRMAN TAHAMTANI: Ron.

22 MEMBER MCCLAIN: I just think the

1 magnitude of this is pretty large. Some
2 operators are high percentage, some aren't. If
3 there's 200,000 miles of liquid lines, 15 percent
4 of that is 30,000 miles, so it's still an
5 aggressive schedule, 10,000 miles a year. I
6 don't think it would go all the way for 20 years,
7 but that wording is at least a part of industry's
8 willingness to accept that, too. If you cut it
9 to ten, you're just not going to find the same
10 support. Five, I don't think you'd find any
11 support. Thirty thousand miles unpiggable,
12 that's still a significant amount of pipe that is
13 the most expensive or the most difficult or
14 whatever the issue is.

15 MR. GALE: Just a real quick point of
16 clarification. This proposal only applies to our
17 HCA mileage. It's a smaller percentage, relative
18 to a smaller number, but point well taken.

19 MEMBER PIERSON: Expanding on Ron's
20 point, a lot of these are made up of short
21 sections, so you don't get a lot of mileage. The
22 spend is the same whether it's 4,000 feet or 400

1 miles. It's harder than it sounds because of all
2 the short sections, and that's why they're last.

3 CHAIRMAN TAHAMTANI: Other comments?
4 Michele.

5 MEMBER JOY: Michele Joy, industry.
6 Just to expand on Craig's comment, because it
7 sounds unreasonable that 400 feet would be the
8 same as 400 miles, but it's the fact of having to
9 add a pig launcher and receiver, which is the
10 expensive part of it, find the space for it, and
11 actually install it. That's the expense part.
12 Thanks.

13 CHAIRMAN TAHAMTANI: Okay, so are we
14 ready to move on this?

15 MR. MAYBERRY: One option we had
16 talked about internally, as well, was going with
17 a 10-year, as opposed to a 20-year implementation
18 maybe as an intermediate, in-between compromise
19 on that.

20 CHAIRMAN TAHAMTANI: Carl.

21 MEMBER WEIMER: I support that. I
22 think our comments were for a shorter period,

1 too. I think Chuck brought that up. I can't
2 remember what we said, but ten years seems like a
3 compromise, and I suppose this language, too. I
4 guess the question is if the RIA didn't support
5 -- can you get past cost benefit with a ten-year
6 period?

7 MR. GALE: It would be a very big
8 hurdle to overcome. I would also ask for
9 counsel's opinion if we could even do that in the
10 final one.

11 MR. WHITE: The cost benefit is put in
12 terms of the cost justifying the benefit, not
13 whether they exceed the benefit or not. If
14 changing it to ten years puts the cost slightly
15 higher than the benefits, potentially, you still
16 could conclude that the ten-year rule is
17 justified.

18 MR. GALE: I'm sorry, Larry. What I
19 was asking was in terms of within the scope of
20 the rule. If we proposed 20 years, could we
21 adopt a shorter period of time to require
22 operators to comply?

1 MR. WHITE: I wouldn't want to
2 speculate about that. It would depend on whether
3 a case could be made that that is such a material
4 change in what the expectations flowed from the
5 NPRM were. If there were really a consensus that
6 that was the approach that really had no -- there
7 was no disagreement about, could be possible, but
8 I would want to probably study that issue a
9 little bit more.

10 MR. WIESE: I dropped my tent card, so
11 I'm just going to raise my hand and ask to be --
12 I guess I would ask -- I got the point, Chuck.
13 By having this phrase in there, the question in
14 my mind -- I see John's question, too, but aren't
15 you really -- you really don't have to. I could
16 have crawled under there and gotten it. I was
17 waiting for a break, but thank you, John. What a
18 gentleman. I'll put it up now. In any event,
19 I'm just wondering if the combination -- even if
20 you shorten it to ten, you still have the same
21 equation. It's just that people are going to
22 have to document their request for an exception.

1 I'll remind people that integrity
2 management, when notifications came in, remember
3 we maintained a notifications database. It was
4 on the web. People could read the notifications.
5 I think we may have to look at it a little bit
6 further, but it can be, certainly, a strong
7 recommendation that we consider it. But I know
8 you have to vote on something, so --

9 MEMBER KUPREWICZ: Just an observation
10 because we don't want to necessarily beat this to
11 death, but most of the major catastrophic
12 failures in liquid transmission pipelines in
13 recent years occurred after inline inspection
14 hadn't occurred.

15 I understand the spirit of what we're
16 trying to do here, but I've got a real problem
17 just conveying, as a public person or as the
18 industry, that there's a lot of forces wanting to
19 drive the inline inspection, but we want to be
20 careful that we're not punishing and setting
21 expectations that the industry can't deliver, and
22 we've dropped a lot of money not going anywhere.

1 I think it's back to the concept of are you using
2 the right assessment methods for the right
3 threats? Are you identifying the threats,
4 integrating all your data? Again, I don't want
5 to deflect off the spirit here, but 10 or 20,
6 we're kind of drawing arbitrary numbers, and we
7 may lose sight of all the forces wanting to go to
8 inline. Inline inspection may be right where you
9 want to be, but it may not be the right approach.

10 CHAIRMAN TAHAMTANI: Sometimes you all
11 make running this meeting very difficult. This
12 is one of those times. The 20 years is in --

13 Then we've got the language. Should
14 we just go ahead and vote on the 20 years?

15 MR. WIESE: With advice from John to
16 look at the possibility, even, of adjusting the
17 timeline. We're not sure if you can go more
18 aggressive in the final than you were in the
19 proposal, so we have to look at that before we
20 can even answer that question. I think we have
21 to stay with what we proposed and get your read
22 on that, but certainly take your advice on the

1 rest of it.

2 CHAIRMAN TAHAMTANI: Based on that,
3 then, Michele, you ready?

4 MEMBER JOY: Sorry, before I make a
5 motion, just to confirm, the sections we're
6 proposing for change is just -- go back one
7 slide, please -- this section, no this section,
8 correct? This is the only place there is a
9 change?

10 (Simultaneous speaking.)

11 CHAIRMAN TAHAMTANI: Yes, that's it.

12 MEMBER JOY: Okay. Hold on one
13 second.

14 Yes, but his isn't the formal
15 language. Okay, I move that the proposed rule,
16 as published in the Federal Register and the
17 draft regulatory evaluation, are technically
18 feasible, reasonable, cost effective, and
19 practicable with respect to the modification to
20 the regulations requiring the use of ILI tools in
21 all HCAs, if the following changes are made -- go
22 back, please, no, forward -- to modify Section

1 195.452(n)(4) to add a section saying, "Or that
2 the operator determines it would abandon or shut
3 down a pipeline as a result of the cost to comply
4 with the requirement of this section," which
5 would be added to the existing proposed
6 regulatory language.

7 CHAIRMAN TAHAMTANI: Thank you. Is
8 there a second?

9 MEMBER QUACKENBUSH: Second.

10 CHAIRMAN TAHAMTANI: Discussions?
11 Cheryl, vote.

12 I'm sorry. Go ahead.

13 MEMBER LESNIAK: This is Chuck
14 Lesniak. I suggested this change in the language
15 with a reduction in the years. I understand the
16 concern from can the Agency do this within the
17 scope, but this is still our advice. If it turns
18 out that can't be done within the scope of the
19 rulemaking, then obviously the Agency can't
20 implement our advice. If we're going to leave
21 this at 20 years, as the motion is, I think I
22 would offer a substitute motion that we strike

1 Part 4 altogether and leave the 20 years in -- or
2 No. 4 altogether.

3 CHAIRMAN TAHAMTANI: I would suggest
4 we go ahead with this vote on this. The 20 years
5 is in the other section that hasn't been changed.

6 MEMBER LESNIAK: I'm offering a
7 substitute motion that -- okay, we can vote on
8 the first one.

9 CHAIRMAN TAHAMTANI: I think we can
10 vote on this, and then go back and discuss the 20
11 again.

12 MEMBER LESNIAK: Okay.

13 MR. GALE: Just to be clear -- and
14 Larry, if you could help me out on this. This
15 paragraph (n)(4) is actually consistent with our
16 statute on what we're allowed to do, in terms of
17 retrofitting an existing line to make it
18 piggable. This is very specific language that
19 was taken out of our statute. Otherwise, we
20 wouldn't be able to do this.

21 CHAIRMAN TAHAMTANI: Any other
22 discussions? We have a motion and a second, if

1 none, Cheryl.

2 MS. WHETSEL: Massoud?

3 CHAIRMAN TAHAMTANI: Yes.

4 MS. WHETSEL: John Quackenbush?

5 MEMBER QUACKENBUSH: Yes.

6 MS. WHETSEL: Todd Denton?

7 MEMBER DENTON: Yes.

8 MS. WHETSEL: Tim Felt?

9 MEMBER FELT: Yes.

10 MS. WHETSEL: Michele Joy?

11 MEMBER JOY: Yes.

12 MS. WHETSEL: Craig Pierson?

13 MEMBER PIERSON: Yes.

14 MS. WHETSEL: Ron McClain?

15 MEMBER MCCLAIN: Yes.

16 MS. WHETSEL: Rick Kuprewicz?

17 MEMBER KUPREWICZ: Yes.

18 MS. WHETSEL: Chuck Lesniak?

19 MEMBER LESNIAK: No.

20 MS. WHETSEL: And Carl Weimer?

21 MEMBER WEIMER: Yes.

22 MS. WHETSEL: Nine to -- anyway, nine

1 yes, ten total people, so --

2 (Simultaneous speaking.)

3 CHAIRMAN TAHAMTANI: All right, we're
4 going to back to the 20 then. Put that language
5 up there where it's got the 20 in it. You know
6 the administrator left. You don't have to show
7 off.

8 Chuck, this is where I'm understanding
9 this is where you would change the 20 to 10.

10 MEMBER LESNIAK: To ten ----

11 (Simultaneous speaking.)

12 CHAIRMAN TAHAMTANI: We want to start
13 a discussion, and then that would be a
14 recommendation to the Agency and see if they can
15 do it.

16 MEMBER LESNIAK: Right.

17 CHAIRMAN TAHAMTANI: Why don't you
18 change it to ten, and let's put a motion up
19 there. Is that what you want to do?

20 MEMBER LESNIAK: Chuck Lesniak. I'll
21 make the motion, if somebody will put the motion
22 language up there for me, so I can read it

1 properly. I move that we recommend that
2 provisions of the proposed rule relative to using
3 ILI tools in all HCAs, as published in the
4 Federal Register and the draft regulatory
5 evaluation, are technically feasible, reasonable,
6 cost effective, and practicable if, as amended
7 during this meeting, the following changes are
8 made relative to 195.452(n). That specific
9 change is to go from 20 years to 10 years.

10 CHAIRMAN TAHAMTANI: All right, so
11 that's a motion. Is there a second?

12 MEMBER QUACKENBUSH: Second.

13 CHAIRMAN TAHAMTANI: Second.

14 Discussions? Having noted Ron's previous
15 comments and the other industries' comments on
16 this, any other new comments?

17 MR. WIESE: For the record, just so
18 we're all clear, we do have to go back and
19 re-evaluate whether that's even feasible. I'm
20 just being straight up. I don't want people
21 coming out of here thinking we voted on that for
22 sure. We'll go back, and we can let you know.

1 CHAIRMAN TAHAMTANI: All right, that's
2 been made clear. Ron.

3 MEMBER MCCLAIN: I just had one other
4 comment. When you talk about the mileage this
5 encompasses, generally, operators don't make just
6 an HCA segment piggable. It's an entire segment.
7 I would just suggest there's more mileage
8 involved than just HCA mileage when you're doing
9 this, just for the record.

10 CHAIRMAN TAHAMTANI: Other comments?
11 So we have a motion and second, no more
12 discussions. Cheryl.

13 MS. WHETSEL: Massoud?

14 CHAIRMAN TAHAMTANI: Yes.

15 MS. WHETSEL: John Quackenbush?

16 MEMBER QUACKENBUSH: Yes.

17 MS. WHETSEL: Todd Denton?

18 MEMBER DENTON: No.

19 MS. WHETSEL: Tim Felt?

20 MEMBER FELT: No.

21 MS. WHETSEL: Michele Joy?

22 MEMBER JOY: No.

1 MS. WHETSEL: Craig Pierson?

2 MEMBER PIERSON: No.

3 MS. WHETSEL: Ron McClain?

4 MEMBER MCCLAIN: No.

5 MS. WHETSEL: Rick Kuprewicz?

6 MEMBER KUPREWICZ: Yes.

7 MS. WHETSEL: Chuck Lesniak?

8 MEMBER LESNIAK: Yes.

9 MS. WHETSEL: Carl Weimer?

10 MEMBER WEIMER: Yes.

11 MS. WHETSEL: We have another tie,
12 five and five.

13 CHAIRMAN TAHAMTANI: In light of what
14 this means anyway, a tie is okay. They have to
15 take it back and look at it, so that's okay.

16 MS. WHETSEL: Right, yes. Is
17 everybody in agreement?

18 CHAIRMAN TAHAMTANI: Thank you all
19 very much. As I said earlier, we don't want to
20 take a break unless there is a consensus, and I'm
21 not seeking it right now.

22 Do we need to take a break?

1 Anyone else? Because he's just only
2 one voice.

3 Very important voice. All right, ten
4 minutes.

5 (Whereupon, the above-entitled matter
6 went off the record at 3:05 p.m. and resumed at
7 3:15 p.m.)

8 CHAIRMAN TAHAMTANI: All right, we're
9 back in session. Jeff's got a couple of
10 comments.

11 MR. WIESE: Just a real quick
12 reminder, so I don't forget at the end. I wanted
13 to remind people -- not the committee members,
14 but the public members -- that there is a sign-in
15 attendance sheet in the back. We'd really
16 appreciate it, part of our formal record on who's
17 attending, so we would appreciate it, if you
18 hadn't had an opportunity to do so, that you take
19 an opportunity and sign in there. I did not ask
20 my usual question, but this is a matter of public
21 record. The whole thing's recorded. It's posted
22 to our website. But I usually ask if there's

1 anyone from the media here. I'm not sure --
2 anyone?

3 Who are you with?

4 Okay, good, thank you. Useful to
5 know, but again, it's still a public meeting, and
6 everything's recorded and put on the website. I
7 think -- are you guys ready to go? You are.
8 Okay.

9 MODIFYING REPAIR CRITERIA

10 MR. MAYBERRY: All right, thank you,
11 Mr. Chairman. Last topic we're dealing with
12 today is modifying repair criteria. The issue
13 there is currently, the repair criteria doesn't
14 reflect proper prioritizing of abnormal pipeline
15 conditions found in the field.

16 That's broken down between HCA and
17 non-HCA repairs. You see up there the current
18 requirements by code. Of course, there's a need
19 to add more specifics on some of the conditions
20 we're talking about when we're talking about
21 immediate repairs versus repairs that are
22 scheduled out later or monitored.

1 The proposed rule had modifications to
2 the repair criteria going to a regime that still
3 had the immediate classification, but then there
4 was another schedule of nine months for inside an
5 HCA or 18 months outside of an HCA. Then there
6 was what's called the monitored condition.

7 There's also a proposal in the proposed rule to
8 change the factor of safety, or failure pressure
9 ratio, if you will, on anomalies and where they
10 require action, increasing to a 10 percent margin
11 from a 1 to 1.1 for the ratio of peak burst over
12 maximum operating pressure. Then like I've
13 already covered a bit, it included additional
14 specifics on anomalies covered under the
15 immediate repair, for instance, stress corrosion
16 cracking, seam corrosion, and those that are
17 listed there.

18 It required explicitly considering
19 tool tolerance for repair decisions, and then
20 lastly, collecting ILI data from HCAs and non-HCA
21 segments for repair decisions. Of course, the
22 basis was based on our inspections, we've

1 identified weaknesses in repair decisions and
2 response to ILI data. As far as comments go on
3 the modified repair criteria, I guess I'll turn
4 it back to you, John.

5 MR. GALE: Reluctantly, Alan, I'm
6 going to have to pass to Mr. Israni on this ----

7 (Simultaneous speaking.)

8 MR. GALE: ---- disappointed.

9 MR. ISRANI: Repair criteria was a
10 challenge when we first time also brought it in,
11 so I'm going to take this. We'll see similar
12 comments. Some of these comments are displayed
13 here. Some commenters said to exempt pipeline
14 segments with low operating pressures from
15 certain repair criteria, and they said to clarify
16 applicability to pipelines which are under
17 195.452, which is the HCA part, and limit
18 applicability of non-HCA criteria to non-HCA.
19 Commenters said transmission lines, which we now
20 previously discussed, to regulated lines.
21 Comments on the criteria part was to add 270 dent
22 condition with 2 percent of the dent.

1 Also, in the comments, they wrote 20
2 percent of the wall thickness, but we assume that
3 they meant 2 percent of the dent because that's
4 what we have under 270 dent condition, and said
5 one year and two years. Currently, we have 9
6 months and 18 months, so they suggested go with
7 one-year and two-year criteria, incorporate
8 industry-recognized methods to calculate
9 remaining strength of the pipeline.

10 We do have B31G and RSTRENG for using
11 that. Some commenters suggested to go beyond,
12 that more research work has come into play to
13 allow them those methods. Eliminate stress
14 corrosion cracking and selective seam weld
15 corrosion to immediate repair criteria, which we
16 added in this proposal. They want us to
17 eliminate that. Allow prioritization of repair
18 of high-consequence area segments or
19 non-high-consequence area segments. We do have
20 these time frames, 18 months and 9 months. They
21 said that they should be a lower prioritization,
22 which we have already allowed, as I mentioned,

1 except for immediate conditions, which we have
2 for both same. Establish standards for
3 prevention, detection, and remediation of SSCC
4 and SCC. SSCC is actually SSWC.

5 Also, maintain 60 and 180-day repair
6 categories. As I mentioned, from two months and
7 six months, we changed to nine months, and
8 outside HCA to 18 months. Some have suggested we
9 should maintain those conditions, 60 days and 180
10 days, what we currently have in the code. Also,
11 some recommended that we should have more
12 stringent, immediate repair category.

13 We did, in the proposal, add some more
14 conditions in the immediate category, but they
15 wanted us to add more. As far as timing is
16 concerned, they said to provide more time to
17 address repairs in offshore pipeline. Currently,
18 they said no time is proposed. Offshore pipeline
19 we considered under the definition of pipeline
20 which applies to non-HCA part, where we have 18
21 months so I guess they mean they need longer
22 period for that.

1 MR. MAYBERRY: Thanks, Mike. As you
2 can see, the comments cover the gamut of
3 theories. As we go forward, we're going to show
4 you next a table that shows a comparison of the
5 current regulation, the proposed regulation, and
6 possible solutions for going forward.

7 Might add, too, on this last bullet
8 here related to offshore pipelines, we do add
9 that as something to consider, just like we have
10 in other areas that we've talked about today,
11 maybe an alternate consideration for all offshore
12 pipeline, and we have some thoughts on that we
13 thought we'd run by you for your consideration.
14 Also, I think our intent here is not necessarily
15 to go -- it's a very technical topic.

16 It's easy to get lost in the weeds.
17 I'd like to focus on some key areas that are of
18 concern. Really tried to lay this out as easy to
19 understand as possible, but there's only so far
20 you can go. It is rather technical. The tables
21 you see here, in the vein of trying to explain
22 this, it's pretty easy to follow. You have the

1 anomaly type -- this basically explains what do
2 you have to do with what type of anomaly, so
3 anomaly type, what the existing code requires in
4 452, what the proposed rule says, the action that
5 was in the proposed rule, or the type of anomaly,
6 and then the proposed action on that anomaly.
7 Again, existing, and then proposed. For example,
8 one of the easy ones, metal loss greater than 18
9 percent. Currently, that's an immediate repair.

10 NPRM didn't change that. It remains
11 an immediate repair in the proposed rule. One of
12 the ones I identified early, a couple of slides
13 ago, was the failure pressure ratio, that second
14 one. An anomaly currently, there's a failure
15 pressure ratio of one. You're essentially
16 allowed to work up to the edge, or the envelope,
17 if you will, to the burst pressure.

18 That would also be an immediate, but
19 we're adding a factor of safety, adding 10
20 percent to that. That gets us consistent to what
21 we have in the gas code now. Then that
22 requirement's there to related to -- again, with

1 specific threats, such as cracking, areas where
2 you have a stress riser and the like, identify
3 those as immediates, top-side dents. Then
4 there's one -- I know this one we'll talk about a
5 good bit, it's any indication of significant SCC
6 -- and we define SCC in the proposed rule, and
7 then indication of selective seam weld corrosion.
8 Those are immediates.

9 That was in the proposed rule. Then
10 moving on -- Mr. Chairman, we have a question.

11 MEMBER JOY: Can you tell me what TSD
12 and BSD stands for?

13 MR. MAYBERRY: Okay, sure, top-side
14 dent and bottom-side dent. Thank you. Again, I
15 won't go through all these. Maybe we'll just
16 summarize them, and then go back, or zero on
17 specific ones, where there'll probably be some
18 robust discussion. We'll get maybe with the
19 proposal, and then we'll go to where we need to
20 go to talk turkey about the specifics, get down
21 into the details.

22 As far as some potential modifications

1 to -- or revisions that could be made to address
2 some of the comments, certainly there was nothing
3 on metal loss greater than 80 percent. Looking
4 at any dent with metal loss, cracking, or a
5 stress riser, we were looking to modify that to
6 any dent with a gouge, unless -- the same
7 language you see up there. You can read it --
8 unless analysis shows minimal risk. So there's
9 an allowance for an analysis to be done. I'm
10 sorry, that's the -- I'm getting at the comments,
11 excuse me, getting ahead of myself, but these are
12 comments. Beg your pardon, here. These came
13 from industry related to API.

14 Then I guess one that I'm sure
15 there'll be robust conversation on related to SCC
16 and selective seam corrosion, the preference was
17 to limit it to where you have likely crack
18 anomalies greater than 70 percent through wall.
19 These are -- as far as proposed -- let me just go
20 back. These are the potential revisions that
21 we've made to it.

22 Addressing the comments that you've

1 seen previously, we would change it, as you see
2 here. Getting to one that's the most
3 controversial, I would say, up there, related to
4 cracks, would be areas where you have a likely or
5 possible crack that's greater than 50 percent.
6 That would be a nine-month repair within an HCA
7 or 18 months outside of an HCA. Then related to
8 corrosion of or along the seam, a dent with
9 corrosion, unless analysis shows it's a minimal
10 risk, we're acknowledging the ability to -- there
11 might be some where an analysis could prove it to
12 be a minimal risk, so we essentially agree that
13 could be a solution, there. As far as options --
14 certainly in the first slides, it indicated some
15 of the options. We could keep the proposed
16 timeframes that were in the original rule, except
17 in the following areas that are listed there.

18 The changes there would change -- like
19 for P safe over MOP less than one, it would go to
20 P burst over MOP is less than 1.25. The P safe
21 already has a factor of safety built into it. I
22 think essentially, it changes your -- it's very

1 close to being similar in the first one. It was
2 something that we felt was acceptable.

3 The next one related to -- I know in
4 talking with people there's a pretty good bit of
5 concern over the requirement relate to SCC or
6 selective seam corrosion. We were looking to go
7 with some language that would allow fracture
8 modeling that considers pipe toughness for flaw
9 growth in determining the safe pressure. That
10 was an option related to SCC selective seam
11 corrosion. Then finally, as I mentioned before,
12 we're adding this. Is there a consideration that
13 we should make for offshore because it has a
14 different threat profile, and should we consider
15 the anomaly or the repair criteria based on
16 historical data for that pipe segment?

17 I'm reminded that the last two, the P
18 safe over MOP, that changed in the ratios for
19 non-HCA, and then the last one also is for
20 non-HCA for -- I'm sorry, for the SCC it would
21 also be for non-HCA, as well.

22 With that, fed you with a fire hose,

1 but --

2 CHAIRMAN TAHAMTANI: All right, Craig.

3 MEMBER PIERSON: Craig Pierson,

4 liquids. Just a couple of opening comments.

5 There's no question in my mind we're all trying

6 to do the same thing. We want to find what's

7 going to fail and fix it before it does. So the

8 discussion on how do you do that is what we're

9 talking about.

10 The couple of things I think we need

11 to keep in mind, what we've got up on the screen

12 is the stuff that you go dig. That's what's

13 being discussed. Detecting it is a different

14 element than deciding what you're going to go

15 dig. We want to make improvements on both sides.

16 You want to be able to improve the ILI technology

17 that finds it and the equations that give you

18 indications of problems, and then you want to

19 improve the modeling that says how much strength

20 is remaining. You do all that, and then these

21 things send you to the field to go dig. If

22 somehow there's a failure, it may not be because

1 of the stuff that tells you what to go dig. Just
2 to make a point, I know in my company -- I think
3 it's typical -- today when we go dig, we only
4 have to repair about half of what we dig.

5 So we will go out, dig. We'll take
6 the coating off and find out there's nothing.
7 Half the time, we find out there's nothing, and
8 all we do is recoat and backfill. So we're
9 over-digging right now in a very significant way.
10 Then when we do repair, by the time you've
11 excavated, you're there, and we will over-repair.

12 Because you've invested in being
13 there, we will over-repair, and we will fix
14 things that are really non-injurious. So when
15 you get down to the subset of what we're actually
16 going to find, it's a relatively small subset
17 that's injurious. The regulations, as proposed,
18 are quite troubling to us because we are having
19 to go out in the field and we will have to dig
20 far more than we do today on things that we can
21 reasonably determine are not needed. If you look
22 at immediates, the immediate criteria of any dent

1 anywhere on the pipe with any metal loss, that is
2 a -- you can find a gazillion of those. It used
3 to be a 60 or 180, perhaps, and now they're
4 immediates. When they're immediates, you're
5 shutting down, or you're derating. The
6 operational impact is even greater.

7 So it's sending us out there to do
8 things which we've got the technology to know are
9 not needed. As we're trying to improve ILI
10 technology that helps better define any metal
11 loss -- we're going to get better at that --
12 that's going to send us out even more. We've got
13 to improve the modeling that helps determine when
14 something is injurious, and we're working on
15 that. We are improving the modeling.

16 This sets us back from being able to
17 take advantage of the improved modeling that
18 we're doing and the improved tools. It truly is
19 taking us away from -- it's diluting our focus
20 from getting at what it is that really -- the
21 needle in a haystack. We're just having to go
22 through a whole bunch of haystacks. This, it's

1 troublesome to us. The thing that may be helpful
2 -- we are in agreement with a lot of what's up
3 there, a lot of what's been proposed. We are in
4 substantial agreement with a lot. What I'd
5 suggest is if we can put up some language -- as
6 opposed to going through the tables, we can put
7 up some language that just looks, by exception,
8 at what we want to change.

9 That's what I would propose that we do
10 to try to get to the guts of the matter because
11 it's tough stuff to walk through. I don't know
12 that we need to pick at things -- we don't need
13 to touch on things that we're already in
14 agreement with. I think we may have sent some
15 language.

16 MR. MAYBERRY: It sounds like a good
17 idea. We have some of the exceptions up here.
18 Yes, go ahead, Mike.

19 MR. ISRANI: This is Mike Israni. I
20 would just like to brief you on how we arrived at
21 all this. In 2008, we had an API petition where
22 many of the conditions that we are proposing now

1 were agreed to at that time. In fact, the dents
2 with this cracking and some risers, we only moved
3 the bottom-side dents into immediate category.
4 Top-side dents, between four and eight o'clock,
5 were already there, already in the immediate
6 category. We only added the bottom-side dents in
7 that, from 60 days to immediate condition. As
8 far as the metal loss, we added the one with the
9 stress risers. Those were the ones which moved
10 to the immediate category. At that time, we were
11 discussing with another team of API.

12 Those corrections were made because of
13 that. The timing, we did increase from --
14 knowing that operators were digging some of the
15 lines and not seeing the anomaly in a really dire
16 situation, we increased some of the conditions
17 from 60 days and 180 days to nine-month period
18 for high-consequence areas. For the some that we
19 found were really critical, we moved them to
20 immediate condition. We have not arbitrarily
21 taken these positions, but from the experience,
22 what we had learned.

1 MEMBER PIERSON: I think we might be
2 looking at hard copy in front of us, as opposed
3 to -- is that what --

4 MR. MAYBERRY: This has some proposed
5 changes. Essentially, they're exceptions,
6 singling out the ones that are at issue.

7 MEMBER PIERSON: Right. So one of the
8 --- let's just start with immediate conditions.
9 We're saying this applies to both HCA and
10 non-HCA. What we're saying is let's be specific
11 about going at crack anomalies as an immediate
12 condition. Let's be specific about that.

13 We're proposing 70 percent wall
14 thickness, or if the tool's capability is less
15 than 70 percent, you would have to go with its
16 maximum ability. So if the tool's capability is
17 only 50 percent, if it said 50 percent, you would
18 go dig 50 percent. Because some of the UT tools
19 can't go as deep as some of the magnetic tools.
20 That's the first point.

21 The second point is: let's let that
22 suffice and remove the specific references to any

1 indication of significant SCC and the selective
2 seam weld corrosion. There was some specific
3 language that defines significant SCC. My
4 understanding is that specificity comes from
5 doing a field investigation, not what a tool can
6 call. It is trying to put something in there
7 that just -- it doesn't work. If you look at the
8 definition there, you'd only get to that by doing
9 a field investigation. What we're saying is just
10 take a 70 percent crack depth and go after it.

11 On the dents and all the dent
12 criteria, we're saying leave it as is, but allow
13 for an engineering analysis that we --
14 professional engineering analysis -- we can work
15 out the details of what that is -- where we can
16 say this type of dent, we don't need to go.

17 We're saying we're good with the dent
18 stuff, but allow us an engineering analysis that
19 can keep us focused on the right stuff and not
20 going to dig a huge number of possible anomalies.
21 Engineering analysis is important to us.

22 The last portion is that we're good

1 with the 1.1 times and let it also include
2 injurious cracks and the selective seam weld
3 corrosion. We're there at the 1.1 safety factor.

4 PARTICIPANT: This is all for
5 immediate repair?

6 MEMBER PIERSON: Pardon me?

7 PARTICIPANT: This is just for
8 immediate repair?

9 MEMBER PIERSON: These are for the
10 immediates, yes.

11 Those are the only changes, so there's
12 a lot of stuff that we're not changing.

13 (Off microphone comment.)

14 MEMBER PIERSON: Pardon me?

15 (Off microphone comment.)

16 MEMBER PIERSON: Then let's go to the
17 270 day, the longer -- 270 days for HCA, 18
18 months for non-HCA. Instead of the 70 percent
19 threshold above an immediate, it goes to 50
20 percent. Again, on dents, keep the dent criteria
21 all the same, but allow us to provide an
22 engineering analysis that we can say that these

1 don't need to be dug, and these do.

2 Then lastly, the safety factor on the
3 remaining strength is 1.25 for the cracks and
4 selective seam weld corrosion. Those are the
5 changes on the 270 and the 18 month. Then
6 there's another change, where we're proposing to
7 allow what we would call a scheduled condition.
8 The purpose of this, there's a population of
9 anomalies that can grow to failure somewhat
10 quickly, quickly meaning before our next
11 inspection cycle. What this obligates us to do
12 is that we've got to keep our eye on those and
13 get them repaired before that next inspection
14 cycle.

15 This is obligating ourselves to make
16 sure that we're watching those things that could
17 grow to failure in the third year or fourth year.
18 We've got to get them before the next inspection
19 cycle. That's what we're proposing to add with a
20 scheduled condition. Should we take a vote?

21 (Laughter.)

22 MEMBER KUPREWICZ: A couple things.

1 I appreciate the spirit of the industry trying to
2 move forward in avoiding failure. I don't want
3 to take anything away from that. A couple
4 comments. First of all, we're getting into area
5 that's fairly technically sophisticated, and
6 there's probably only a handful of people in this
7 room -- not to take away from any of the
8 attorneys, is that better -- but it goes well
9 beyond attorneys. It's the technical guys. This
10 is a very small core of expertise here. So in
11 fairness to all the parties, there might be a way
12 where PHMSA can bring together, in a more focused
13 arena, some of these observations. I'm sensing a
14 general understanding and acceptance of the
15 failure pressure ratio of another 1.1, not a
16 surprise. That's a good thing because we're
17 seeing too many rupture failures that are at 50
18 percent SMYS.

19 That's not a place -- that's way
20 beyond your engineering analysis. Your
21 conservatism was 20 years, and it failed in five,
22 at half the pressures you predicted. There's

1 something wrong here. That's a good thing. A
2 couple observations, and it's not to be
3 argumentative. I could be just totally not
4 completely informed.

5 Dents with stress concentrators, I
6 have yet to see someone who can give me a
7 reliable fracture time to failure prediction. I
8 think your comment about I found a dent and
9 stress concentrator because I got better tools,
10 but hell, it's been running for all these years.
11 Do I go drop everything and go dig this sucker
12 up? I think that's a fair comment. For the
13 record, I'll just say dents with stress
14 concentrators were handled differently. It was
15 when you knew you had one, you had to go do it.
16 Now you're going a different area, and so you
17 might want to have the discussion -- again, my
18 objective is not to punish industry or have them
19 diluted in their attempt here, but when I hear
20 dent with stress concentrators, that's a crack,
21 corrosion, a cut.

22 The fracture mechanics guys will sit

1 here and tell you there's too much unknown here,
2 so what's my safety factor? That's one of the
3 issues, again, not to be argumentative. The
4 other one is the cracks. They're a nightmare,
5 and there's different types of cracks, SCC versus
6 low frequency. Low frequency, no surprise, it's
7 in the public domain. If you've got low frequency
8 and you've got very low toughness, forget the
9 engineering analysis. I hope I'm wrong, but the
10 engineers will try to work all this stuff.
11 They're making assumptions, but they're taking
12 the management team down a path that the ability
13 to reliably predict time to failure may not be
14 very good.

15 So cracks, I kind of look at, whether
16 it be 70 percent or 30 percent or 50 percent, I'm
17 sensing a willingness to try to figure out
18 something here. I don't think I can answer that
19 right now in this group. I'd ask PHMSA, maybe,
20 to embrace the spirit of the cooperation here and
21 try to get something subject to a little more
22 clarification. My warning would be I think

1 there's a general consensus going to the higher
2 failure pressure ratio.

3 Figure out where we don't tell the
4 industry to go drop everything and work on
5 something if there's enough information to make
6 us feel it isn't immediate, and those would
7 probably be dents with stress concentrators and,
8 to a lesser extent, SCC cracks. But again,
9 you've got to integrate the data. If you've got
10 a 20 percent SCC crack, and it's in a wall loss
11 of general corrosion of 80 percent, you don't
12 have a lot of remaining wall, so there's an issue
13 there.

14 Then I'd be really careful about --
15 there's been a lot of work done by PHMSA in the
16 public domain about both low-frequency and
17 high-frequency with low toughness steels. I
18 can't answer that today. I want to carry the
19 momentum here of cooperation, but I can't say, in
20 clear conscience, I can support all the details.
21 I want to understand them better. Is that okay?
22 Sorry for the speech.

1 MEMBER PIERSON: No, absolutely,
2 that's a good speech. The thing that I think
3 that is -- we have APR 1176, an enormous industry
4 effort to go out and better figure out how to
5 handle cracks. That is by the time you're
6 writing this language, 1176 is going to be there,
7 and you can see -- it speaks to the low-frequency
8 ERW. We're quiet to that. We're quiet to that
9 here. You've got 1176 that is going to be
10 available when the final language is written.

11 MR. MAYBERRY: Craig, if I might --
12 just had a quick question. The 70 percent, can
13 you give us some background on that real quick?

14 MEMBER PIERSON: That's what our
15 industry experts came up with. I'm not going to
16 be technically able to say why 70. I know that
17 it's ground in some of the Battelle equations and
18 so forth.

19 Technical experts are going to need to
20 deal with that.

21 MR. MAYBERRY: It must have considered
22 a length and -- certain extent of --

1 MEMBER PIERSON: We're not specific to
2 the length. We're only specific to the depth.
3 So it's 70 percent. You see it. It's immediate.

4 MR. MAYBERRY: Then another thought.
5 I don't know if you'd consider -- there's a
6 standard from ASME that does categorize these
7 types of anomalies. Maybe that's a solution is
8 characterizing an immediate -- for instance, in
9 this standard we have here from ASME on SCC,
10 perhaps maybe a Category 3. We can --

11 MEMBER PIERSON: We would advocate for
12 looking at --

13 MR. MAYBERRY: Some existing standards.

14 MEMBER PIERSON: -- where our technical
15 experts have gotten together to try to find good
16 solutions. The one thing that I would say in
17 regard to the dents specifically, there are some
18 dents that can be highly injurious, and they can
19 be very shallow. There are other dents that are
20 shallow, they can have some metal loss, and
21 they're nothing. So our tactic with this is to
22 say that they have to be considered, and then

1 they have to be engineered out. So by default,
2 they're in, and they get engineered out, if that
3 makes sense. It's a more conservative approach
4 that handles the subtlety of the dents. There's
5 going to be other technical work going on.

6 In the next two years, we've got a lot
7 of projects at PRCI, where we're trying to figure
8 this stuff out. We need the capability of having
9 some flexible regulation that allows for the
10 continuous improvement cycles that we're pushing
11 hard with ILI and pushing hard with the fracture
12 equations. We need to be able to accommodate
13 that, or our focus won't be on finding the things
14 they're going to get us.

15 MR. NANNEY: Just to answer back, the
16 things that we would like to get -- and we hear
17 what you're saying there -- if you look at the
18 crack, as far as immediate conditions, we don't
19 understand where the 70 percent came from, but we
20 would definitely entertain, for stress corrosion
21 cracking -- just as Alan said, if you looked at
22 Category 3, Table 40, a summary of crack severity

1 categories --

2 MEMBER PIERSON: Let me -- I'm sorry,
3 Steve. Let me get all the --

4 MR. NANNEY: Aside from that, I really
5 think on the dents, I think we're close on that.
6 I think when we talk in terms of using fracture
7 mechanics, a component that has an analysis part
8 to really address what you have there, I think
9 that's something that we could work with there.

10 CHAIRMAN TAHAMTANI: Chuck, you want
11 to go ahead and comment while they're looking for
12 --

13 MEMBER LESNIAK: Chuck Lesniak.
14 Obviously, this is -- what Rick has said is that
15 this is a really technical subject. As a member
16 of the public -- I'm a biologist by training and
17 education and involved with pipelines kind of by
18 accident. I think the intent -- but following
19 the news, reading about incidents, something's
20 not working. We're not catching everything we
21 ought to be catching. I think that's the intent
22 here.

1 As a member of the public, my instinct
2 is to defer to the staff. It concerns me that --
3 where I don't want to head with this is to defer
4 action on this. I think this needs to get done.

5 In terms of working with the industry,
6 looking at these alternatives they've proposed,
7 I'm not opposed to that, but don't let that defer
8 action on this. If the Agency staff looks at
9 this and are comfortable with what the industry
10 is proposing, then okay if it achieves the goal
11 you're trying to achieve. If it doesn't, then I
12 think stand where you're at. But I also -- I'm
13 with Rick. We don't want people digging
14 anomalies that don't need to be dug. That's just
15 a waste of resources, and we maybe miss stuff we
16 ought to be catching. I'm sensitive to that, as
17 well.

18 But something's not working because we
19 are having incidents on lines that were pigged
20 that didn't catch things or things grew much
21 faster than we thought they were going to grow.
22 We've obviously got an issue. I know maybe --

1 Craig, you are digging 50 percent -- or 50
2 percent of your digs don't find anything or don't
3 find anything that needs action.

4 I understand that, but that's a
5 reflection of the consequence of some of these
6 failures is the probability is low, but the
7 consequence is very, very high. I think
8 over-digging is necessary until we get our tools
9 better and more accurate. So I would tend to be
10 more conservative and defer to the staff's
11 judgment on this because what we're doing is not
12 working today.

13 CHAIRMAN TAHAMTANI: Jeff.

14 MR. WIESE: I'm not sure whether to
15 let Craig go first. I'll go, but I'll just add
16 -- first of all, thanks for the vote of
17 confidence, and we take it seriously. But I did
18 want to say, to Rick's point, we're in
19 rulemaking. It limits us a little bit in what we
20 can do.

21 So while we do like collaboration, we
22 do like to push the standards and that, it's our

1 goal, it's a continuous improvement cycle. Not
2 everything is known now. But we would certainly
3 take that under advisement, and I really
4 appreciate the work that Craig and others have
5 put into that. I think it's really important to
6 have some of this discussion in public.

7 It's just not us and the industry
8 sitting down and hashing it out. It's important
9 for the public to understand a little bit that
10 these are not simple matters. I had a comment
11 that I reserved for the end, but I'm going to go
12 ahead and pull it out. I honestly believe that
13 there's virtually no failure that's caused
14 intentionally. It's almost always a human or an
15 organizational problem. It is rarely -- rarely
16 -- on occasion, maybe -- someone did something
17 intentionally. It's what's not known that really
18 gets us. There are a lot of ways in which we're
19 working together outside of this environment to
20 try to drive that home, whether it's through SMS
21 or something else that drives that continuous
22 improvement cycle. I just wanted to say I think

1 it is -- it's kind of dry for a lot of people,
2 but I think it's important to have some
3 conversation about these issues in public. I
4 appreciate your vote of confidence on that.

5 MEMBER PIERSON: Just a couple quick
6 things. Chuck, we want to over-dig, too. You
7 need to over-dig to make sure you get stuff. The
8 part about this that was hard to appreciate is it
9 can, as written, drive way more over-digging.
10 That's the uh-oh moment for trying to find the
11 stuff that's going to get you.

12 Over-digging is what we intend to do.
13 The other thing is when you have the failures,
14 the failure can occur at multiple levels, and it
15 can be in -- it didn't get detected. It didn't
16 get analyzed. Then it may be that the data
17 didn't get integrated. What we're talking about
18 here is it's the knob that you turn that sends
19 you to the field. That's what we're talking
20 about here. All this other stuff is happening
21 upstream. We're debating the go the field knob,
22 and that's where the big spend is, and that's

1 where you've got to be pretty careful about
2 turning that knob right.

3 CHAIRMAN TAHAMTANI: Ron.

4 MEMBER MCCLAIN: Ron McClain with
5 industry. I think Craig's done a good job of
6 expressing some of our concerns and proposing
7 some alternate language. I think PHMSA, in
8 looking at recommendations, picked up on some of
9 our biggest concerns, which were any indication
10 of significant SCC, which we don't know what that
11 means, or selective seam corrosion. I'm not sure
12 how we move the ball in providing what Craig
13 outlined as a summary. It doesn't seem that far
14 away from PHMSA's revisions, but I'm not sure how
15 we get it to a motion, either.

16 MR. WIESE: I think it is going to
17 take some additional thought that's not going to
18 happen in the next 30 minutes. I'm not sure how
19 we do that, either, unless it's to go to Chuck's
20 idea that -- if you want to go ahead and make a
21 motion, you can, that we actively consider the
22 proposals laid on the table by the industry. We

1 would have to respond to that in the rulemaking
2 anyway. We can't do it outside of this public
3 forum, where it's all recorded and public, but I
4 don't know how to respond in 30 minutes. I think
5 we'd have to go off and take your proposal and
6 figure out what we're going to do.

7 MEMBER MCCLAIN: Just to add to my
8 comment, I think there's already been a
9 considerable closing of the gap by removing some
10 of the things that gave us a lot of heartburn,
11 but I think you're right. If you would take the
12 language that I'll say industry proposed, and we
13 spent a lot of time working on that, with the
14 changes that PHMSA's already made and considered,
15 maybe that would be a motion to continue down
16 that road, rather than a definitive answer.

17 MR. WIESE: Chuck, just for your
18 benefit -- and I would recommend -- we don't have
19 this in the docket, so we'd have to enter it into
20 the docket.

21 PARTICIPANT: We could read it as a
22 comment, which would put it in the document, or

1 offer it.

2 MS. WHETSEL: I can make it part of
3 the transcript, I believe.

4 MR. WIESE: Okay, good.

5 CHAIRMAN TAHAMTANI: Chuck.

6 MEMBER LESNIAK: A couple of things.
7 Jeff, what I was saying about the staff is I do
8 believe and trust the staff to a great extent,
9 but I also agree that these things should be
10 discussed in a public forum. My concern is I
11 don't want to kick the can down the road on this.
12 In this particular instance, I think that the
13 Agency ought to take into consideration the
14 industry comments, but that because of time
15 constraints, I know this thing needs to move
16 forward.

17 So my suggestion would be that we make
18 a motion to recommend the staff proposed
19 revisions with -- include a recommendation to
20 consider the industry input that's provided in
21 this sheet, if we can make it part of the docket,
22 but that the committee make a recommendation to

1 approve the staff proposed revisions, and then
2 take that into consideration as you finalize the
3 rule. That would allow us to move forward with a
4 recommendation from the committee.

5 MEMBER MCCLAIN: This is complicated
6 enough. I would suggest maybe give us ten
7 minutes to caucus on that. I know we're short on
8 time, but I think it's a really big issue for us
9 to think through what we're committing to there,
10 even if it's five minutes.

11 CHAIRMAN TAHAMTANI: All right, five
12 minutes to caucus, starting right now.

13 (Whereupon, the above-entitled matter
14 went off the record at 4:03 p.m. and resumed at
15 4:12 p.m.)

16 CHAIRMAN TAHAMTANI: All right, who is
17 the spokesperson for the industry?

18 MEMBER MCCLAIN: Thank you for the
19 opportunity to walk through our concerns, and
20 they are complex, but I think Craig is going to
21 outline what we would like to see, something
22 industry could support, and then it's going to be

1 very difficult for Michele to put it in a motion.

2 MEMBER MCCLAIN: Craig Pierson,
3 industry. In a nutshell, we'll try to outline a
4 motion that says we acknowledge the work that
5 PHMSA has put out. We acknowledge that there
6 needs to be more discussion. We want full and
7 equal consideration, with the industry proposal
8 in parallel with what you tabled, and a provision
9 for engineering analysis. That's, in essence,
10 what we would be trying to put in a motion. You
11 got go with what you got, full and equal
12 consideration of the industry, plus engineering
13 analysis.

14 MR. WIESE: Thank you for that in the
15 spirit of cooperation. I think you do know that
16 we were listening before, when we were reading
17 the comments on the docket. You've seen some
18 motion in our proposals based on points that were
19 already offered. I think it's fair to say that
20 we're taking these suggestions seriously in
21 looking at them. I don't know, Alan, if you want
22 to add anything to that?

1 MR. MAYBERRY: I think we can work
2 with this and come up with a solution. We were
3 talking about some solutions at the break to work
4 with what we have here. If you don't mind
5 staying until 8:00, we could probably iron it
6 out.

7 PARTICIPANT: First liar never wins,
8 Alan. I'm good, buddy.

9 MR. MAYBERRY: I'm not good.

10 CHAIRMAN TAHAMTANI: So Michele,
11 you've got some good motion language we can work
12 with?

13 MEMBER JOY: I hope so. I move the
14 proposed rule, as published in the Federal
15 Register and the draft regulatory evaluation are
16 technically feasible, reasonable, cost effective
17 and practicable, as regarding repair criteria for
18 both HCA and non-HCA pipeline segments, subject
19 to the following change being made to allow for
20 recognized engineering analysis to determine
21 those dents and cracks that are non-injurious and
22 no further investigation is needed, and to give

1 full and equal consideration to the industry
2 comments that were discussed here today.

3 CHAIRMAN TAHAMTANI: That was pretty
4 clear. Is there a second?

5 MEMBER DENTON: Second.

6 CHAIRMAN TAHAMTANI: Second.

7 Discussions? Chuck.

8 MEMBER LESNIAK: Chuck Lesniak. It
9 seems like -- and I understand the suggestion of
10 the inclusion of the engineering analysis. It
11 seems like that's included in the industry
12 comments. That's kind of suggested all
13 throughout that. Absent that, I think I would be
14 fine with the motion. To me, it's a little
15 redundant. Maybe I'm picking it to death, but
16 that's my only comment.

17 CHAIRMAN TAHAMTANI: My comment would
18 be do the words engineering analysis concern
19 PHMSA?

20 MR. WIESE: I personally don't, but I
21 would ask if someone who was in the caucus can
22 respond? I think Chuck's point is fair. It's in

1 the comment. Did you feel that it's under-served
2 within the comment document?

3 MEMBER JOY: The intent was that we
4 take it out of the comment document, and it
5 becomes something that modifies the rule, that
6 the rule would allow consideration of recognized
7 industry analysis in the analysis of those dents
8 or cracks that would require immediate action, a
9 determination that they are non-injurious, so
10 that no further investigation is needed. In
11 other words, it wouldn't be just a knee jerk.
12 You meet this criteria, go do it. There would be
13 an opportunity for a recognized engineering
14 analysis to say maybe this type is not required
15 to be an immediate repair.

16 MR. WIESE: Isn't that 1(c)?

17 MEMBER JOY: Yes, but we're taking
18 1(c) out of this. This is just for
19 consideration. The other would be adding it to
20 your rule. That was the proposal. Sorry if I
21 wasn't clear.

22 CHAIRMAN TAHAMTANI: Chuck, any more

1 comments?

2 MEMBER LESNIAK: That's kind of what
3 I thought. I'm not prepared -- I'm not
4 comfortable with making that a committee
5 recommendation. I'm happy to, and I think it's a
6 good idea for the advisory committee to recommend
7 that PHMSA consider the industry comments that
8 are outlined here and include that engineering
9 analysis. It's all through it. I don't think
10 it's appropriate that the committee provide that.
11 That's my only comment.

12 CHAIRMAN TAHAMTANI: Other comments?

13 MEMBER KUPREWICZ: Just real quick.
14 I know everybody's probably getting tired. I
15 want to be careful about -- I think, again, in
16 the spirit of what I'm hearing is we're looking
17 at those anomalies with dents and cracks. You
18 don't have to go into rocket science, but the
19 engineers should be able to say here are cracks
20 in certain locations, dents of a certain type in
21 a certain location, not looking at the last-digit
22 calculation here, would become obvious if you

1 follow certain analysis that those are many years
2 of life. I just caution, in the word engineering
3 analysis, when you start looking at this stuff,
4 all the ruptures that have occurred recently,
5 where the ILI calls were either ignored or
6 miscalculated, involve detailed engineering
7 analysis that mispredicted by decades time to
8 failure.

9 Usually when that's happening their
10 modeling isn't quite right. Usually it's the
11 engineering assumptions that the engineer put in
12 the models. That's the unknown, low and high
13 frequencies in the GRW helped us to verify an
14 appraisal of the analysis; you can come up with
15 an estimate that says ten years, but it's
16 actually one. I think in the spirit here, I'll
17 let you guys work out -- what Chuck was saying,
18 work that out. I sense the power of this
19 committee is in its ability to update these
20 issues personally to try to move the bar forward.
21 I think it's trying to move the bar forward. You
22 guys have got to figure out how to clarify this.

1 CHAIRMAN TAHAMTANI: All right. Other
2 comments? If not, we have a motion and second,
3 and there's been discussion.

4 MR. MAYBERRY: If I can add a comment.
5 We can work with that proposal. I was going to
6 say, to put meat on the bone, so to speak, to
7 your point, Rick, we would put some specifics
8 around what the expectations would be to deal
9 with fracture mechanics, consider the failure
10 type, failure mode, toughness of the material
11 you're dealing with. Those things go into your
12 analysis, and we would be specific. Where we're
13 seeing shortcomings are where people didn't
14 properly consider that. I think as we put -- and
15 it would help everyone being clear on the
16 expectations. I think we can deal with that.

17 CHAIRMAN TAHAMTANI: Craig.

18 MEMBER PIERSON: Craig Pierson,
19 liquids. We agree. You would want to say what
20 is an engineering analysis and the things they
21 have to consider and drive to a high-level
22 proficiency and consistency.

1 CHAIRMAN TAHAMTANI: Chuck.

2 MEMBER LESNIAK: One last thing is
3 just that I'm a biologist, so I can talk bad
4 about engineers and attorneys.

5 CHAIRMAN TAHAMTANI: Good point. If
6 no other discussion, Cheryl, please take the
7 vote.

8 MS. WHETSEL: Is this the last and
9 final?

10 Wow, all right. Massoud?

11 CHAIRMAN TAHAMTANI: Yes.

12 MS. WHETSEL: John Quackenbush?

13 MEMBER QUACKENBUSH: Yes.

14 MS. WHETSEL: Todd Denton?

15 MEMBER DENTON: Yes.

16 (Simultaneous speaking.)

17 MS. WHETSEL: Tim Felt?

18 MEMBER FELT: Yes.

19 MS. WHETSEL: Thank you. Michele Joy?

20 MEMBER JOY: Yes.

21 MS. WHETSEL: Craig Pierson?

22 MEMBER PIERSON: Yes.

1 MS. WHETSEL: Ron McClain?

2 MEMBER MCCLAIN: Yes.

3 MS. WHETSEL: Rick Kuprewicz?

4 MEMBER KUPREWICZ: Yes.

5 MS. WHETSEL: Chuck Lesniak?

6 MEMBER LESNIAK: Yes.

7 MS. WHETSEL: And Carl Weimer is

8 absent.

9 CHAIRMAN TAHAMTANI: The motion

10 carries.

11 I believe that's what we had on our
12 agenda. I thank you all for your input and hard
13 work. We got through it. At this point, I'll
14 turn the meeting over to Jeff.

15 MR. WIESE: Don't take off quite yet.
16 A couple of final remarks. First of all, thanks
17 again, just to express my thanks to you for your
18 time in helping us move this thing forward. I
19 think there's a lot of really good collaboration
20 that happens here.

21 I was just explaining to John
22 Quackenbush and Chuck, I see really the strength

1 of our rulemaking, a lot of it is in the advisory
2 committee. We get our comments, and we go off
3 and see what we think we need, but sitting down
4 and talking about it together in an open forum
5 with the public I think is really important, so I
6 appreciate your time and not taking that lightly.
7 I think it's a really important contribution on
8 your part. I know you have a comment on --
9 immediate one? Do you want me to wrap up?

10 MEMBER JOY: You were talking about
11 the advisory committee getting together in May.
12 I would ask if you could send us any proposed
13 dates as soon as possible because our calendars
14 are getting filled up.

15 MR. WIESE: That's fair.

16 MEMBER JOY: Unless you happen to have
17 the date for us today.

18 MR. WIESE: Fair point. We'll try to
19 avoid known external events, too. We're trying
20 to put together a calendar with NAPSRS and all the
21 trades and everyone, NACE and CGAs, but fair
22 point. I did want to say that these are a little

1 harder than our other meetings, when they're
2 policy meetings and we're talking about subjects
3 that we really like, but that's the real work of
4 the advisory committee.

5 We very much appreciate your policy
6 advice, but really need your regulatory advice,
7 so did want to thank you for that. I wanted to
8 mention and reiterate a point that the
9 administrator said about feedback. With your
10 suggestions and with hers, we tried something a
11 little different this time. We went with a
12 couple of public webinars, and I think we learned
13 a few things about conducting those, and then we
14 conducted a meeting for the members. We're going
15 to try to improve on that, but I'd welcome your
16 suggestion on those things. I'm serious. One of
17 them, for example, a couple members had to miss,
18 but we're going to try to record that session and
19 give you a link to the members. It will be open
20 to the public, but not for comment.

21 Those meetings, when we talk, it's
22 just really for you. It's to try to prep you for

1 the debate here, give you a leg up on that
2 conversation. So welcome any feedback you have
3 on that. I did want to say that -- really, I
4 think the thing I wanted to comment and close on
5 was that I'm really appreciative of all the time
6 and effort that people put into this.

7 I'm really sorry when we see people
8 come and go. John had just mentioned to me this
9 will be his last meeting. I'm really sorry to
10 see that, John, but I want to thank you
11 personally for all the service you've given us,
12 and for the service you gave to Michigan, as
13 well, so thank you very much and appreciate your
14 service. I think with that, I really just want
15 to wish you a safe journey home and have some fun
16 while you're at it.

17 MS. WHETSEL: Just one administrative
18 point. When they schedule the meeting a week in
19 advance, it would really be helpful if you all
20 just leave your tent cards and name tags, then I
21 don't have to worry about that, okay?

22 MR. WIESE: It'll be easier to

1 schedule the May one. This one was contingent on
2 a few regulatory steps, and that was why it was
3 difficult. But again, thank you, and see you all
4 soon.

5 (Whereupon, the above-entitled matter
6 was concluded at 4:26 p.m.)
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

A	
A-2 177:3	153:2
a.k.a 173:15	acting 9:16
a.m 1:11 3:2 88:2,3	action 13:11 15:6,14
abandon 208:8 218:2	33:16 43:5 162:16,19
abbreviated 33:2 51:8	188:19 189:2 191:5,7
ability 78:20 140:11	194:20 227:10 232:4
151:17 194:2 206:12	232:6 254:4,8 255:3
208:1,15 210:6	265:8
235:10 242:16 248:12	actions 46:5 137:9
267:19	167:5
able 3:18,21 14:1 19:17	actively 258:21
19:19 30:7 62:2,8	actual 21:9 30:19 33:11
68:11 110:2 143:12	34:8,17 42:8
150:3 168:8 210:12	add 6:10,16 7:18 8:17
219:20 237:16 239:16	14:6 23:6 25:16 26:3
250:16 252:12 266:19	26:9,12 36:17 45:4
abnormal 226:14	56:5 81:20 89:1 90:22
above-entitled 88:1	94:11 103:18 127:22
133:7 225:5 261:13	141:10,11,20 142:2,3
274:5	146:15 152:3 153:8,8
absent 264:13 270:8	153:9 161:5 167:20
absentee 203:18	181:18 190:4 194:10
absolutely 59:20 250:1	200:11,18 204:5
absorb 89:8	208:6 212:9 218:1
Academy 22:22	226:19 228:21 230:13
accept 76:18 211:8	230:15 231:7,8
acceptable 77:4 85:21	245:19 255:15 259:7
154:17 236:2	262:22 268:4
acceptance 100:9,12	added 71:13 109:20,22
246:14	153:16 201:6 209:21
accepting 43:7 58:14	218:5 229:16 241:6,8
accepts 74:10	adding 46:5 136:17
access 56:15	200:10 232:19,19
accessed 147:16 148:7	236:12 265:19
accident 34:22 39:4	addition 68:12 71:20
40:1,4 71:14,22 73:3	additional 26:19 45:9
73:9,16 101:8 107:13	56:18 70:7 73:11,13
160:13 182:19 253:18	79:13 142:11 146:19
accidents 18:19	147:5 172:4 183:16
accommodate 98:22	227:13 258:17
204:4 252:12	address 18:17 22:7
accommodating 204:8	24:19 25:4,12 57:20
206:2,3	136:18,20 140:10
accomplished 132:9	150:2 175:2 180:22
account 90:12 128:9	195:22 206:16 230:17
152:6 206:7	234:1 253:8
Accountability 38:15	addressed 18:13 23:2
accuracy 65:12	137:20 141:5
accurate 255:9	addresses 97:19
achieve 8:8 254:11	addressing 43:3 140:4
achieves 254:10	146:16 188:17 234:22
acknowledge 140:9	adds 6:12 91:8
262:4,5	adequate 47:14
acknowledgement	adhere 8:8
34:20	adjust 87:3
acknowledging 235:10	adjusting 216:16
act 24:19 38:13,14 56:8	ADMINISTRATION 1:3
	administrative 273:17
	administrator 1:20 3:6
	4:1 9:20 133:19
	154:20 162:9 221:6
	272:9
	administrator's 87:21
	161:20
	administrators 119:9
	132:14
	admission 61:15
	admissions 109:21
	adopt 34:8 204:17
	205:2,16 213:21
	adopted 159:13 164:18
	adopting 160:22
	advance 17:22 155:15
	158:1 273:19
	advancements 157:19
	advancing 156:15
	advantage 239:17
	advice 6:5 216:15,22
	218:17,20 272:6,6
	advised 119:8
	advisement 256:3
	advisor 10:3 22:4
	advisory 1:5 4:17 7:4
	7:12 13:10 120:19,20
	123:14 155:13 156:13
	266:6 271:1,11 272:4
	advocate 251:11
	affiliation 7:1
	affirm 49:11
	afraid 30:1
	afternoon 4:10 19:21
	31:6 102:6 132:11
	135:10 155:4
	AGA 161:19
	agency 109:1 177:20
	188:6,11,12 190:5,11
	190:13 194:15 210:13
	210:17,18 218:16,19
	221:14 254:8 260:13
	agenda 23:3,5 27:2
	270:12
	aggressive 88:16 211:5
	216:18
	ago 23:10 25:18,21
	127:18 144:17,18
	159:7 232:13
	agree 8:7 31:2 51:18
	53:2,9 54:2 55:1 84:6
	88:15 98:1 109:2
	128:2,13 151:21
	166:22 168:21 179:7
	188:5,6,12 189:7
	191:1 193:5 207:22
	235:12 260:9 268:19
	agreed 91:19 241:1
	agreeing 94:1
	agreement 16:1,2 28:8
	68:19,20,22 69:3,7,11
	129:9 224:17 240:2,4
	240:14
	agrees 151:4,21
	ahead 21:18 27:13
	31:14 49:5 72:20
	84:15 104:5 114:9
	127:8 153:9 168:11
	171:6 193:2 202:1
	216:14 218:12 219:4
	234:11 240:18 253:11
	256:12 258:20
	aims 18:16
	air 150:16
	Alan 9:19 20:15 22:8
	26:14 27:13 29:1
	31:16 32:11 34:9
	38:19 42:13,14 50:13
	58:10 60:22 62:22
	64:3,14 66:1 76:11
	89:15 90:2,20,21 96:6
	103:19 108:15 134:22
	136:4,13 137:11
	138:3 158:20 162:7
	163:17 170:22 171:20
	174:13 177:12 182:5
	183:21 204:13,18
	228:5 252:21 262:21
	263:8
	Alan's 56:6
	Alicia 10:19,20
	all-day 34:19
	allow 48:7,15 74:10
	137:14 172:3 173:15
	206:20 209:4 229:13
	229:17 236:7 243:12
	243:18 244:21 245:7
	261:3 263:19 265:6
	allowance 187:9 234:9
	allowed 183:17 219:16
	229:22 232:16
	allows 72:14 185:8
	206:1 252:9
	alternate 231:11 258:7
	alternative 151:2 190:7
	193:16 205:19
	alternatives 188:10
	254:6
	altogether 107:22
	219:1,2
	amazing 54:4
	amend 93:14 95:4
	101:13 107:20 121:11
	184:1
	amended 93:15 103:2,3
	131:4,6,10,15,15
	202:9 222:6

amendment 95:5
102:16,19,20,22
103:1 105:7 110:16
110:18,19 111:18
113:22 116:4 118:1,5
123:9 124:3,5 125:8
125:12,19 126:22
130:14,15 137:22
164:18 192:14
amendments 193:13
American 160:1
amount 51:5,5 211:12
analysis 45:2,5,16,22
48:13 79:11 90:15
160:14 195:7 234:8,9
235:9,11 243:13,14
243:18,21 244:22
246:20 248:9 253:7
262:9,13 263:20
264:10,18 265:7,7,14
266:9 267:1,3,7,14
268:12,20
analyze 46:17 47:16
analyzed 45:3 79:14
257:16
annual 32:16 33:17
34:21 39:4,22 53:17
72:17 101:7 107:12
173:3
annually 45:21
anomalies 184:21
199:21 200:4 227:9
227:14 234:18 242:11
243:20 245:9 251:7
254:14 266:17
anomaly 38:7 232:1,2,3
232:5,6,14 236:15
241:15
ANPRM 21:7 24:11,13
27:8 100:2
answer 18:2 70:10
144:15 199:3 216:20
248:18 249:18 252:15
259:16
answering 59:13
anticipate 141:3
anticipating 161:15
anybody 124:5 151:5
158:16
anymore 104:4
anyway 17:12,14 21:17
32:1 63:11 70:9
120:19 135:7 146:20
171:17 182:1 220:22
224:14 259:2
API 84:8 138:22 234:13
240:21 241:11
apologies 50:1

apologize 35:10 50:11
159:2 182:20
apparent 94:4
appear 65:22 196:5
appears 94:15 200:3
appendix 47:6
applicability 43:11 44:8
75:6 77:7,8 113:22
172:9 173:14 174:2
206:7 228:16,18
applicable 77:14
113:14
application 174:10
applied 58:4 171:17
applies 167:15 174:18
182:8 197:4 211:16
230:20 242:9
apply 39:11 52:1 58:6
75:12 167:2 177:10
186:15
applying 179:1 181:1
appraisal 267:14
appreciate 16:17 21:17
60:11 80:11 125:4
134:15 148:10 155:7
155:13 157:2,15
158:15 169:1 191:21
201:7 225:16,17
246:1 256:4 257:4,8
271:6 272:5 273:13
appreciative 273:5
approach 8:12 28:13
53:7 67:3 214:6 216:9
252:3
appropriate 5:4 6:7
18:17 54:12 80:5
94:17 147:3 151:22
188:20,21 191:2
200:8 208:14 266:10
approval 193:8,10
195:5,6
approve 195:14 261:1
appurtenances 181:20
APR 250:3
arbitrarily 241:20
arbitrary 66:17,21
209:17 216:6
area 33:14 44:13 45:5
45:15 46:7 48:3 90:5
141:18 147:16 148:6
149:1,22 153:10
157:19 162:17 175:1
229:18,19 246:4
247:16
areas 18:2 19:3,10,13
19:16 20:3,11 24:20
37:18 43:2,9 44:18
45:20 46:10 55:8

79:17 92:19 136:5
150:2,22 183:17
184:2 188:16 197:9
197:15,17 204:11
205:7 231:10,17
233:1 235:4,17
241:18
arena 246:13
argue 168:9 183:2
argumentative 247:3
248:3
arguments 143:2
Arlington 1:10,10
Armstrong 12:15
104:20
arrival 87:21
arrived 240:20
articulate 126:21
articulated 146:12
Aside 253:4
asked 53:13 70:4 82:20
asking 23:2 33:3,20,22
55:16 62:15 66:1
93:11,12 109:12
137:12 154:6 213:19
asks 5:11
ASME 251:6,9
assert 188:4
assess 59:3 137:8
171:13 184:17
assessed 153:11
171:10 181:9
assessing 153:2
184:20
assessment 20:6 35:18
35:20 38:7 148:16,21
150:4,6 172:3,4,15
173:8,16,21 181:5
184:3,12,13 185:3,10
186:4,4,9,15,20
187:11,14 188:20
189:15 199:22 200:10
200:19,22 201:1
208:20 216:2
assessments 2:17 70:9
146:19 147:5 151:6
171:7,9 172:7 173:2
173:10 179:12 186:13
202:8
asset 37:20 58:20
174:21
associate 1:20 3:5 9:20
associated 7:22 43:8
61:9 63:5 64:16 98:10
assume 30:7 229:2
assuming 70:16
assumptions 248:11
267:11

assure 83:13
atmosphere 158:7
attempt 98:16 182:20
247:19
attendance 225:15
attending 155:11
225:17
attention 37:21 120:12
159:1 189:17
attest 154:3
attorney 9:17 10:21
183:10
attorneys 183:7 246:8,9
269:4
attributes 40:10 45:2
46:19 47:4,5,12 48:12
51:2 79:13,14 82:8
88:13 91:6,7,14 95:22
126:13 127:3
audience 6:3 8:21
10:12 155:8
audit 80:11
Austin 11:10
authority 72:6,12
188:13 190:22 191:2
194:19 195:10
authorization 194:18
availability 153:12
165:17,21
available 46:17 85:15
173:2 192:18 250:10
avoid 271:19
avoiding 246:2
await 87:20
aware 17:3 89:2 152:21
192:8
awesome 13:20
aye 101:18,19 105:12
105:13

B

B 1:16 153:14 165:10
165:11,12 169:4
175:6 176:20 179:19
200:19 201:2
B31.8S 91:11
B31G 229:10
back 3:17 5:2,19 17:19
25:3,12 26:3,4,11
30:15 32:6 35:11 37:5
42:11 48:19,20 49:19
50:13 77:15 87:16,19
100:8 103:22 105:9
114:7 118:2,5 121:8
130:11 131:16 132:15
134:8,13,18 135:3,4
149:11 163:5 165:7
166:1,15 176:4 179:9

183:21 184:7,8
 192:21 195:2,17,19
 195:22 196:10 207:11
 216:1 217:6,22
 219:10 221:4 222:18
 222:22 224:15 225:9
 225:15 228:4 233:16
 234:20 239:16 252:15
backdrop 17:19
backfill 238:8
background 250:13
backs 56:1
backwards 8:7 196:8
 199:5
bad 8:19 269:3
balancing 56:8 60:22
 153:1
ball 21:16 33:12 173:22
 258:12
balloting 31:5
banks 143:12
bar 267:20,21
barometer 163:18
barriers 44:10
Barry 93:21 134:21
based 3:14 30:18 33:19
 49:2 59:4 66:7,16
 78:11 120:22 138:20
 138:20 189:15 192:13
 210:6 217:2 227:22
 236:15 262:18
baseline 173:17
basic 4:21
basically 26:17 43:15
 72:9 75:10 94:8 136:7
 177:14 183:12 232:1
basis 27:19 32:4 38:13
 42:2 45:13 56:17
 135:17 171:14 204:8
 227:22
bathroom 132:4,6
Battelle 250:17
bear 10:13 12:22
beat 215:10
bed 143:12
beg 133:20 234:12
beginning 26:12 49:22
 81:18 153:16 207:6
believe 13:12,15 14:7
 29:1 31:20 49:4 74:19
 80:8 82:19 85:18 88:5
 91:16 109:17 110:5
 130:10 131:9 133:20
 138:1 139:2 154:21
 163:21 195:8 207:15
 256:12 260:3,8
 270:11
believed 204:21

bend 8:7
beneficial 63:10,12
benefit 25:17 40:20
 55:5 162:13 208:21
 209:2 213:5,11,12,13
 259:18
benefits 213:15
best 57:21 139:21
 145:11 160:6 188:11
better 21:3,4 55:2 65:15
 123:7 136:19 149:6
 167:9 189:12 239:10
 239:11 246:8 247:9
 249:21 250:4 255:9
beyond 62:2,3 229:11
 246:9,20
bidding 208:6
big 85:7 128:12 182:1
 213:7 257:22 261:8
bigger 57:7
biggest 32:14 42:16
 43:16 258:9
binary 126:9
biologist 253:16 269:3
bit 4:11 10:7 37:22 64:6
 76:4 81:22 82:2 91:22
 142:22 154:15 156:2
 156:4 214:9 215:5
 227:13 233:5 236:4
 255:19 256:9
blame 92:20
bleeding 85:12
blind 23:18
board 156:10 159:19
boat 95:2
Bobby 14:7,11
body 46:20 47:8
bogged 28:6 30:1
bold 153:16
bone 268:6
book 124:17
booklet 110:6
books 80:20 81:1 99:11
bottom 179:20
bottom-side 233:14
 241:3,6
boundaries 52:2
boundary 66:19
break 85:8 87:15,18
 91:13 122:20 133:21
 214:17 224:20,22
 263:3
breakdown 137:17
breaking 119:3,10
breaks 132:4,7 171:4
Brian 7:14 12:15 102:9
brief 6:18 19:1 71:2
 240:20

briefly 91:18
bring 64:19 149:11
 246:12
bringing 59:17 97:19
broad 21:11
broadening 43:10,15
broken 144:11 226:16
brought 47:7 150:12
 166:20 197:11 213:1
 228:10
BSD 233:12
buddy 263:8
build 80:9 85:22
built 235:21
bullet 64:16 98:3
 101:14 107:21 108:9
 114:3 231:7
bullets 34:13 65:22
 98:9,9
bunch 239:22
burden 51:4 61:8,9
 62:14 210:16
burst 227:11 232:17
 235:20
business 156:10
button 86:9
buy 183:5
buys 153:3

C

C 1:14,15 165:10,13
 169:5
C-1 199:18
caffeine 132:18
calculate 229:8
calculation 266:22
calendar 271:20
calendars 271:13
call 5:19 8:11 13:16
 14:2,16 17:22 50:7
 68:13 101:22 102:2
 113:4 120:14 177:6
 179:19 243:6 245:7
called 51:9 163:13
 180:15 227:6
calls 88:20 267:5
Cam 14:7,11 87:1 91:22
Cameron 100:7 133:12
Cameron's 92:13
capability 62:8 242:14
 242:16 252:8
capable 184:19 185:1
 199:19 204:7 206:2,3
capricious 209:18
capture 141:6 168:10
 199:1
captured 75:10 76:8
 183:1,2

card 13:4 70:21 214:10
cards 185:12 273:20
careful 215:20 249:14
 258:1 266:15
Carl 1:18 11:17 24:16
 25:15 27:1 53:8 54:8
 57:1 73:19,20 82:15
 82:19 83:1 97:21
 103:11 105:3 106:13
 107:19 109:3 111:15
 112:21 115:6 117:16
 118:12 119:9 121:1,5
 122:16 130:6 134:15
 143:22 145:9 166:20
 170:19 179:7 185:13
 185:14 193:3,4
 203:12 212:20 220:20
 224:9 270:7
Carl's 103:1
carries 106:17,18
 111:18 113:1 115:9
 117:19 203:16 270:10
carry 117:20 118:4
 203:17 249:18
case 9:1 33:18 35:19
 36:12 49:20 58:18
 61:4 80:20 99:2 123:7
 128:11 140:7 174:13
 189:7 191:8 192:8
 214:3
cases 32:7 34:22
 120:11 137:6 152:12
 188:19 189:2
catastrophic 215:11
catch 19:22 142:15
 166:3 254:20
catches 180:18
catching 253:20,21
 254:16
categories 230:6 253:1
categorize 251:6
category 58:12 230:12
 230:14 241:3,6,10
 251:10 252:22
caucus 86:16 87:9 88:5
 261:7,12 264:21
cause 118:16 142:13
 152:19 168:19
caused 256:13
caution 267:2
Center 56:15
certain 26:10 40:22
 43:7 140:11,12
 151:17 197:14 208:3
 228:15 250:22 266:20
 266:20,21 267:1
certainly 23:21 37:22
 80:6 85:11 151:3

215:6 216:22 234:2
235:14 256:2
certainty 139:6 140:5
143:9
cessation 147:15 148:5
CGAs 271:21
chair 5:17 7:8 15:12
chairman 1:11,14 12:3
12:19,20 14:15 16:8
24:4 26:22 27:13
28:11 29:1,16 30:3
31:13 41:8 49:1,17
50:12,16 51:10 52:10
53:8 59:8,11 60:7
61:16 63:21 64:9,14
64:21 65:5,20 68:4
69:10,14,17 70:11,19
71:9 72:20 73:19
74:16,21 75:8,15
76:11,17,21 77:3,19
78:3 79:4,18 80:2,13
81:4,15 82:15 83:6
84:3 85:5 86:19 87:8
87:17 88:4,21 89:12
90:20 91:16 92:5,11
92:17,22 93:5,10,18
94:13 95:8 97:21
98:11 99:8,15 101:9
101:17,21 102:4,12
103:5,11,20 104:7
105:9,14,17 106:16
106:19,22 107:15,18
108:3,7,16 109:4,8
110:14,20 111:17
112:2,4 113:2,15,18
114:2,5,11 115:10,20
116:1,7,10,15,20
117:9 118:4,8,10
119:1,14 121:4,14,20
122:19 123:22 124:10
124:13,16,20 125:1,5
125:9,16 126:15
127:5,20 129:2,7,10
130:10,15,19 131:1,6
131:14,20 132:1,6
133:1,5,10,16 134:2
134:17,22 139:13
140:15 142:18 143:19
145:13,22 146:5
147:7,9 150:18 151:8
152:2,14 153:7,18
154:18 155:2 158:19
159:3 162:6 163:21
164:6,9,19,21 165:2,6
165:9,12,14 166:6,10
166:13,16 167:11
168:18 169:1,9,14,19
169:22 170:22 171:3

175:4,8,12,17,20
176:1,15,19 177:1,4,7
177:12 178:16 179:13
179:18 182:5,11
183:6 184:6,10
185:11 187:7,15
190:16 191:9 192:9
192:20 193:2 195:15
196:19,22 197:3
198:1,5,13 199:8
201:4,8,12,16,20
202:11,14,18 203:15
203:18 207:9,10,18
210:21 212:3,13,20
216:10 217:2,11
218:7,10 219:3,9,21
220:3 221:3,12,17
222:10,13 223:1,10
223:14 224:13,18
225:8 226:11 233:10
237:2 253:10 255:13
258:3 260:5 261:11
261:16 263:10 264:3
264:6,17 265:22
266:12 268:1,17
269:1,5,11 270:9
chairman's 28:3
challenge 82:3 228:10
challenges 44:9 209:7
chance 89:9 157:9
159:6,17 160:5
change 16:3 31:16 32:9
54:12 73:12 76:17
77:6 95:12 98:1,2,3
101:14 102:5 109:19
121:5 156:9 163:16
166:10 168:18 169:14
174:7 178:2,10
181:17 182:12 186:1
190:8 195:19 196:1
198:1 214:4 217:6,9
218:14 221:9,18
222:9 227:8 232:10
235:1,18 240:8 245:6
263:19
changed 45:22 181:11
219:5 230:7 236:18
changes 13:18 27:22
34:13 40:7 46:1 49:9
49:13 51:11 75:1,11
76:1 92:12 94:18,19
99:3 100:17 101:3
107:8,9 113:9,10
115:17 148:10 163:4
163:8,16 165:5
173:11 175:5 182:15
195:17 202:6 205:15
217:21 222:7 235:18

235:22 242:5 244:11
245:5 259:14
changing 116:12 158:2
158:5,6 213:14
244:12
characteristics 146:22
characterize 36:2,11
180:2
characterizing 251:8
Charles 1:16 106:11
203:10
check 108:10 124:1
checking 163:18 193:1
193:20
Cheryl 5:11,13 9:10
12:12,21 13:16 14:16
15:1 16:14 28:17
93:10 95:12 101:21
110:15 111:20 113:19
114:9 116:13 121:18
124:17 127:8 134:18
169:16 202:15 218:11
220:1 223:12 269:6
Cheryl's 111:19
chief 9:15,16
choice 26:1 128:6
176:5,7 177:20 186:5
choices 28:21
choose 185:5 188:10
Chorus 101:19 105:13
chosen 192:1
Chuck 11:9 30:3,5
52:10,11 53:10 54:3,8
58:19 61:17,19 70:22
71:1,9 75:17 77:20
80:15 94:13,14 95:19
96:21 97:5 98:17
105:1 108:5,16,18
111:13 112:19 113:20
115:4 116:2 117:14
122:14 130:4 142:20
142:21 150:18,19
151:11 162:16 165:3
166:17 168:5 170:17
177:7,8 178:4 179:8
179:13 182:21 187:22
188:1 189:3 190:2,3
191:12 193:6 194:12
195:8 207:19,20
208:18 210:4 213:1
214:12 218:13 220:18
221:8,20 224:7
253:10,13 257:6
259:17 260:5 264:7,8
265:22 267:17 269:1
270:5,22
Chuck's 59:13 258:19
264:22

circulate 198:19
circumstances 152:6
154:12 157:12,14
158:6
cited 91:4
cities 57:7,8
citizens 20:19
City 11:9
clarification 8:17 44:12
47:18 60:15 71:14
74:10 80:17 91:11
120:1 125:8 128:1
211:16 248:22
clarifications 2:12
46:11 79:6,7
clarify 39:13 55:13
59:19 77:12 102:16
109:14 136:7 137:12
137:13 167:21 172:9
178:4 179:4 192:11
199:18 200:5 228:15
267:22
clarifying 19:10 80:22
118:9
clarity 142:3 144:13
163:11 167:20 183:4
200:12
class 38:1 40:18 51:9
classification 227:3
clause 168:14
clear 68:18 77:17 145:2
182:17,20 185:19
219:13 222:18 223:2
249:20 264:4 265:21
268:15
clearly 191:7
clock 194:19
close 18:17 64:5,10
236:1 253:5 273:4
closing 259:9
CO2 172:12 180:8
Coast 148:14
coating 238:6
code 9:1 31:20 37:11
37:11 41:14,16 46:2
138:7 194:9 196:4
204:6 207:1 226:18
230:10 232:3,21
codified 127:12
collaboration 255:21
270:19
collect 47:14 54:1
66:12 72:15 98:5,5
collecting 45:16 56:20
66:14 227:20
collection 46:18
Colonial 11:19
combination 214:19

- combined** 28:9
come 4:2,6 23:15 29:11
 37:5 54:22 56:16
 77:15 78:5,7 83:18
 85:3 90:11 91:15
 140:1 142:19 192:5
 192:21 210:7,16
 229:12 263:2 267:14
 273:8
comes 4:4 14:1 32:20
 39:20 40:4 43:19
 59:22 72:7 74:11
 83:16 89:8 133:20
 163:14 174:1 180:20
 243:4
comfort 5:8
comfortable 94:20
 177:19 178:3 254:9
 266:4
coming 4:4 78:16 89:6
 109:1 161:21 209:8
 222:21
comma 153:15
commence 150:6,20
 151:10,14 165:14
commend 160:4
commensurate 33:16
comment 11:1 12:14
 13:3,6 14:21 20:18
 21:10 26:22 28:19
 33:1 34:5 42:16,19
 43:10,16 46:22 47:2
 47:10,19 51:15 56:21
 66:10 68:8 73:22
 76:12 79:9 80:16
 92:19 97:15 121:7
 133:17 138:22 146:11
 156:4 158:15 166:3
 189:14 201:9 205:8
 207:9 212:6 223:4
 244:13,15 247:8,12
 253:11 256:10 259:8
 259:22 264:16,17
 265:1,2,4 266:11
 268:4 271:8 272:20
 273:4
commented 20:20
commenters 139:5
 204:17,20 228:13,19
 229:11
comments 3:14 4:15
 6:8,9,20 7:1,10,18
 20:14,16,18 21:4,5,8
 21:9,12,17 23:20 24:2
 24:9 26:14 27:20 31:3
 32:10,12 33:3,5,8,19
 33:20,22 38:18,21
 39:6 42:11,15,21
 46:11,20 48:5,15 50:2
 51:12,16 52:10 54:8
 56:6,11,22 57:11 60:9
 60:11 65:5 66:7 67:15
 70:12,16,20,21 71:3
 75:17 77:20 79:5,18
 82:20 92:16 95:9
 108:17 110:15 119:6
 120:8,15 121:1
 135:20,22 136:1,6,9
 136:12,17 138:21
 139:19,22 143:20
 145:13 146:10 147:7
 147:9,13,18 154:19
 154:21 156:20,21
 162:21 163:1 171:17
 171:22 172:20 175:5
 176:17 183:14 187:7
 187:16,19,21 190:16
 191:10 195:16 199:11
 204:12,14,16 205:1
 205:10 207:18 212:3
 212:22 222:15,15,16
 223:10 225:10 228:2
 228:12,12,21 229:1
 231:2 234:2,10,12,22
 237:4 246:4 260:14
 262:17 264:2,12
 266:1,7,12 268:2
 271:2
commercial 17:6
commercially 85:14
Commission 11:8 12:5
commissioner 11:7
commit 65:16
commitment 156:18
 158:13
committee 1:5 2:2 4:18
 6:4,7 7:4,12 8:1,2 9:9
 9:13 13:2,7,10,20,21
 15:6,11,12,14 28:12
 51:12 65:21 67:5
 68:16 73:9 92:6 93:7
 120:21 131:1 138:1
 139:12 146:3 154:22
 155:13 156:13 161:7
 161:7,16 164:2
 183:20 205:11 225:13
 260:22 261:4 266:4,6
 266:10 267:19 271:2
 271:11 272:4
committees 7:19
committing 261:9
common 194:5
communication 160:15
communications 154:9
communities 62:7
 158:14 160:19 161:1
community 159:15,16
companies 54:4 61:3,7
 61:22 83:12,21
 160:19
company 58:2 62:3
 83:13 238:2
compare 176:11
comparison 231:4
complete 126:2 148:16
 150:4
completed 13:8 25:9
 125:19 149:15
completely 178:3 247:4
complex 21:21 23:16
 261:20
compliance 139:21
complicate 99:20
complicated 261:5
comply 110:9 206:15
 213:22 218:3
component 253:7
comprehensive 62:16
compromise 196:6
 212:18 213:3
computational 41:16
concentrator 247:9
concentrators 247:5,14
 247:20 249:7
concept 26:6 126:6
 153:4 216:1
concern 25:14 30:6
 73:2 88:12 149:2
 192:19 218:16 231:18
 236:5 260:10 264:18
concerned 90:1 148:15
 230:16
concerns 75:11 147:22
 254:2 258:6,9 261:19
conclude 213:16
concluded 274:6
condition 33:21 35:5
 40:16,22 53:2 60:4
 64:17 70:2 71:6 95:3
 131:5 152:16 158:5
 227:6 228:22 229:4
 241:7,20 242:12
 245:7,20
conditions 40:19 53:21
 94:22 137:15 138:14
 147:1 151:18 158:2
 226:15,19 230:1,9,14
 240:22 241:16 242:8
 252:18
conduct 14:16
conducted 272:14
conducting 272:13
confidence 255:17
 257:4
confirm 217:5
confused 109:10 186:6
Congress 22:11
connected 181:20
connections 8:20
conscience 249:20
conscious 177:20
conscripted 5:16
consensus 8:2,8,13
 29:12 49:18 64:6,10
 64:10 65:22 66:3 67:2
 68:5,14,15 70:17 85:3
 87:12 94:8 120:11
 144:1 168:20 179:19
 214:5 224:20 249:1
consequence 255:5,7
conservatism 246:21
conservative 252:3
 255:10
consider 15:15 16:18
 19:18 36:22 37:1 41:4
 46:20 48:3,17 64:19
 146:21 183:20 205:8
 215:7 231:9 236:14
 251:5 258:21 260:20
 266:7 268:9,14,21
considerable 85:22
 259:9
consideration 20:12
 40:7 41:7 50:21 51:7
 95:19 206:16 231:11
 231:13 236:12 260:13
 261:2 262:7,12 264:1
 265:6,19
considerations 27:22
 35:8 206:8,11 210:1
considered 15:18 48:13
 87:16 230:19 250:21
 251:22 259:14
considering 227:18
considers 236:8
consistency 268:22
consistent 70:15 72:13
 110:3 136:22 183:22
 185:2 219:15 232:20
consistently 44:19
consolidate 19:15
constraints 260:15
construction 43:12
 138:13
consuming 80:7
containment 67:20
content 23:11
contention 143:18
 207:17
CONTENTS 2:1
context 103:10 157:18
contingent 274:1

continue 160:3 162:4
 259:15
continuing 141:22
continuous 86:3,12
 128:20,22 252:10
 256:1,21
contribution 271:7
control 5:18 36:6 78:20
 166:15
controlled 78:8 79:2
controversial 3:16 4:11
 19:19 20:3 31:15
 34:15 42:5 49:3,4
 125:6 132:12 135:6
 163:18 235:3
controversy 30:12 42:6
conversation 7:11 28:7
 34:12 155:5 157:4
 187:12 200:1 234:15
 257:3 273:2
convey 158:17
conveying 215:17
convince 84:21
cooperation 248:20
 249:19 262:15
cooperatively 159:18
coordinate 154:9
 173:17
copies 50:9
copy 242:2
core 127:16 246:10
corner 50:5
Corporation 12:4
correct 28:4 55:11 56:7
 70:18 77:18 103:4
 108:12 120:6 125:21
 131:10,19 192:15
 199:9 217:8
corrections 241:12
correctly 91:2 177:6
corrosion 184:20 185:3
 189:15 199:20 200:4
 227:15,16 229:14,15
 233:7 234:16 235:8,9
 236:6,11 243:2 244:3
 245:4 247:21 249:11
 252:20 258:11
cost 15:19 55:5 56:8,18
 100:15 107:7 113:8
 115:16 164:15 202:5
 208:20 209:2 213:5
 213:11,12,14 217:18
 218:3 222:6 263:16
costed 56:9
costly 63:18
counsel 9:15,16 123:12
counsel's 9:18 10:21
 213:9

count 7:20 8:10
counties 62:7
counting 120:13
country 150:13 158:14
couple 3:11 4:19 7:8,10
 26:17 42:3 46:9 60:8
 66:6 84:6 134:8
 154:21 157:1 225:9
 232:12 237:4,10
 245:22 246:3 247:2
 257:5 260:6 270:16
 272:12,17
course 3:18 18:14
 31:16 37:22 38:12
 42:20 43:3 119:7
 123:6 137:12 163:5
 174:6 187:10 205:7
 226:18 227:21
court 56:1 100:4
cover 18:12 19:18 34:2
 110:4 139:2 178:5,13
 178:14 197:16 231:2
coverage 37:13
covered 18:7 23:20
 40:14 54:21 136:11
 180:9 197:14 198:9
 198:10 199:6 227:13
 227:14
covering 21:17
covers 51:2
Covert 10:20,20
CPM 41:16
crack 234:17 235:5
 242:11 243:10 247:20
 249:10 252:18,22
cracking 227:16 229:14
 233:1 234:4 241:2
 252:21
cracks 192:17 235:4
 244:2 245:3 248:4,5
 248:15 249:8 250:5
 263:21 265:8 266:17
 266:19
Craig 1:17 11:13 28:20
 49:18 59:11,12 68:17
 69:10 86:1 96:4
 104:16 106:5 109:6,8
 111:7 112:13 114:20
 115:11 117:6 122:8
 128:17 129:20 139:15
 139:16 170:11 175:17
 176:15,16 179:22
 181:10 203:5 220:12
 224:1 237:2,3 250:11
 255:1,15 256:4
 258:12 261:20 262:2
 268:17,18 269:21
Craig's 63:14 212:6

258:5
crawled 214:16
creates 194:8
criteria 2:22 20:10
 24:11 226:9,12,13
 227:2 228:3,9,15,18
 228:21 229:7,15
 236:15 238:22 243:12
 244:20 263:17 265:12
critical 54:1 96:2
 108:19 109:2 155:22
 156:14 157:21 241:19
crossing 149:21
crossings 143:7
crowd 134:7,11
crude 17:21
crystal 33:12
culture 160:22
current 36:20 40:14
 41:14 50:22 65:11
 91:8 107:22 127:12
 136:14,19 138:7,9
 147:14 226:17 231:5
currently 31:19 32:16
 37:10 42:9 43:6 44:15
 46:2 71:19 94:18
 171:9 172:4 180:21
 180:22 181:9 183:17
 191:15 207:1,3
 226:13 229:5 230:10
 230:17 232:9,14
curve 21:16
cut 6:20 12:5 211:8
 247:21
cuts 78:18
cutting 11:3 12:8
cycle 245:11,14,19
 256:1,22
cycles 252:10
cylindrical 180:7

D

D 1:18 158:21 162:10
 162:11,15 165:10
 169:14
damage 135:19 137:1,3
 137:5,8 142:14 147:4
 167:14 168:7,14
dark 195:2
data 19:11 32:15 34:21
 36:1 39:1 40:2 44:14
 44:16,16 45:4,11
 46:17,18 47:1,3 52:14
 52:17,18 53:3 54:13
 54:17 56:19 58:4 59:2
 59:17 62:12 63:16,19
 66:12,14 72:15,16
 73:9,15,17 80:5 81:18

82:4,6,14 83:5,8,15
 83:16 85:17 86:11
 88:11,15,19 89:3 91:4
 91:13 97:9 108:22
 110:9 115:17 126:6
 127:2 128:3,14
 160:14 179:2 216:4
 227:20 228:2 236:16
 249:9 257:16
database 215:3
date 25:22 33:11 39:20
 39:22 40:2 52:9 75:14
 206:15 271:17
dates 271:13
day 3:12 12:9 244:17
days 41:1 190:5,12
 191:13 194:17 230:9
 230:10 241:7,17,17
 244:17
deactivate 17:2
deadline 46:3,4 206:15
deaf 23:18
deal 18:18 45:7,12
 97:12 118:22 148:14
 250:20 268:8,16
dealing 53:6 61:2 79:10
 149:19 226:11 268:11
dealt 84:17 150:15
death 215:11 264:15
debate 50:7 134:7
 273:1
debating 257:21
decade 82:5 128:15
decades 267:7
decide 62:16 118:20
 122:22 135:11 178:20
 186:7
deciding 237:14
decision 8:5 15:10
 67:13 119:8
decisions 227:19,21
 228:1
declared 150:22,22
deep 143:15 242:19
default 252:1
defeated 168:15
defend 168:8
defer 254:2,3,7 255:10
deference 183:13
define 137:12 139:7
 233:6 239:10
defined 148:5 178:7
 179:16 184:18 196:18
 198:13,14
defines 197:6 243:3
defining 140:6
definitely 252:20
definition 24:12 47:20

144:3 180:6 181:19
196:5 230:19 243:8
definitive 138:14
259:16
deflect 216:5
deformation 184:21
199:20 200:4
degree 143:9
delay 25:5 137:7
delete 64:16
deliver 215:21
demonstrate 208:2,10
210:7,12
dent 228:21,22 229:3,4
233:14,14 234:4,6
235:8 238:22 243:11
243:16,17 244:20
247:8,20
Denton 1:14 12:1,1
51:14,14 55:13 68:22
69:3,6,6 75:9,9 76:7
104:10,11 105:21,22
111:1,2 112:7,8
113:17 114:14,15
116:22 117:1 122:1,3
129:14,15 170:5,6
180:13,13 192:10,10
192:16 202:21,22
220:6,7 223:17,18
264:5 269:14,15
dents 233:3 241:1,3,4,6
243:11 244:20 247:5
247:13 249:7 251:17
251:18,19 252:4
253:5 263:21 265:7
266:17,20
Department 1:1 3:7 8:4
159:9,11 160:2
depend 214:2
dependent 39:17
depending 40:12 200:2
depth 243:10 251:2
deputy 9:15,20
derating 239:5
describe 27:18
description 20:16
design 75:21 76:1
138:14
designated 1:19 5:12
5:14 6:6
designation 24:11
despite 139:21
detail 23:6
detailed 267:6
details 233:21 243:15
249:20
detected 257:15
detecting 184:20 185:1

199:20 237:13
detection 2:5,10 16:12
19:7 38:8 41:13,15,22
42:16,20,22 43:2,5
75:2,4 113:10 152:17
230:3
determination 32:18
35:1 144:12 167:4
265:9
determinations 39:2
40:3
determine 45:21 47:3
66:13 73:11 140:8,14
144:9 147:4,19
149:22 238:21 239:13
263:20
determined 121:12
124:8 153:13 168:15
determines 142:4 144:8
166:21 167:3,14,17
208:8 218:2
determining 146:18
147:2,3 236:9
develop 120:10 159:19
166:4
developed 85:13 86:7
developing 79:21 80:5
89:3
development 43:6
127:18 209:7
devices 24:14
DFO 5:13
DGO 5:12
dialogue 140:17 207:6
diameter 38:4 72:10
diameters 38:3
difference 103:9 128:13
194:8
different 20:22 23:9
59:18 61:11 83:11
84:18 85:10 132:8
174:14 184:22 188:7
190:22 236:14 237:13
247:16 248:5 272:11
differently 85:10 156:3
193:17 247:14
difficult 26:5 35:21 62:6
78:22 82:12 86:18
88:9 149:16 154:11
209:15,16 210:10
211:13 216:11 262:1
274:3
difficulty 43:8
dig 237:12,15,21 238:1
238:3,4,5,19 242:18
243:20 247:11
digging 241:14 254:13
255:1

digs 255:2
dilbit 22:21
diluted 247:19
diluting 239:19
dire 241:15
direct 172:6 185:3,10
189:10,15
direction 35:9
directionally 139:19
140:3
directly 45:8 56:20
director 10:4 22:1
disagree 54:11 188:13
191:22
disagreement 94:16
214:7
disallowed 189:21
disappointed 228:8
disaster 137:2 140:19
141:4 150:3,22
disasters 2:15 135:2,9
discourage 6:11
discuss 28:15,15,18
29:3,9,10,22 31:9
45:12 48:4 139:15
141:2 219:10
discussed 92:19
118:14 164:17 181:2
202:9 228:20 237:13
260:10 264:2
discussing 18:8 104:4
241:11
discussion 2:6,8,10,12
19:17 30:9,13,15 33:5
35:2,2 37:2,3 44:3,11
48:16 49:2 50:17 64:5
67:7 69:16 75:2 79:6
81:11 85:9 86:3 100:1
108:20 118:13 121:3
137:17 138:1 139:17
161:14 166:19 168:21
172:14 173:6 221:13
233:18 237:8 247:17
256:6 262:6 268:3
269:6
discussion/comment
75:5
discussions 13:7 29:7
43:21 101:11,17
105:11 107:18 108:7
108:8 109:5 111:20
113:18 114:9 116:2
116:11 118:11 124:17
127:7,17 139:3
141:16 165:3 169:16
172:13 202:14 218:10
219:22 222:14 223:12
264:7

disparate 138:18
displayed 228:12
distance 66:17
distinction 174:20
distribution 39:12 57:4
57:6 74:6,11,15
divergence 85:2
divergent 204:16
205:10
dividing 146:17
Division 9:12 10:1
doable 57:10
docket 4:16 7:6 120:8
259:19,20 260:21
262:17
docketed 7:5
document 56:2 110:8
148:2 152:8 214:22
259:22 265:2,4
documentation 110:5
152:9
doing 16:18 36:7 43:14
44:10 45:4 52:20
64:22 78:13 81:8 82:6
83:3 86:4,11 90:3
102:4 103:22 120:13
149:8 160:20 173:10
174:16 186:8 192:5
199:2 210:15 223:8
239:18 243:5,8
255:11
domain 248:7 249:16
domestically 157:5
DOMINGUEZ 155:1,3,7
158:22 159:4 162:12
door 5:4,10
DOT 73:5 121:13 124:8
DOT's 89:11
doubt 55:3
draft 15:15 51:21
100:14 107:6 113:7
115:14 164:14 202:3
217:17 222:4 263:15
draw 123:8 144:22
145:4
drawing 216:6
drink 171:5
drive 157:18 209:9
215:19 256:20 257:9
268:21
driven 85:21
drives 256:21
driving 209:19
drop 247:11 249:4
dropped 214:10 215:22
dry 257:1
duck 193:15
due 147:21 171:10

dug 245:1 254:14
duly 6:6
duplication 163:5

E

E 185:2
ear 4:9 23:18
earlier 70:4 73:21 83:8
 97:19 109:19 128:19
 146:15 148:4 152:8
 162:18 187:17 195:22
 224:19
early 18:6 134:9 232:12
earth 141:20
earthquake 140:18
easier 50:8 98:21
 149:22 273:22
easiest 49:12
easy 86:8,14 115:11
 142:15 144:21 164:11
 231:16,18,22 232:8
ECDA 189:18,21
echo 83:7 85:11 86:2
 86:15
echoing 176:17
economic 206:8
economically 208:3
edge 85:12 232:16
edification 10:11
 179:15
editorial 189:13
educate 156:7
educating 160:21
education 156:11
 253:17
effective 39:20,22 40:1
 55:4 100:16 107:7
 113:8 115:16 164:15
 202:5 206:14 217:18
 222:6 263:16
effectively 44:10
effectiveness 15:20
efficient 6:15 64:22
 67:9 135:15 189:13
 201:22
effort 52:18 54:18 63:18
 83:14 152:22 160:14
 160:15 161:10,11
 250:4 273:6
efforts 139:21 156:16
egregious 189:19
eight 19:3 20:9 72:9
 125:3 241:4
eight-inch 178:7
eight-inch-diameter
 37:14
either 22:20 39:11
 126:10 132:5,7 145:4

150:21 151:19 166:19
 193:12 258:15,19
 267:5
elbows 182:2
element 90:17 237:14
elements 90:7 120:2
 128:5,6
eliminate 33:20 35:4
 40:15 128:10 229:13
 229:17
eliminating 58:15
else's 95:19
email 14:10 51:22
embrace 248:20
emergencies 150:22
emergency 24:13
 152:19 154:1 163:6
emerging 94:9
emphasize 132:11
encompasses 223:5
encompassing 48:14
encourage 160:17
ended 148:3
energy 158:12
enforceable 167:5
enforcement 152:5
 193:18
engage 192:6
engaged 160:18
engineer 22:3 267:11
engineered 252:1,2
engineering 10:1
 243:13,14,18,21
 244:22 246:20 248:9
 262:9,12 263:20
 264:10,18 265:13
 266:8 267:2,6,11
 268:20
engineers 248:10
 266:19 269:4
enjoying 155:4
enormous 250:3
ensure 171:14
enter 127:10 259:19
entertain 86:17 252:20
entire 95:7 118:17
 119:17,19 120:4
 189:17 223:6
envelope 232:16
environment 204:10
 256:19
equal 262:7,11 264:1
equation 214:21
equations 237:17
 250:17 252:12
equipment 147:17,21
 147:22 148:7,19
 149:14 153:11,12,15

165:18,22 174:22
 175:1
erosion 143:8,11
ERW 184:17 187:2
 250:8
especially 43:2 55:22
essence 262:9
essentially 32:2 78:5,8
 196:11 197:8,10
 232:15 235:12,22
 242:5
Establish 230:2
established 13:15
 15:13
estimate 267:15
eternal 161:8
evaluation 15:16
 100:14 107:6 113:7
 115:15 164:14 192:6
 202:4 217:17 222:5
 263:15
event 7:3 20:5 34:20
 123:16 136:7,8
 137:13 138:16 140:9
 140:17,19,22 142:13
 144:3,14,21 146:22
 147:15,19 148:5
 168:12 214:18
events 2:15 135:2,9
 136:18 138:13,17
 140:6,12,14 141:9
 145:5 153:6 157:11
 164:17 167:21 168:6
 168:10 271:19
everybody 5:21 14:13
 31:12 46:19 101:20
 103:21 126:7 134:19
 144:1 155:4 224:17
everybody's 67:11
 149:9 157:15 266:14
everyone's 8:15 40:19
 155:13 157:6
everything's 226:6
evolutions 25:21
evolve 14:9
exact 81:22 82:7
exactly 60:19 61:13
 74:13 145:1
examine 172:12
example 7:14 22:21
 57:5 101:5 137:4
 191:6 232:7 272:17
excavate 59:16
excavated 238:11
exceed 213:13
exception 39:10 43:15
 51:20 57:16,17 58:17
 66:16,20 68:20 207:3

214:22 240:7
exceptions 35:3 53:1
 54:9 57:14 58:9,11
 62:10 96:7 97:6 98:2
 101:5 240:17 242:5
exchange 160:9
exclude 182:21
excludes 110:6,10
excuse 55:20 192:22
 234:11
exempt 54:10,14 72:3
 177:17 180:15 228:13
exempted 31:19 37:11
 52:5
exempting 177:15
exemption 32:3 56:13
exemptions 33:3 41:10
 55:14,16,19 67:16,18
 70:4
exist 36:14 177:9
existing 19:8 41:22
 43:11 47:7 76:4,20
 80:17 113:12 128:12
 146:9 174:9 218:5
 219:17 232:3,7
 251:13
exits 5:1
expand 34:1 59:4 110:4
 205:6 206:6 212:6
expanding 24:12
 211:19
expands 185:22
expanses 149:20
expansion 24:19
 179:11
expect 4:10 12:9 45:6
 187:9
expectation 91:3
expectations 46:6
 163:12 214:4 215:21
 268:8,16
expected 47:9
expecting 3:22
expedited 205:3
expense 60:2 212:11
expensive 80:7 84:1
 209:12,16 211:13
 212:10
experience 30:18 45:14
 46:16 189:16 241:21
experienced 164:7
expertise 155:17
 246:10
experts 250:15,19
 251:15
explain 74:4 103:9,11
 209:17 231:21
explaining 12:8 270:21

explains 232:1
explicit 46:2 77:15
explicitly 110:6 227:18
express 17:6 270:17
expressing 258:6
extend 19:6 41:18
extended 40:12 42:7
extending 42:8
extension 42:4
extent 19:21 36:2 249:8
 250:22 260:8
extenuating 152:6
 157:13
external 185:3 189:14
 271:19
extraordinary 31:4
extreme 2:14 20:5
 135:1,9 137:13
 140:16 144:3,13
 157:10 164:16
extremely 73:10,10
extremes 142:15
eye 23:18 245:12

F

F 1:15
FACA 6:4 7:19
facilitate 13:17 84:5
 137:16
facilitator 86:21
facilities 63:4,8 66:13
 96:9,12 135:20
 140:12,13 172:11
 176:7
facility 52:2 57:16,18
 63:9 66:19 67:19
 187:1
fact 5:16 82:2 91:11
 108:10 152:10 154:7
 164:10 171:15 200:9
 212:8 241:1
factor 90:13,14 157:1
 184:18 227:8 232:19
 235:21 244:3 245:2
 248:2
factors 45:21 48:4
 206:19
fade 210:2
fail 237:7
failed 21:18 246:21
failing 90:9
fails 123:16
failure 61:5 90:16,17
 160:12 227:8 232:13
 232:14 237:22 245:9
 245:17 246:2,15
 247:7 248:13 249:2
 256:13 257:14 267:8

268:9,10
failures 189:19 215:12
 246:17 255:6 257:13
fair 32:22 61:13 186:10
 188:17 191:11 247:12
 262:19 264:22 271:15
 271:18,21
fairly 3:19 19:20 32:13
 54:15 143:6 145:2
 182:17 246:5
fairness 246:11
fall 17:16 23:12 209:6
fallen 46:9
familiar 82:6 208:19
familiarity 56:12
FAQs 194:2
far 32:9 35:9 42:11
 43:17 45:2 46:10
 48:14 79:11 90:1
 140:4 146:10 147:13
 148:2 155:16 186:3
 192:12 193:18 204:11
 228:2 230:15 231:19
 233:22 234:19 235:13
 238:20 241:8 252:18
 258:13
farms 33:4
farmst 209:11 254:21
fastest 5:6
favor 101:18 105:12
favorite 84:8
fear 167:3
feasibility 15:19
feasible 100:15 107:7
 113:8 115:15 146:13
 148:2 151:5,19
 164:15 202:4 208:2,3
 208:10 210:8,13
 217:18 222:5,19
 263:16
FEBRUARY 1:8
fed 236:22
federal 15:8 17:6
 100:13 107:5 113:6
 115:14 120:20 127:12
 164:13 202:3,8
 217:16 222:4 263:14
federally 173:4
feedback 272:9 273:2
feel 48:1 93:7 119:4
 120:9 139:19 150:9
 249:6 265:1
feeling 13:20 67:14
feels 73:5 149:4
feet 65:12 211:22 212:7
felt 1:15 11:19,19 57:1
 96:20 104:12,13
 106:1,2 111:3,4 112:9

112:10 114:16,17
 117:2,3 122:4,5 123:4
 124:4,12 126:5,5
 127:1 129:3,16,17
 163:11 170:7,8
 199:17,17 200:13
 201:7 203:1,2 220:8,9
 223:19,20 236:2
 269:17,18
fewer 40:10
field 226:15 237:21
 238:19 243:5,9
 257:19,21
fifth 20:2,4
figure 16:22 50:6 96:19
 140:2 142:16 168:13
 248:17 249:3 250:4
 252:7 259:6 267:22
filled 271:14
final 8:5 18:9 21:14
 34:7 85:9 124:7
 213:10 216:18 250:10
 269:9 270:16
finalize 261:2
finally 236:11
find 8:14 59:15 85:20
 90:18 139:20 183:11
 196:6 211:9,10
 212:10 237:6 238:6,7
 238:16 239:2 251:15
 255:2,3 257:10
finding 23:7 252:13
finds 237:17
fine 71:7 150:8 182:7
 185:15 264:14
finer 33:13
finger 56:5
fire 5:1 236:22
first 3:20 7:9,10 19:16
 19:16 27:15 28:1
 31:14 36:11 46:22
 48:21 50:18 51:17,20
 57:21 64:1 74:14
 109:22 122:22 135:7
 135:15 138:5 172:15
 175:16,21 176:2
 184:22 189:18 200:11
 200:21 219:8 228:10
 235:14 236:1 242:20
 246:4 255:15,16
 263:7 270:16
fittings 182:1
five 7:21 8:11 41:1
 42:19 44:5 47:2 48:8
 62:18 65:12 75:6,21
 76:15 79:9 80:9,14
 84:10,11 98:9 99:2,21
 100:2 113:11 122:18

122:18 172:21 205:1
 208:6 211:10 224:12
 224:12 246:21 261:10
 261:11
five-year 75:14,16
 172:16
fix 196:20,21 197:2
 237:7 238:13
flag 189:1
flaw 236:8
flexibility 152:11
 194:22 208:1,16
flexible 252:9
flight 27:3 102:5
flip 52:16 138:4
flood 140:18 143:13
flooding 137:1 142:12
floods 135:18 142:6
flow 24:13 78:11,20
 79:2 158:6
flowed 214:4
flows 78:15 180:8
fluctuations 78:15
fly 6:14
focus 50:1 52:16 63:12
 142:10 162:1 231:17
 239:19 252:13
focused 139:14 243:19
 246:12
folks 5:21 58:10 149:19
 155:9,10
follow 50:9 186:13
 231:22 267:1
follow-up 137:8 167:5
followed 190:1
following 2:14 81:14
 99:2 100:17 101:3
 107:9 113:10 115:17
 135:1,8 145:12 202:6
 217:21 222:7 235:17
 253:18 263:19
forces 215:18 216:7
forefront 81:19
foresee 143:2
forget 74:13 209:1
 225:12 248:8
forgot 134:9 187:16
 201:10
form 33:2,2 34:16,18,18
 34:22 38:21 39:3 40:1
 40:9 51:1,8 60:11,17
 69:22 101:4 107:10
 127:3 160:12,13
formal 217:14 225:16
format 89:14
formed 155:8
forms 40:8 50:21 52:7
 52:12,16 53:11 66:8

103:15
forth 3:17 104:1 132:15
 250:18
Forty-five 133:5
forum 209:9 259:3
 260:10 271:4
forward 8:14 36:5 44:2
 44:11 48:16 87:6 91:1
 94:7 155:22 174:1
 190:7,13 192:1,5
 205:12 217:22 231:3
 231:6 246:2 260:16
 261:3 267:20,21
 270:18
found 45:17 226:15
 241:19 247:8
four 8:12 19:10,16,16
 22:4 27:17 28:6,13,17
 29:2,5,7,14,21 30:8
 30:12,13 31:3,9,11
 34:15 41:14 48:18
 92:7,19 93:1,4 94:5,9
 98:10 105:6,7 117:18
 145:20,21,22 241:4
fourth 87:16 115:11
 245:17
Foxx 159:10
fracture 236:7 247:7,22
 252:11 253:6 268:9
frame 44:6 76:15 83:5
 91:15 139:17 205:3
 210:20
frames 229:20
framework 159:9,13,17
 159:21 160:4,21
frequencies 267:13
frequency 184:17 248:6
 248:6,7
frequently 22:12
front 27:18 139:1 242:2
frustrating 26:13
full 40:17 41:5 126:12
 145:16 262:6,11
 264:1
fully 44:15 51:3 155:8
fun 161:13 204:2
 273:15
fundamental 127:11
 134:9
funded 22:22
further 32:19 36:10
 38:11 46:5 59:3 73:6
 77:12 80:8 160:11
 204:9 215:6 263:22
 265:10
future 21:1 24:1 58:6
 143:3,18

G

gaining 37:20
Gale 10:4,4 14:10 20:15
 22:1 32:11,12 38:19
 38:19 42:13 46:12
 64:15 70:13,14 72:6
 73:8 74:9,19 82:19
 91:20 92:2,9,13
 109:16 110:13 120:5
 120:22 136:4 137:11
 138:9 139:9 163:2,17
 164:2,8,11 171:20,21
 174:13,16 180:20
 183:12 192:13,22
 204:13 205:21 206:21
 207:15 209:20 211:15
 213:7,18 219:13
 228:5,8
gallons 17:21
gamut 231:2
GAO 38:15
gap 259:9
gaps 18:17
gas 13:19 161:16
 232:21
gather 36:1 52:14 53:3
 60:18 63:10 72:12,16
 73:3 119:6 178:20
gathered 179:2
gathering 2:4,8 16:11
 18:16 19:7 32:14 37:9
 37:10,13,15 38:3,9,10
 38:16,18,22 39:10,12
 40:5,8 51:17 52:8,17
 52:18 54:13,17 55:18
 58:4 62:12 65:8 69:16
 69:18,21 72:5,8,13,15
 73:1,6,13,21 74:7,11
 74:15 75:13 77:8,10
 77:14 78:1,5,7 79:1
 100:17,21 107:1,9
 108:14,15,19,21
 109:1,17 110:4,6,10
 110:12,12,13 112:1
 113:14 114:1 177:11
 177:15,17,21 178:5,6
 178:7,19 179:1,5,11
 180:11,21 181:4,12
 182:9,22 183:2 196:2
gathering's 180:14
gavel 16:16 17:14
 134:19
gazillion 239:2
gear 53:18
general 20:16 82:21
 128:13 136:1 138:6,6
 154:16 207:11,12
 246:14 249:1,11
generally 3:12 6:10
 49:7 51:18 128:2
 223:5
generate 156:4 157:4
generated 61:4
gentleman 214:18
getting 6:11 83:20
 121:17 135:5 137:7,9
 148:12,17,18 149:9
 149:13,14,15 182:18
 234:10,11 235:2
 239:20 246:4 266:14
 271:11,14
GIS 34:2 47:11,13,18
 61:20 62:5,6 64:5,12
 64:13 65:10,17 85:21
 97:9 108:14
gist 26:17 154:16
give 4:3,8 6:17 13:5
 20:13 33:18 42:18,19
 43:18 88:17 89:7
 91:13 92:3,14 132:17
 132:21,21 183:15
 205:12 237:17 247:6
 250:13 261:6 263:22
 272:19 273:1
given 12:21 44:9 54:17
 137:20 158:6 273:11
gives 19:1 184:4
gizmo 169:6
glad 59:9 121:10
glib 82:3
go 3:12 14:10 15:3
 18:15 24:2 25:2 27:13
 27:16,21 28:3 29:2,3
 29:7,11 31:14 35:9
 36:10 42:11,14 44:2
 47:9 48:19,20 49:5,18
 50:10,13 51:15 56:7
 59:3,15 60:2 61:17
 65:8,13 66:2 72:20
 84:15 85:1 86:9 87:4
 88:10 91:1,22 94:19
 97:11 102:8 104:5
 114:9 119:17 127:8
 130:11 131:16 135:12
 139:10,11,13,17
 146:5 147:20 149:14
 153:8 156:19 158:8
 165:6 166:1 167:15
 171:5 175:16,20
 176:2 177:4 183:21
 184:7,8 193:2 195:16
 195:22 198:20 202:1
 204:12 207:10 210:19
 211:6 216:7,14,17
 217:6,21 218:12
 219:4,10 222:9,18,22

226:7 228:2 229:6,11
 231:3,15,20 233:15
 233:16,19,20 234:19
 235:19 236:6 237:12
 237:14,21 238:1,3,5
 238:19 239:21 240:18
 242:15,18,19 243:10
 243:16 244:16 247:11
 247:11,15 249:4
 250:4 253:11 255:15
 255:15 256:11 257:21
 258:19,20 259:5
 262:11 265:12 266:18
 268:11 271:2 273:8
goal 18:21 34:10 66:12
 66:15 254:10 256:1
goes 31:17 118:5 146:4
 180:1 186:9 244:19
 246:8
going 3:11,11 4:1,20
 6:14 7:7 12:10,11
 15:3,6 16:20,21 18:4
 21:1,13 22:6 23:9
 25:6 27:16 30:7 31:9
 31:10,11 35:11 38:17
 39:16 41:6 42:18
 43:18,20 46:12 48:7
 48:11,19 49:11 53:14
 54:7 56:14 58:11
 62:13 64:2,12 66:22
 67:1,2,8 68:10,11
 70:14 72:16 78:21
 82:9 83:9 84:12,22
 85:1 86:5 87:2,4,5,6
 87:18 90:22 91:12
 93:20 94:7 95:11
 97:14 98:12,22 99:7
 99:12,16,17 102:8
 116:11,12 118:2
 120:10,16 123:4,8
 124:4 127:14 128:14
 130:20 132:13,15
 133:1,18,20 135:10
 135:21 141:18 142:9
 142:10 143:17 145:2
 148:20 153:8 154:4
 154:19 158:8,22
 160:20 163:17 168:12
 176:9 188:4 189:14
 190:11 191:5 193:12
 193:13 196:19,20,21
 197:8,16 202:15
 204:4 210:2,12 211:9
 212:16 214:11,21
 215:22 218:20 221:4
 227:2 228:6,11 231:3
 231:6 237:7,14
 238:16 239:11,12

240:6 242:11 243:20
 247:16 249:1 250:6,9
 250:15,19 252:5,5,14
 254:21 256:11 257:11
 258:16,17 259:6
 261:20,22 268:5
 272:14,18
good 3:4 9:14,19 11:6
 12:12 21:11,13 24:16
 27:12 37:22 55:2
 59:19 64:6 67:7,14
 84:20 90:5,9 92:17
 93:18 96:20 98:2
 121:17 134:14,14
 155:3 160:5 161:10
 161:10 166:11 182:9
 182:10 188:21 193:14
 196:16 200:18 201:10
 226:4 233:5 236:4
 240:16 243:17,22
 246:16 247:1 248:14
 250:2 251:15 258:5
 260:4 263:8,9,11
 266:6 269:5 270:19
gotten 67:10,11 109:10
 214:16 251:15
gouge 234:6
government 1:19 5:14
 38:15 140:6
grab 132:18
gradations 142:5
grasp 26:6
gravity 2:4,6 16:11 19:4
 27:15 28:1 31:18 32:2
 32:7,13,20 34:14
 38:22 40:5 48:20
 50:15,17,19,20 51:9
 51:17,18 52:1,8 55:15
 55:17 60:17 61:4,5
 62:21 63:6 65:9 70:1
 70:16 71:3 73:14 99:6
 100:19 101:2 108:20
great 49:10 84:13 85:1
 102:12 161:4 169:4
 189:22 260:8
greater 37:15 52:4 86:4
 144:13 232:8 234:3
 234:18 235:5 239:6
greatly 25:13 158:15
grew 254:20
groove 48:19
ground 54:5 62:1,3
 75:22 207:7 250:17
group 89:5 141:2
 159:19 248:19
grow 245:9,17 254:21
growth 236:9
GRW 267:13

guess 16:21 20:13
 22:14 24:5 25:15
 44:12 48:20 51:15
 58:9 119:15 120:1
 123:9 140:19 149:1
 153:18 180:13 185:18
 199:17 207:8 210:10
 213:4 214:12 228:3
 230:21 234:14
guidance 45:13 126:8
 142:11 144:20 145:1
 145:3,12 194:1,1
guide 45:9 166:4
guided 182:16
guidelines 73:5 142:19
Gulf 137:6 148:13
guts 240:10
guys 61:22 62:3 89:22
 226:7 246:9 247:22
 267:17,22

H

half 84:14 238:4,7
 246:22
hallway 5:3
hand 57:10 124:18
 185:2 187:20,21
 214:11
handful 246:6
handle 140:12,13 250:5
handled 65:15 247:14
handles 252:4
happen 30:2 84:6,8
 258:18 271:16
happened 25:22
happening 16:22
 128:21 257:20 267:9
happens 78:10 148:1
 270:20
happy 22:8 61:1 84:4
 90:19 100:8 158:16
 266:5
hard 134:4 135:7
 156:19 242:2 252:11
 252:11 257:8 270:12
harder 212:1 272:1
hashing 256:8
hate 152:18
haystack 239:21
haystacks 239:22
hazard 143:8,11
hazardous 1:3 15:7
 17:15 18:12 19:8
 32:16,21 41:21
 155:20 173:4 180:7
HAZMAT 159:15
HCA 20:11 24:11 43:2
 46:1,3 72:10 172:5

204:7 211:17 223:6,8
 226:16 227:5,5
 228:17 230:8 235:6,7
 242:9 244:17 263:18
HCAs 2:20 20:6,8 24:12
 41:19 42:10 171:10
 171:15,16,17 185:17
 185:18 186:1,3
 192:12,15 203:22
 204:3 217:21 222:3
 227:20
head 254:3
hear 36:13 51:12
 247:19 252:16
heard 55:8 64:18 66:8
 76:15 98:17 125:20
hearing 4:14,16 50:13
 180:17 266:16
heart 157:3
heartburn 168:19
 259:10
heavily 22:4
held 156:5
helicopters 148:20
 150:11
hell 247:10
help 8:14 13:17 77:22
 91:21 137:16 150:5
 150:17 162:5 164:2,4
 200:11 206:22 208:17
 219:14 268:15
helped 267:13
helpful 50:2 56:3 98:17
 240:1 273:19
helping 161:8 270:18
helps 239:10,13
Hey 175:17
hi 4:3,8
high 135:21 143:9
 211:2 255:7 267:12
high-consequence
 19:9,13 24:20 44:18
 45:20 79:17 173:20
 183:17 184:2 197:9
 197:15,17 205:6
 229:18 241:18
high-frequency 249:17
high-level 268:21
high-risk 204:10
higher 32:8 63:2 155:21
 213:15 249:1
highlighting 207:16
highly 251:18
Hilton 1:10
historical 236:16
historically 52:21 178:1
history 17:18 19:2 40:4
 40:13 59:5 73:16

147:1
hold 3:10 29:16 103:20
 118:10 166:16 217:12
holing 81:9
home 256:20 273:15
honest 194:6
honestly 199:3 256:12
hope 156:8 157:18
 176:6 248:9 263:13
hopefully 85:16 90:6
 91:21 99:9
hoping 3:22 156:6
 189:10 205:12
horizontal 50:5
hose 236:22
hotel 5:3 8:18
hour 63:22 84:14
 132:21 147:13
hours 147:15 148:16
 149:3,8,13,15,18
 150:4,7,13 151:6,10
 152:13 153:22
house 86:8
housekeeping 4:19
huge 243:20
human 256:14
hurdle 213:8
hurricane 136:9 137:5
 140:18 148:19
hurricanes 135:18
 148:14
hurry 202:16
hybrid 184:3
hydrotesting 173:16

I

idea 86:20 168:10
 178:19 200:7 240:17
 258:20 266:6
ideas 192:5
identification 45:10
 46:3 79:16 160:16
 186:8
identified 45:21 173:12
 195:9,21 228:1
 232:12
identifies 160:12
identify 50:3 137:19
 138:11 160:11 167:19
 233:2
identifying 186:4 216:3
ignore 25:6
ignored 267:5
Ill 1:16
ILI 172:6 174:1 184:4
 185:22 204:4,8
 217:20 222:3 227:20
 228:2 237:16 239:9

252:11 267:5
IM 174:19 191:15
immediate 116:5
 226:21 227:3,15
 229:15 230:1,12,14
 232:9,11,18 238:22
 241:3,5,7,10,20 242:8
 242:11 244:5,8,19
 249:6 251:3,8 252:18
 265:8,15 271:9
immediately 126:10
immediates 233:3,8
 238:22 239:4,4
 244:10
impact 18:22 35:18,19
 208:19 239:6
impacts 138:18
implement 43:18 46:4
 83:5 89:10 218:20
implementation 35:6
 41:7 42:17 44:3,7
 48:3,7 52:9 53:4,16
 66:9 70:3 71:8 75:4
 75:14,16,19 76:10
 79:8 80:21 81:2 82:18
 83:21 91:5 101:6,7
 107:12,13 113:11,12
 115:19 116:4,5,19
 118:21 121:12 124:6
 124:7 126:12 127:1
 187:10 204:22 205:17
 208:14 212:17
importance 186:18
important 8:18 33:11
 43:21 52:19 55:10
 66:15 73:10 155:18
 159:22 160:3 209:20
 225:3 243:21 256:5,8
 257:2 271:5,7
importantly 160:22
impose 62:13
imposing 61:10
impossible 79:1 209:15
impractical 184:14
improve 189:10 237:16
 237:19 239:9,13
 272:15
improved 239:17,18
improvement 86:3,12
 128:20 129:1 252:10
 256:1,22
improvements 237:15
improving 239:15
in-between 212:18
inadequate 45:17
inches 72:9,9
incident 72:17 182:19
incidents 40:21 42:3

53:20 56:13 194:4
 253:19 254:19
inclined 85:6
include 15:17 19:11
 31:10 38:2 47:19,22
 60:6 96:8 103:16
 136:22 174:22 179:10
 181:20 196:13 244:1
 260:19 266:8
included 21:10 39:14
 47:6 71:7 123:20
 180:2 196:13 227:13
 264:11
including 15:12 50:8
 67:4 98:14 153:12
 161:18 165:17,21
inclusion 264:10
incorporate 47:1 229:7
increase 241:13
increased 241:16
increasing 227:10
incumbent 187:5
indefinitely 188:10
indicated 13:5 62:22
 94:8 235:14
indicates 45:15
indication 156:8 233:5
 233:7 243:1 258:9
indications 152:17
 237:18
individual 135:21
individually 99:18
 135:11 153:2
indulgence 133:21
industries 222:15
industry 11:12,14,20,22
 12:2 29:20 51:15 53:6
 58:10 62:8 65:7,7
 69:7,11 71:12 75:10
 75:15 76:18 77:5 78:4
 80:5,12,13 81:1 84:11
 85:7,19 87:9 88:5,8
 89:2,7 95:10 107:4
 113:5 126:8 128:18
 143:7 151:16 153:3
 154:2 160:1 161:19
 176:12 194:14,22
 195:18 209:12 212:5
 215:18,21 234:13
 246:1 247:18 249:4
 250:3,15 254:5,9
 256:7 258:5,22
 259:12 260:14,20
 261:17,22 262:3,7,12
 264:1,11 265:7 266:7
industry's 65:13,18
 88:12 211:7
industry-recognized

229:8
inference 173:22
inform 4:18 160:11
information 19:12
 32:17 35:20,21 36:13
 36:21 45:2,16 47:12
 47:13,15 54:1 62:15
 62:17 73:1,4,7 79:11
 108:14 143:16 156:5
 156:11 160:10 171:15
 171:16 178:20 249:5
informed 21:3 247:4
informing 45:7 158:4
infrastructure 47:21
 60:16 73:15 168:7
INGAA 161:20
inherently 206:3
inhospitable 132:20
initial 146:17 147:3
 150:6 173:16
initially 36:1
injection 47:19 78:13
injurious 238:17 239:14
 244:2 251:18
inline 2:19 20:7 183:13
 184:13 185:8 203:22
 204:2 206:3 215:13
 215:19 216:8,8
innovation 189:11
input 18:2 35:9 44:7
 48:10 57:19 157:15
 260:20 270:12
insert 16:5,6 200:22
inside 57:17 185:18
 196:8 199:4 227:4
inspect 135:19
inspecting 146:12
 148:12 149:10 157:11
 181:22
inspection 2:19 20:7
 45:14 138:15 146:8
 146:18 147:4,18
 148:8 149:3 152:4
 153:13 157:20 173:1
 183:14,16 184:14
 185:1,9,22 199:19
 203:22 204:3 206:4
 215:13,19 216:8
 245:11,13,18
inspections 2:14 18:20
 20:4 46:8 135:1,8
 137:3 147:20 173:4
 227:22
install 212:11
instance 24:18,22 32:5
 150:11 187:2 188:22
 192:8 227:15 251:8
 260:12

instinct 254:1
integrate 82:1 88:14
 91:3 128:9 249:9
integrated 79:15 83:20
 127:3 257:17
integrating 44:14,16
 88:18 91:13 97:7
 128:7 216:4
integration 19:11 45:3
 45:10 47:1 63:19 80:6
 81:19 82:5,7,14 83:4
 83:8,11 85:17 86:11
 88:11 89:4 95:13,15
 98:4,14 101:4,15
 103:6 107:11 115:18
 126:7 127:2 128:3,14
integrity 44:21 81:10,17
 81:20 127:11,15
 136:14,20 174:11
 178:21 184:13,20
 186:2,11,14 189:4
 191:13 192:3 198:18
 201:1 204:6 215:1
intend 257:12
intent 47:22 63:2 80:19
 89:10 149:2,9 176:3
 188:14 200:5 231:14
 253:18,21 265:3
intentionally 256:14,17
interactive 45:11
intercede 189:7
interest 135:14 161:21
interested 4:14 103:17
intermediate 212:18
internal 161:1 184:22
 199:19
internally 212:16
interrelationship 47:15
interrupting 159:2
interval 172:21
intervals 172:18
intervene 150:17
intraplant 33:4 101:6
introduce 5:21,21 6:1
 10:15
introduction 2:5 10:6
 10:17 16:13
introductions 2:2 4:21
 7:9 9:4,5,9 10:14
inventory 51:7 53:12
invested 238:12
investigation 243:5,9
 263:22 265:10
investment 160:3
 189:11
invite 24:2 56:6,11
 57:11
involve 267:6

involved 21:21 22:5
81:17 89:2 127:16
152:4 223:8 253:17
involvement 23:16
209:5
involves 135:17 171:8
iron 263:5
Israni 10:2,2 22:3 46:14
228:6,9 240:19,19
issuance 26:1
issue 13:3,8 24:22 25:2
25:4,4,6 27:18 28:5
31:19 42:8 50:1 59:22
69:15 72:22 78:1
84:19 96:22 97:3
108:21 110:3 118:19
120:9 128:19,22
135:16,17 137:19
141:13 162:3,4 163:9
171:9 185:1 188:22
190:19 191:6 195:21
196:3 204:3 205:10
211:14 214:8 226:12
242:6 249:12 254:22
261:8
issue's 59:17
issued 17:16,22 19:3
issues 18:15,18 19:16
22:13 23:1,19 29:3
38:16 43:3 58:21
62:21 66:13 132:10
132:12 135:6 139:3
148:18 149:20 150:16
248:3 257:3 267:20
it'd 86:14 132:19
it'll 7:2 45:11 95:5 98:21
138:2 273:22
item 37:9 96:22 99:4
159:4,11
items 34:15 56:9 82:1
83:10,10,19 99:21
100:3

J

jammed 4:6
Jeff 1:20 3:5 12:20,22
13:5 22:6 25:5 30:16
49:20 60:7 61:16 66:1
68:4 77:11 80:14
81:15 89:12 93:19
95:18 119:1 127:20
128:1 133:16 152:20
154:3 162:6 167:11
191:10 194:7 255:13
260:7 270:14
Jeff's 225:9
jerk 265:11
job 258:5

John 1:18 10:4,18 11:5
11:7 14:10 20:13
21:15,16,19 22:1 23:2
23:5 32:10,11 38:19
40:6 42:12 44:1 46:11
51:1 65:1 66:4,5
67:14 70:14,21 87:2
91:17 97:18 102:14
103:6 104:8 105:18
109:14 110:21 112:5
114:12 116:16 121:21
129:12 136:2 162:22
170:3 171:18,21
202:19 205:14 214:17
216:15 220:4 223:15
228:4 269:12 270:21
273:8,10
John's 214:14
joint 161:16
jotting 200:9
journey 273:15
Joy 1:15 11:11,11 29:17
29:19,20 41:9 62:20
62:20 71:11,12 72:2
72:18,21,21 77:5,5,18
78:4,4 83:7 89:1,16
89:21 95:10,10 100:7
100:7,12,20,22 101:2
104:14,15 106:3,4
107:4,4 108:10
110:11 111:5,6
112:11,12 113:5,5
114:18,19 115:22
117:4,5 122:6,7
129:18,19 148:10
149:7 150:8 154:2,2
164:12,20 170:9,10
195:18,18 196:17
197:7,19,21 198:9,17
199:3 201:10,14
202:2 203:3,4 212:5,5
217:4,12 220:10,11
223:21,22 233:11
263:13 265:3,17
269:19,20 271:10,16

judgment 255:11**Julia** 10:14**jump** 66:22**jumped** 60:10**jumping** 144:17**jurisdictional** 71:18

72:3 197:4 198:3,6

justification 205:19**justified** 36:5 179:2

213:17

justify 56:8 137:14**justifying** 213:12**K**

Katrina 152:21 154:4
keep 6:18 16:20 17:4,7
67:1 121:6 134:6
235:15 237:11 243:19
244:20 245:12
keeps 6:13 169:10
kept 65:11
key 73:17 231:17
kick 195:6 260:11
Kidding 133:4
killer 97:12 118:22
kind 22:6 34:5,11 39:3
47:15 54:3 66:21
67:10 103:15 137:9
138:12 143:13 144:1
167:21 180:5 216:6
248:15 253:17 257:1
264:12 266:2

Kinder 11:22**kinds** 132:2 195:6**knee** 265:11**knew** 247:15**knob** 257:18,21 258:2**knock** 177:17**knot** 167:8**knots** 167:7**know** 3:13 4:6 5:17 7:13

13:2,12 14:2 16:19

21:20 23:13 26:14

29:20 36:9,15 37:10

54:2 55:17,20 57:22

58:1,5,20 59:14,16,20

59:21 60:9,13 61:12

62:1,4 63:15 65:3

67:16,20 75:21 86:22

90:18 91:18 95:5 96:3

98:6 100:3 104:2

108:11,12 113:3,19

118:14 121:2 128:3

132:7 134:7 136:21

142:4 143:10,12

144:21 145:4,9

147:22 150:10,15

152:21 154:13 155:16

156:18 157:7 158:8

160:4,6 161:18

180:10 183:6,9 187:3

190:20 196:7 199:4

201:14 215:7 221:5

222:22 226:5 233:4

236:3 238:2 239:8

240:11 250:16 251:5

254:22 258:10 259:4

260:15 261:7 262:15

262:21 266:14 271:8

knowing 52:18 58:6

61:15 186:22 196:7

241:14

known 16:16 143:16

171:16 256:2,17

271:19

knows 26:12 142:9**Kuprewicz** 1:16 11:15

11:15 81:5,5 84:16

104:21,22 106:9,10

111:11,12 112:17,18

115:2,3 117:12,13

122:12,13 127:9

130:2,3 140:16 141:6

141:14 168:5 170:15

170:16 176:3,11

182:13 183:9 215:9

220:16,17 224:5,6

245:22 266:13 270:3

270:4

L**labeled** 199:6**lack** 163:10 171:11**lacking** 44:18,19**lady** 125:2**laid** 258:22**land** 90:13**landslide** 140:21 141:1

141:17,18 165:19

landslides 166:3**language** 15:22 16:1,4

16:6 47:11 51:22

58:16,17 79:12 93:16

99:9 105:10 121:2,6,8

142:22 144:5 145:10

146:7,9,14 147:14

149:6 150:20 151:9

153:20 162:21 164:3

164:10,17 168:17

173:18,19 174:5

182:6 183:13,15,22

184:12 185:15 191:15

191:19 192:11 193:9

193:20 195:2 201:5

201:15,17,18 206:14

206:16,21,22 207:11

207:13,14 208:6

213:3 216:13 217:15

218:6,14 219:18

221:4,22 234:7 236:7

240:5,7,15 243:3

250:6,10 258:7

259:12 263:11

languages 177:9**Lanny** 12:15 104:20**lap-welded** 184:17,19**large** 79:22 149:1,20

159:10,16 178:2

211:1

- larger** 67:21 96:1 157:4
Larry 9:17 213:18
 219:14
last-digit 266:21
lastly 227:20 245:2
lasts 41:1
late 33:14
latitude 194:14,22
Laughter 176:22
 245:21
launcher 212:9
law 144:11
lawyers 81:9 84:18
 167:6 168:8 182:18
lay 35:11 231:18
lead 21:13 147:21 191:6
leak 2:4,10 16:11 19:7
 38:8 41:13,15,22
 42:16,20 43:1 75:2,3
 78:17 113:10 152:17
learn 37:19 58:19 71:16
learned 18:19 241:22
 272:12
learning 46:15
leave 96:9,11 113:22
 168:14 218:20 219:1
 243:12 273:20
leaving 144:7 168:3
leeway 150:21 188:9
left 50:4 58:16 118:17
 135:5 144:11 221:6
leg 273:1
legal 195:7 199:9
legislation 18:7 110:2,4
legislative 73:12
legitimate 152:12
lending 155:17
length 63:9 66:17 189:8
 250:22 251:2
lengthened 25:13
lens 161:4
Lesniak 1:16 11:9,9
 30:5,5 52:11,11 54:11
 57:20 61:19,19 71:1,2
 75:18 77:21 80:15,16
 94:14,14 97:5,5 105:1
 105:2 106:11,12
 108:5,6,18,18 111:13
 111:14 112:19,20
 113:21 114:4 115:4,5
 116:3 117:14,15
 122:14,15 123:13,15
 123:20 130:4,5,12
 131:3,7,12,18 142:21
 142:21 150:19,19
 151:15 165:4 166:18
 168:2 170:17,18
 177:8,8,13,18 178:9
 178:14 179:14 188:1
 188:2 190:3,3,21
 191:20 194:12,12
 203:10,11 207:20,20
 210:4,4 218:13,14
 219:6,12 220:18,19
 221:10,16,20,20
 224:7,8 253:13,13
 260:6 264:8,8 266:2
 269:2 270:5,6
lesser 249:8
lessons 18:19
let's 51:12 126:11
 139:15 171:2 221:18
 242:8,10,12,21
 244:16
letting 53:18
level 52:4 80:10 135:21
 160:8
levels 83:11 257:14
liability 195:11
liar 263:7
life 267:2
light 10:8 224:13
lightly 271:6
likelihood 142:14 143:1
 143:3,5 144:9,10
 167:14 168:6,14
limit 173:13 174:9
 228:17 234:17
limitations 206:11
limited 18:22 31:21
 57:17 72:7
limiting 174:2
limits 74:6 255:19
line 32:2,13,14 48:21
 59:5 61:4,5 73:22
 78:19 142:16 144:22
 145:4 172:10 173:15
 174:19 175:3,12,14
 175:15 176:5,8,12
 178:5,12 179:9,15
 180:1,18 181:19,21
 182:3 196:5 200:11
 200:21 208:9 210:19
 219:17
linear 174:21
lines 2:4,8 16:11 18:16
 19:7 22:18 28:1 31:18
 31:20 32:7,20,21 34:3
 34:7,14 37:9,10,13,15
 38:3,9,10,16,18,22
 39:1,10,12,12,13 40:5
 40:8,11 41:19 42:1
 43:8,12,12,16 50:15
 50:19,20 51:9,18 52:1
 52:8,14,19 54:14 55:8
 55:12,15,18 57:8,22
 58:1,13 59:20 60:17
 62:4,18,22 63:6,15
 65:9,14,17 69:16,19
 69:21 70:1 71:15,22
 72:5 73:13,14 75:13
 75:20 76:10 77:9,10
 78:5,7,16 79:2 97:6,8
 99:6 100:17,19,21
 101:2,6 107:1,9
 108:19,20,21 109:2
 109:17 110:6 112:1
 113:14 138:18 153:1
 171:9 172:5,10,12
 173:13,15,20 174:10
 177:11,15,17,21
 178:19 179:1,11
 180:11,21 181:4,8,12
 196:2 197:11 206:1
 206:18 207:2,4
 209:21,21 210:2,9
 211:3 228:19,20
 241:15 254:19
link 181:7 272:19
liquid 1:5 13:10 15:7
 17:16 18:12 19:8
 32:16,22 41:21 43:11
 44:21 72:7 155:20
 161:19 173:5 180:7
 211:3 215:12
liquids 28:21 51:14
 59:13 62:20 68:18
 75:9 86:2 96:5 139:17
 176:17 178:18 180:1
 181:11 237:4 268:19
list 24:8 49:10,12 50:14
 50:16 51:11 63:22
 64:2,3,10,12 65:21
 66:2 68:5 70:12,19
 74:18,22 77:20 79:5
 83:9,18 87:4 113:3
 115:11 145:10
listed 18:2 42:3 46:10
 227:17 235:17
listen 29:8 60:19
 103:21
listening 262:16
lists 46:19 196:11
little 20:22 58:21 65:4
 66:17 76:4 81:22 82:2
 91:22 128:11 134:16
 142:22 156:2,4 196:4
 214:9 215:5 248:21
 255:19 256:9 264:14
 271:22 272:11
live 30:17 76:9 167:9
lively 155:4
located 37:17
location 147:1 266:21
locations 266:20
long 8:1,6 23:13 25:18
 25:20 30:20 33:6
 42:18 43:17 48:6 51:1
 62:10 82:14 96:5 97:8
 147:6 162:5 167:6
 192:17 204:21 207:21
longer 6:13 41:1 63:22
 76:4 95:5 209:4
 230:21 244:17
look 5:10 8:14 17:19
 33:10,12 39:8,21 44:2
 44:11 46:7 48:10,16
 52:14 77:3 94:5 124:6
 152:7 159:11 161:2
 161:15 162:10 169:4
 173:12 174:2 215:5
 216:16,19 224:15
 238:21 243:7 248:15
 252:17
looked 196:6 197:8
 252:21
looking 17:18 19:15
 32:1,9,18 33:1,9,13
 35:8 44:7,17,20 53:12
 57:19 75:5 79:9
 138:21 139:5 142:22
 152:9 154:17 156:2,3
 156:9 157:10,22
 169:3 178:18 196:4
 205:11 206:6 234:3,5
 236:6 242:2 251:12
 253:11 254:6 258:8
 262:21 266:16,21
 267:3
looks 30:14 130:16
 168:21 169:2 200:6
 240:7 254:8
loop 81:9
lose 216:7
loses 8:12
loss 232:8 234:3,4
 239:1,11 241:8
 249:10 251:20
lost 231:16
lot 6:13 7:11 22:17,19
 23:1,8,9,15,16 25:21
 31:4 37:21 38:20
 42:21 45:4,16 50:8
 53:13 57:6,10 60:13
 60:16 63:17 64:4
 78:10 83:8,14 84:17
 85:12 89:4 94:11
 95:22,22 98:19 125:2
 127:17 128:6,15
 141:14 143:2 145:7
 154:9 155:9 160:8,9
 160:10,20 169:2,10

171:21 172:14 173:6
178:1 189:10 211:20
211:21 215:18,22
240:2,3,4 244:12
249:12,15 252:6
256:18 257:1 259:10
259:13 270:19 271:1
low 32:5 55:15 63:1
184:17 228:14 248:6
248:6,7,8 249:17
255:6 267:12
low-frequency 187:2
249:16 250:7
low-risk 65:14,17
low-stress 32:5 180:11
207:2,4,5
lower 50:4 54:9 57:14
96:7 229:21
lower-risk 35:3 53:1
60:1 97:6 101:5
LPAC 1:5,10
Ls 181:21 182:2
lunch 3:20 4:7 92:21
132:3,12,14
lunchtime 4:1

M

M 1:18
magnetic 242:19
magnitude 211:1
main 78:19 123:17,18
130:12,14,16 131:3
149:1
mainline 176:8
maintain 230:5,9
maintained 215:3
major 70:6 108:21
135:18 148:19 168:12
215:11
majority 13:14 84:19
making 8:13 59:6 66:16
66:20 96:5 121:9
194:20 206:17 248:11
266:4
manage 83:15
management 44:21
78:18 81:10,18,20
127:11,15 136:15,20
159:8,8,17,21 160:4
174:11 186:3,12,14
189:5 191:13 192:3
198:18 215:2 248:12
management's 204:6
manager 9:13
mandate 22:20 24:18
mandatory 47:17
mapped 57:7 97:8
mapping 34:2 35:2

36:18,19,21,22 37:1,3
39:6,9,10 40:14 52:20
54:3 57:1,2,21 58:8
59:17,18,22 60:3,20
60:20 61:21 63:14,17
64:6 66:11,14,16
68:20 70:1 71:5 73:22
74:1 95:12,14,17
103:16 109:13 110:8
maps 54:5
Marathon 11:14
margin 227:10
marked 59:14
markers 63:15
Marshall 17:20 18:10
massive 141:1,18
Massoud 1:11,14 5:16
6:20 9:6 12:3,10
14:20 16:15,15 17:13
19:14 31:8 48:22
70:13 74:19 91:20
92:3 102:9,11 104:6
105:16 110:19 112:3
114:10 116:14 120:22
121:19 129:6 135:4
144:16,17 159:2
160:6 169:18,20
192:22 202:17 220:2
223:13 269:10
match 67:17
material 45:9 166:5
214:3 268:10
MATERIALS 1:3
matter 7:2 23:20 63:20
88:1 94:10 133:7
164:10 225:5,20
240:10 261:13 274:5
matters 256:10
maximum 227:12
242:16
Mayberry 9:19,20 14:18
14:19,22 16:9,14
17:12 21:15 22:9
24:16 26:16 27:14
29:10 31:17 35:7
36:17 37:8 40:6 41:12
44:1 48:2 49:14 50:18
54:7,20 57:13 58:18
59:10 64:4,11,18 65:3
69:18 71:18 72:4
73:17 74:5 75:3 76:14
76:20 77:1 79:7 83:1
90:21,21 96:11,16
97:13 103:18 108:13
108:15 109:14 135:3
136:16 138:5 139:5
140:4 141:3,8,11,20
145:15,21 146:4,7

147:8,11 149:5 150:5
150:15 153:7 154:14
162:8,14 163:9,20
165:8,11,13,16,21
166:2,8,11,15 167:18
171:2,8 174:4,15,17
175:7,10,14 177:16
178:4,11,15 179:4,17
179:21 180:4 181:14
181:18 182:7 184:11
186:10,22 187:8
188:16 190:18 191:4
191:14 194:7 196:15
196:21 197:2,18,20
198:3,8,12,14,19
200:7,15 204:1
205:14 206:10 207:8
207:12 212:15 226:10
231:1 233:13 240:16
242:4 250:11,21
251:4,13 263:1,9
268:4
McClain 1:17 11:21,21
65:6,7 79:20 80:4,4
85:6 87:11,11 88:5,7
88:8 104:18,19 106:7
106:8 111:9,10
112:15,16 114:22
115:1 117:8,11
119:15,15,22 120:18
122:10,11 129:22
130:1 152:15 168:20
170:13,14 178:17,17
203:7,8 210:22
220:14,15 223:3
224:3,4 258:4,4 259:7
261:5,18 262:2 270:1
270:2
mean 8:9 36:19 40:20
49:14 50:22 68:5
87:19 89:15 230:21
meanest 183:10
meaning 199:1 245:10
meaningless 58:14
means 36:19 103:15
169:9 180:6 202:12
224:14 258:11
meant 229:3
measure 31:7
measures 136:13
meat 268:6
mechanics 247:22
253:7 268:9
media 22:11 134:10
226:1
medium 84:4 90:19
meet 89:10 153:22
159:6 188:4 265:12

meeting 3:10 7:4 8:12
12:18 13:1,9 35:11
93:14,16 155:15
159:7 160:6 161:11
162:2 164:18 175:18
202:10 216:11 222:7
226:5 270:14 272:14
273:9,18
meetings 7:17 132:3
272:1,2,21
meets 8:15
member 11:6,9,11,13
11:15,17,18,19,21
12:1 15:12 24:5 27:5
27:10 28:20 29:6,19
30:5 41:9 49:7,16
51:14 52:11 53:9
54:11 55:13 57:20
59:12 61:19 62:20,21
65:6 66:5 68:17,22
69:2,3,5,6 71:1,11
72:2,18,21 73:20 75:9
75:18 76:7 77:5,18,21
78:4 79:20 80:4,15
81:5 82:16 83:7 84:16
85:6 86:1 87:11 88:7
89:1,16,21 94:14
95:10 96:4,14,18 97:5
97:22 98:13 100:7,12
100:20,22 101:2,13
102:15,21 103:8,13
104:9,11,13,15,17,19
104:22 105:2,4,19,22
106:2,4,6,8,10,12,14
107:4,20 108:5,10,18
109:6,9 110:11,22
111:2,4,6,8,10,12,14
111:16 112:6,8,10,12
112:14,16,18,20,22
113:5,17,21 114:4,13
114:15,17,19,21
115:1,3,5,7,13,22
116:3,9,17 117:1,3,5
117:7,11,13,15,17
118:13 119:15,22
120:8,18 121:10,22
122:3,5,7,9,11,13,15
122:17 123:4,13,15
123:20 124:4,12
126:5 127:1,9 128:17
129:13,15,17,19,21
130:1,3,5,7,12 131:3
131:7,12,18 134:12
139:16 140:16 141:6
141:14 142:21 143:22
148:10 149:7 150:8
150:19 151:15 152:15
154:2 164:12,20

165:1,4 166:18 168:2
 168:5,20 170:4,6,8,10
 170:12,14,16,18,20
 175:19 176:3,11,16
 177:8,13,18 178:9,14
 178:17 179:7,14,22
 180:13 181:10,16
 182:13 183:9 185:14
 186:19 188:1 190:3
 190:21 191:20 192:10
 192:16 193:4 194:12
 195:18 196:17 197:7
 197:19,21 198:9,17
 199:3,17 200:13
 201:7,10,14 202:2,13
 202:20,22 203:2,4,6,8
 203:11,13 207:20
 210:4,22 211:19
 212:5,21 215:9 217:4
 217:12 218:9,13
 219:6,12 220:5,7,9,11
 220:13,15,17,19,21
 221:10,16,20 222:12
 223:3,16,18,20,22
 224:2,4,6,8,10 233:11
 237:3 242:1,7 244:6,9
 244:14,16 245:22
 250:1,14 251:1,11,14
 253:2,13,15 254:1
 257:5 258:4 259:7
 260:6 261:5,18 262:2
 263:13 264:5,8 265:3
 265:17 266:2,13
 268:18 269:2,13,15
 269:18,20,22 270:2,4
 270:6 271:10,16
members 1:13 4:13,14
 6:6,6 7:13 8:6 13:2,14
 13:18 15:14 21:10
 22:12,15 34:11 35:15
 57:12 87:13,14 91:21
 155:14 161:6 225:13
 225:14 272:14,17,19
men's 5:9
mention 12:22 21:18
 39:16 48:11 136:13
 272:8
mentioned 38:20 52:6
 144:18 205:8 229:22
 230:6 236:11 273:8
merge 92:9 99:13
merging 99:15,17
mess 162:10
met 1:10 67:5 188:14
metal 232:8 234:3,4
 239:1,10 241:8
 251:20
method 146:16 147:3

185:6 188:15 190:7
 191:1,2 192:1 193:16
 200:22
methodically 158:10
methods 146:8 172:3,4
 173:21 184:3,15,16
 184:22 205:20 216:2
 229:8,13
metric 41:16
metrics 43:1,4
Mexico 137:6
MFL 188:22
mic 80:3
Michele 1:15 11:11
 29:17,19 30:18 41:8
 61:18 62:20 70:3
 71:10,12 72:21 77:5
 77:12 78:3,4 83:6
 85:11 88:22 95:8,10
 100:7 104:14 106:3
 107:3,4 108:9 111:5
 112:11 113:4,5
 114:18 117:4 122:6
 123:7 129:18 154:2
 164:6 170:9 195:18
 201:8 203:3 212:4,5
 217:3 220:10 223:21
 262:1 263:10 269:19
Michele's 151:11
 152:11
Michigan 11:8 17:20
 18:10 273:12
microphone 10:6,17
 11:1 12:14 14:21
 244:13,15
mics 10:7 12:6 16:20
middle 207:7
Mike 10:2 21:19 22:3
 48:2 231:1 240:18,19
Mike's 46:12
mile 37:17 52:3 66:21
 67:18 97:16
mileage 33:4 211:17,21
 223:4,7,8
miles 55:9 211:3,4,5,11
 212:1,8
million 17:21
mind 128:13 182:12
 214:14 237:5,11
 263:4
minds 195:3
minimal 234:8 235:9,12
minimum 34:3,4,8
 37:16 46:19 52:3
minor 30:21
minute 7:8 13:7 16:4
 64:13 122:21 144:16
 144:18

minutes 63:22 87:14,19
 87:22 133:2,6 225:4
 258:18 259:4 261:7
 261:10,12
miscalculated 267:6
miscellaneous 109:20
mispredicted 267:7
missed 90:17
misspoke 89:17
mistake 52:21
mistaken 76:9
mitigate 162:18
mode 86:12 159:12
 268:10
modeling 45:5 90:3
 236:8 237:19 239:13
 239:15,17 267:10
models 45:12,13
 267:12
modification 42:1
 117:20 217:19
modifications 20:9
 76:5 79:10 83:18
 172:2 227:1 233:22
modified 34:16 39:3
 40:8 52:6,12 66:8
 70:20 71:4 74:17,17
 92:8 98:3 101:3,15
 103:6,9,14 107:10
 121:1 148:3 228:3
modifies 265:5
modify 44:20 50:21
 69:22 70:14 83:15
 84:12 164:4 171:12
 183:15 217:22 234:5
modifying 2:22 38:2
 52:15 53:11 161:12
 226:9,12
mods 96:6
moment 5:9 6:9 257:10
moments 109:11
momentum 249:19
MONDAY 1:7
money 125:2 182:18
 215:22
monitored 226:22
 227:6
month 245:5
monthly 161:9
months 33:7 71:14,21
 82:22 159:7 227:4,5
 229:6,6,20,20 230:6,7
 230:7,8,21 235:7
 244:18
MOP 235:19,20 236:18
Morgan 11:22
morning 3:4 4:7 9:14
 9:19 11:6 19:17,18

20:1 134:1 135:7
motion 13:9 14:4,5,12
 15:11,13,16 31:10
 51:22 68:10,12 77:16
 94:7,17 95:3 99:1,3
 99:10 100:1,4,9
 101:10,14 102:17,18
 102:22 103:2,3 104:1
 104:2 105:11 106:16
 106:18 107:2,21
 111:18,19,19 112:1
 113:1 114:6,8,8 115:8
 115:12 116:8 117:19
 118:11 121:5,9,11,12
 121:14 123:16,17,18
 124:11,14 127:6
 129:3 130:8,14,16
 131:3,16 133:14
 163:22 164:22 169:15
 170:21 199:15 201:13
 201:18 203:15 217:5
 218:21,22 219:7,22
 221:18,21,21 222:11
 223:11 258:15,21
 259:15 260:18 262:1
 262:4,10,18 263:11
 264:14 268:2 270:9
motion's 130:13
motions 14:9 94:11
 199:14 201:21
move 17:15 27:1 28:18
 29:13 30:11 32:19
 36:5 37:4,8 49:6 66:3
 68:1,6 69:12,14,18
 73:10 74:22 84:10
 92:3 100:9,12 101:13
 121:11 123:18 139:15
 147:8,10 158:21
 162:9 164:12 169:4,5
 171:2 173:22 182:12
 190:6,13 205:2
 206:12 209:11 212:14
 217:15 222:1 246:2
 258:12 260:15 261:3
 263:13 267:20,21
 270:18
moved 125:6 241:2,9
 241:19
movement 90:14 96:17
 141:21
moving 19:2 20:2 44:11
 155:21 158:21 174:4
 191:22 204:2 233:10
multiple 78:6 156:22
 199:22 200:6 257:14
multiply 157:1
mute 13:1
muted 12:11

N

n 219:15
NACE 271:21
name 3:5 6:22 55:21
102:11 141:12 169:21
170:1 273:20
name's 9:10
Nanney 9:22,22 22:2
252:15 253:4
NAPSR 271:20
narrow 37:12 58:12
181:19
narrowly 178:6
nastiest 183:11
National 22:22 56:15
natural 42:9 140:19,21
141:4 150:2
nature 136:8 139:22
146:22 189:22
nay 122:2
nearly 161:13
necessarily 31:4 54:13
63:10 66:15 88:19
97:11 110:7 182:3
215:10 231:14
necessary 6:21 36:14
76:1 171:15 255:8
need 8:21 13:3,18,21
17:5,13 27:1 32:15,17
34:21 35:17 37:4 39:1
40:2,18 44:17 47:2
50:13 58:3 60:1 62:11
65:1 73:16,18 79:14
81:8 87:1,2 92:3,22
93:5,8 97:10 107:1
124:18 125:2 130:11
131:16 132:19 136:10
138:12 141:6 142:9
146:19 147:4,20
152:10 153:19 157:21
164:9 166:2,6 167:2
176:20 184:7 187:3
188:7 189:16 192:21
194:21 195:21 199:10
199:21 224:22 226:18
230:21 233:19 237:10
240:12,12 243:16
245:1 250:19 252:8
252:12 254:14 257:7
271:3 272:6
needed 5:1 39:2 58:7
119:12 136:12 137:8
154:6 163:11 238:21
239:9 263:22 265:10
needle 239:21
needs 8:15 62:2 74:17
84:7 101:10 109:1
137:20 165:14 254:4

255:3 260:15 262:6
never 7:21 8:1 143:14
176:6 185:19 263:7
new 19:8 33:2 41:20
53:5 62:11 75:20 76:3
76:10,19 77:1,1 79:12
83:15,16 113:13
151:8 173:17 204:5
209:5 222:16
news 38:1 253:19
nice 67:20 147:6
nightmare 248:4
nine 220:22,22 227:4
230:7
nine-month 235:6
241:17
no-brainer 58:9 62:9
nomination 30:19,21
87:6
non-controversial 3:21
28:14 29:3 30:20 49:8
59:9 64:1 132:10
163:14
non-HCA 20:10 226:17
227:20 228:18,18
230:20 236:19,20,21
242:10 244:18 263:18
non-HCAs 171:13
non-high-consequen...
229:19
non-IM 173:3
non-injurious 238:14
263:21 265:9
non-jurisdictional
71:15 110:11
non-pipeline 77:22
normally 150:17 181:22
199:13
North 1:10
northern 132:7,20
note 68:9 71:11
noted 71:12 222:14
notes 13:22 65:4
notice 17:1 18:1 109:11
notification 185:8
notifications 194:6
215:2,3,4
notify 188:3 190:19,20
193:7
NPMS 52:7 74:12 95:13
95:15,20 97:8,11 98:4
101:4,15 103:6,16
107:11 109:13,21,22
110:4,5,7
NPRM 13:11 23:12
25:18 27:7 76:8,15
99:2 118:19 156:1
181:7 183:12 214:5

232:10
NRC 56:19
NTSB 18:9
nuances 138:12
number 3:15 7:6 18:6
18:10,18 21:8 31:21
50:3,4 51:2 55:17
67:5 84:1 87:9 145:5
147:12 156:19 161:6
183:7 211:18 243:20
numbers 216:6
nutshell 262:3

O

O 1:17
o'clock 241:4
Oaky 110:18
object 189:6,6 190:2,5
190:11 191:18 192:7
193:13 194:3,18
195:10,13
objected 192:6
objection 190:6 191:22
194:10,15
objective 247:18
objects 190:13
obligated 194:16
obligates 245:11
obligating 245:15
observation 215:9
observations 46:8
246:13 247:2
obstacle 85:8
obtain 171:14 194:9
obvious 42:4 266:22
obviously 18:21 45:14
63:4 75:22 92:20
149:10 180:10 218:19
253:14 254:22
occasion 256:16
occur 21:6 34:14
257:14
occurred 196:9 215:13
215:14 267:4
occurrence 138:16
October 15:8 25:19
offer 113:21 116:3
145:11 198:21 218:22
260:1
offered 51:11 262:19
offering 28:22 29:2
199:15 219:6
office 9:18 10:21 38:15
official 1:19 5:15,15
6:19 12:17 14:16
offshore 39:13 43:7,9
44:8,10 75:6,12 77:7
77:8,14 78:1,14
113:14 114:1 174:3
230:17,18 231:8,11
236:13
oftentimes 45:17
144:18
oh 10:19 109:8 113:19
124:22 134:14 158:21
170:2 192:2 201:10
209:1
oil 17:21
okay 10:22 11:2 27:10
27:14 29:19 48:2
55:18,19 66:7,15
87:15 90:2 92:9 97:7
97:10,13 98:13
111:22 118:9 129:12
131:12,20 135:3
146:5 147:8 149:2
150:20 152:1 153:14
155:7 165:8 166:2,11
168:3,22 170:3
180:16 181:16 182:9
182:11 193:2 194:13
199:11 201:4,20
203:14,21 204:1
207:18 212:13 217:12
217:15 219:7,12
224:14,15 226:4,8
233:13 249:21 254:10
260:4 273:21
on-site-specific 137:15
once 26:7 30:8 70:8
78:18 134:7 171:13
one's 42:4
one-year 35:6 39:5 41:7
53:4 66:9 70:3 71:7
76:3 101:6 107:11
229:7
ones 3:22 38:11 41:6
81:7 152:8 163:14
197:14 232:8,12
233:17 241:9 242:6
onus 140:8,13 167:22
onward 169:17 202:17
open 182:17 271:4
272:19
opening 3:3 237:4
operate 32:4,7 52:3
63:11 159:16 161:4
169:5
operates 148:13
operating 72:11 147:1
227:12 228:14
operational 239:6
operators 149:11
operator 59:20 61:6,10
90:9 140:8,14 142:4
143:10 144:7,8

- 146:21 162:20 166:20
 167:2,3,13,15,16,22
 168:7,15 184:12,16
 185:5 187:6 188:3,9
 190:6,9,19 191:21
 193:6 207:13 208:1,7
 208:9,15 210:7,16
 218:2
operator's 188:3
 190:14
operators 43:18 44:15
 44:20 45:15 46:6,9,16
 47:3,9,14 48:15 79:21
 80:7 82:6,10 91:3,4
 110:9 128:6,16
 138:19 148:1 158:1,4
 168:11,19 171:12,14
 189:20 192:4,4 211:2
 213:22 223:5 241:14
opinion 42:22 81:3 85:2
 213:9
opportunities 161:18
opportunity 6:17 13:6
 92:15 160:8,9,10
 189:6 191:17 225:18
 225:19 261:19 265:13
opposed 42:7 212:17
 240:6 242:2 254:7
OPS 18:11 185:6,8
 188:3,5
option 140:5 148:1
 162:18 175:6,9
 176:20,21 177:1,3
 179:19,20 185:4,9
 190:15 194:11 205:18
 212:15 236:10
options 34:18 174:14
 175:6,10 192:18
 235:13,15
order 89:10 134:18
ordering 76:2
organizational 256:15
original 114:7 130:11
 130:21 131:2,22
 206:13 207:14 235:16
originally 73:2
ought 19:19 52:15
 53:21 61:14 62:8 71:5
 71:6 142:7 143:6
 188:12 207:22 253:21
 254:16 260:13
out-of-scope 24:9
outdoor 134:21
outline 261:21 262:3
outlined 258:13 266:8
outside 5:10 20:6 34:5
 52:2 57:15 63:7 66:19
 171:10,15,16 185:17
 186:1,3 227:5 230:8
 235:7 256:19 259:2
over-dig 257:6,7
over-digging 238:9
 255:8 257:9,12
over-repair 238:11,13
overall 89:10
overarching 136:1
 185:18
overcome 213:8
overlays 85:21
overlooked 162:22
overly 99:20
-
- P**
-
- P** 235:19,20,20 236:17
P-R-O-C-E-E-D-I-N-G-S
 3:1
p.m 133:8,9 225:6,7
 261:14,15 274:6
package 120:17
pages 12:21
pain 55:21
pandemonium 154:7
paragraph 137:17,17
 139:2,10,11,11,14,14
 147:5 153:14 184:15
 200:19 201:2 219:15
parallel 22:17 262:8
paramount 186:17
pardon 69:2 234:12
 244:6,14
part 4:17 8:3 12:18 38:5
 43:21 44:21 52:17
 58:5 65:19 70:6
 107:22 119:2,9 138:7
 140:5 145:16,17
 150:12 153:10 155:22
 156:13 161:3 162:16
 171:18 177:20 180:8
 186:11,22 194:8
 198:22 199:1,7,22
 204:6 205:22 211:7
 212:10,11 219:1
 225:16 228:17,21
 230:20 253:7 257:8
 260:2,21 271:8
PARTICIPANT 16:10
 17:1,5 27:9,11,12
 50:15 69:13 92:1 93:3
 94:1 99:12 100:19,21
 101:1,16,20 102:2,7
 102:19 103:1 107:17
 119:20 124:15 125:14
 125:21 126:19,21
 129:8 132:4 133:14
 134:20 141:10 145:18
 145:20 146:2 151:13
 165:19 166:1 169:7
 169:12 175:16 176:21
 177:3,6 184:8 244:4,7
 259:21 263:7
participation 6:4
particular 13:8 23:20
 31:22 36:12 82:11
 99:4 128:10 155:14
 157:16 159:15 260:12
particularly 35:14 36:8
 54:17 62:14 76:5
 108:22 154:8 158:7
 208:2
parties 246:11
parts 37:19 41:20 69:19
 98:19
pass 8:22 55:5 105:8
 202:15 228:6
passed 81:12 130:16
passes 106:15 130:9
 170:21 203:14
path 8:14 65:8 80:8
 205:12 248:12
patient 171:5
pattern 27:16,17 135:9
 135:16
pause 17:2
pay 125:2
paying 120:11 189:17
peak 227:11
pending 24:21
people 3:12 5:7 6:11,14
 7:11 8:15,21 10:12
 14:8 23:1,15 26:5
 36:10 56:6,12 61:11
 81:14 83:11 84:7
 85:10,15 88:17,18
 91:18 95:1 132:21
 134:13 141:16 154:5
 156:7 159:14 199:14
 208:18 209:11 214:21
 215:1,4 221:1 222:20
 225:13 236:4 246:6
 254:13 257:1 268:13
 273:6,7
perceive 178:22
percent 37:15 52:4
 209:13,14 210:9,9
 211:3 227:10 228:22
 229:2,3 232:9,20
 234:3,18 235:5
 242:13,15,17,17,18
 243:10 244:18,20
 246:18 248:16,16,16
 249:10,11 250:12
 251:3 252:19 255:1,2
percentage 58:15
 210:11 211:2,17
perfectly 61:1 152:11
perform 147:18 148:8
 153:13 184:13 201:1
performance-based
 144:19
performing 146:16
period 33:6,7,16 35:6
 39:5,15 42:17 43:17
 44:4 48:4 53:4 66:9
 70:3 71:8 75:4,16,19
 75:20 76:3 79:8 80:21
 81:2 82:18 98:15
 101:6 107:12,13
 113:11 115:19 116:4
 116:19 118:21 121:12
 124:9 147:12 148:2
 150:1 172:17,17
 187:10 204:21,22
 205:17 206:9 208:3
 212:22 213:6,21
 230:22 241:17
periodic 2:17 19:12,13
 20:6 45:19 79:16
 171:7,9 179:12
 184:12 202:7
periodically 171:10
periods 53:16
perk 132:19
permission 4:5 6:2
 72:19
person 21:20 77:22
 215:17
personal 7:18
personally 52:22 94:19
 97:7 160:18 207:21
 264:20 267:20 273:11
personnel 147:17 148:7
 153:11,12,14 165:17
 165:22
perspective 80:12
 84:17 126:9 127:13
 176:13
petition 240:21
phase 33:6,6
phase-in 33:15 39:5
 124:9
Phillips 12:1
PHMSA 3:6 7:6 9:4,11
 9:18,22 10:5,12,18
 21:22 51:11 58:5
 63:17 74:1 80:10 84:7
 85:20 97:9 118:20
 134:4 150:20 151:4,6
 151:21,21 154:10
 155:9,21 160:2 161:1
 190:17 196:12,22
 197:13 199:8 246:12
 248:19 249:15 258:7

262:5 264:19 266:7
PHMSA's 45:4 47:4
 103:17 156:9 258:14
 259:14
phone 9:1
phrase 214:13
physical 44:9 146:22
 157:20 206:11
physically 149:12
pick 175:8 181:21 182:3
 199:13 240:12
picked 208:20 209:2
 258:8
picking 135:4 186:11
 264:15
pieces 199:12
Pierson 1:17 11:13,13
 28:19,20,20 29:6 49:6
 49:7,16 59:12,12
 68:17,17 69:2,5 86:1
 86:1 96:4,4,14,18
 104:16,17 106:5,6
 109:6,6,9 111:7,8
 112:13,14 114:20,21
 115:13 117:6,7 122:8
 122:9 128:17,17
 129:20,21 139:16,16
 165:1 170:11,12
 175:19 176:16,16
 179:22,22 181:10,10
 181:16 202:13 203:5
 203:6 211:19 220:12
 220:13 224:1,2 237:3
 237:3 242:1,7 244:6,9
 244:14,16 250:1,14
 251:1,11,14 253:2
 257:5 262:2 268:18
 268:18 269:21,22
pig 209:15 210:18
 212:9
piggable 206:18 210:1
 219:18 223:6
pigged 90:11 254:19
pigging 209:13 210:8
pipe 40:18 51:9 76:2,3
 76:6 78:22 96:1,2
 172:10 173:15,17
 174:19,20 175:3,12
 175:14,15 176:5
 178:12 179:9,15
 180:1,5,18 181:19,21
 182:3 184:19 187:3
 211:12 236:8,16
 239:1
pipeline 1:3,5,20 3:6
 10:20 11:12,14,18,20
 12:2 13:10 19:1,11,14
 24:19 37:21 38:1

40:22 41:16 42:2
 44:16 47:20 57:5
 90:12 138:13 140:22
 141:17 143:10,14
 147:2 151:1,19
 152:16 157:11,21
 158:5 159:14 168:11
 172:11 173:8,9
 174:21 198:22 206:12
 218:3 226:14 228:13
 229:9 230:17,18,19
 231:12 263:18
pipeline's 143:13
pipelines 2:4,6,14 15:7
 16:11 19:5,9,9 20:4,6
 27:15 32:4,6,22 35:3
 41:19,21 42:10 50:17
 51:2 52:22 53:1 54:5
 54:9 57:14 59:14
 61:12 62:1 75:7 98:6
 101:5 113:12,13
 135:1,8 152:20
 154:10 172:12 173:3
 173:5 174:3 175:11
 177:14 182:9 186:17
 196:11,12 197:5,8,13
 197:16 198:9,12
 199:6 204:4,7 205:7
 215:12 228:16 231:8
 253:17
place 25:18 36:15 62:11
 151:13 187:13 204:19
 205:4 217:8 246:19
placements 24:14
places 158:3
plan 120:5
plans 163:6
plant 63:8 97:16
platform 78:9
platforms 78:6,6 79:3
play 4:9 30:17 43:20
 229:12
please 6:22 12:22 17:13
 55:21 75:1 79:5 80:3
 103:7 105:10 109:5
 110:15 111:21 113:3
 133:6,17 167:21
 169:5 217:7,22 269:6
plenty 31:6
plus 21:9 100:2 161:9
 262:12
point 8:18 26:3,9 27:12
 28:2 29:13,21 36:20
 39:19 40:15 51:6 59:2
 59:15 60:3 61:13
 63:14 67:22 73:18
 74:9 76:2 86:2 90:19
 94:10 96:3 97:19

107:21 128:18 138:22
 143:18 145:6 146:18
 148:6 151:4 154:20
 169:13 180:8 186:10
 188:17 191:12,16
 193:14,21 197:6
 200:20 205:21 207:17
 209:21 210:14 211:15
 211:18,20 214:12
 238:2 242:20,21
 255:18 264:22 268:7
 269:5 270:13 271:18
 271:22 272:8 273:18
pointed 51:1
points 24:16 33:1 44:3
 59:13 83:2 90:6 119:5
 152:11 262:18
policy 9:21 67:5 161:14
 272:2,5
Politico 134:12
Poor 169:20
population 55:7,7
 245:8
portion 115:18 157:17
 243:22
portions 158:9
pose 31:21
position 95:6 168:8
positions 67:14 241:21
positively 128:10 195:9
possibilities 49:19
possibility 25:3 39:21
 216:16
possible 8:16 9:8 27:21
 30:6 34:13 36:20 40:7
 49:9,13 50:14 51:11
 53:22 63:7 75:1 98:3
 142:1 173:11 174:5,7
 184:5 205:15 206:15
 214:7 231:6,19 235:5
 243:20 271:13
possibly 19:22 28:9
 37:1 40:12 50:20
 157:12 194:10 205:18
post 137:5
post-incident 162:15
post-natural 137:2
posted 225:21
potential 162:19 233:22
 234:20
potentially 59:4 65:10
 65:11 166:21 213:15
power 12:5 267:18
practicability 15:20
practicable 100:16
 107:8 113:9 115:16
 164:16 202:5 217:19
 222:6 263:17

practical 151:18
practically 206:20
practice 57:22 60:12
 141:22 159:20
practices 160:7
PRCI 252:7
pre-briefing 24:8
preclude 206:19
precluded 74:2
precludes 108:13
predict 248:13
predicted 143:6,8
 246:22
prediction 247:7
prefer 176:17 179:8
preference 93:13
 118:18 184:4 234:16
preferred 144:12
prefers 80:14
prematurely 11:4
prep 272:22
preparation 155:14
prepare 162:3
prepared 14:8 46:14
 60:5 87:3 88:10
 136:19 266:3
prerogative 4:3
present 1:13 13:13
presentation 15:4
 50:10
presentations 28:14
 49:2
presented 18:10
presiding 1:11 5:15
 6:19
pressure 32:5,8 72:11
 78:20 174:22 185:2,9
 227:8,12 232:13,15
 232:17 236:9 246:15
 249:2
pressures 228:14
 246:22
presume 158:11
pretty 48:14 85:14
 96:20 187:18 190:2
 210:11 211:1 231:22
 236:4 258:1 264:3
prevention 230:3
previous 118:3 187:17
 222:14
previously 72:3 228:20
 235:1
price 61:14
primary 6:5 137:4
prime 24:17,21
principle 127:11
prior 147:1 149:5 181:2
prioritization 187:13

229:17,21
prioritizing 226:14
priority 155:21 159:11
pro 164:8
proactive 136:13,15,17
 137:3
proactively 135:19
probability 255:6
probably 3:20 5:4,5
 13:21 23:6 33:13,15
 33:17 49:11 58:2,3
 82:9 83:2 86:16,21
 134:5 214:8 233:17
 246:6 249:7 263:5
 266:14
problem 17:10 52:21
 53:18 98:15 127:14
 144:2 148:17 149:8
 149:17 159:3 168:3
 176:7 215:16 256:15
problematic 149:4
 151:16 166:22
problems 23:7 178:2
 237:18
procedural 93:11
proceed 16:9 192:7
 195:10,11
process 22:17 23:13,16
 24:6 25:5 26:2,4,7
 30:19,22 35:17,22
 63:19 83:20 152:5
 155:18,19 156:1,12
 156:13 159:20 161:3
 189:17
processes 127:16
producers 78:8
production 48:1 78:9
 78:18
professional 243:14
proficiency 268:22
profile 151:3 236:14
Programs 9:21
progress 132:9 162:4
 162:11
progression 42:9
prohibit 172:5,6
projects 252:7
promote 204:9
promoting 204:11
pronounce 102:10
proper 226:14
properly 222:1 268:14
property 97:17
proposal 27:19,19,22
 31:22 32:13 34:12
 35:4 37:19 41:11,20
 43:19,22 45:18 46:15
 46:18 48:12 69:19

72:13 82:21 83:4 93:9
 108:1 135:17 138:3
 171:12,22 173:13,18
 181:3,6 204:5,14,15
 204:18 205:9,13,22
 211:16 216:19 227:7
 229:16 230:13 233:19
 259:5 262:7 265:20
 268:5
proposals 43:4 205:5
 258:22 262:18
propose 16:3 29:6 34:6
 240:9
proposed 15:15 17:17
 18:1 19:2 33:7 47:21
 64:1 73:2 82:18 92:12
 100:9,13 107:5
 108:11 109:11 113:6
 115:13 138:10 143:21
 146:10,14 162:20
 163:15 164:12 172:19
 173:19 174:6 181:4
 183:13 184:1 192:14
 202:2,7 204:18
 206:13 213:20 216:21
 217:15 218:5 222:2
 227:1,7 230:18 231:5
 232:4,5,6,7,11 233:6
 233:9 234:19 235:15
 238:17 240:3 242:4
 254:6 259:12 260:18
 261:1 263:14 271:12
proposing 28:3 31:12
 41:10 69:21 75:11
 217:6 240:22 242:13
 245:6,19 254:10
 258:6
protection 204:10
protocol 2:3 14:22 15:2
 28:5,17 67:7
protocols 194:1
prove 35:19 210:16,17
 235:11
proven 36:4
provide 7:3 45:12 55:6
 142:10 144:20 145:12
 189:3,5 194:2,21
 208:15 230:16 244:21
 266:10
provided 33:4 48:12
 172:5 207:4 260:20
provides 128:11 188:8
providing 126:8 156:10
 156:11,11 194:13
 258:12
provision 72:14 204:5
 204:19 206:1,18
 262:8

provisions 3:15 4:11
 202:6 222:2
proximity 72:10
prudent 138:2 168:11
public 5:22 6:17 7:2,17
 8:9 11:8,10,16,17
 13:6 20:19 21:2,11
 22:12 26:6 35:14 36:9
 50:9 67:4 84:16,21
 92:4,15,18 145:3
 153:5 154:22 156:3
 160:1 182:16 185:15
 187:16 193:5 204:9
 215:17 225:14,20
 226:5 248:7 249:16
 253:16 254:1 256:6,9
 257:3 259:2,3 260:10
 271:5 272:12,20
public's 127:14
publication 156:1
publicly 173:1
publics 84:18
publish 39:17
published 15:8 100:13
 107:5 113:6 115:14
 164:13 202:3,8
 217:16 222:3 263:14
pull 14:2 17:13 25:12
 26:2,11 30:22 38:6
 43:13 69:20 97:1,4
 195:2 256:12
pulled 32:6
pulling 21:19 25:3
 38:11 40:17 41:5 70:7
 72:1 92:14 186:12
pump 63:5 175:1 176:7
punish 247:18
punishing 81:13 215:20
purpose 4:17 6:5 90:10
 168:16 245:8
purposes 3:13 5:22 6:4
 118:14
push 206:17 255:22
pushing 16:21 252:10
 252:11
put 14:12 18:21 34:12
 36:18 46:18 49:5
 51:21 59:6 63:17,18
 87:6 91:17 99:8 100:8
 105:9 113:3 121:8
 130:17 133:12 140:13
 141:17 143:5 153:15
 166:7 177:20 183:13
 190:10 201:16,18
 203:18 204:19 205:4
 210:15 213:11 214:18
 221:4,18,21 226:6
 240:5,6 243:6 256:5

259:22 262:1,5,10
 267:11 268:6,7,14
 271:20 273:6
puts 83:14 188:8
 213:14
putting 50:4 59:5 60:2
 140:8 167:22 177:13

Q

Quackenbush 1:18
 11:6,7 66:5,6 102:14
 102:15,21 103:8
 104:8,9 105:19
 110:21,22 112:5,6
 114:12,13 116:16,17
 121:21,22 129:12,13
 170:3,4 202:19,20
 218:9 220:4,5 222:12
 223:15,16 269:12,13
 270:22
qualifier 177:10,14
quality 58:2
quarter 37:17
question 24:6,6 41:9
 58:10 80:16 89:13
 92:5 93:11 98:7
 120:14 123:2 140:18
 140:20 141:1 143:1
 148:9 153:19 168:4
 177:9 179:15 185:19
 188:2 195:8 199:4,16
 213:4 214:13,14
 216:20 225:20 233:10
 237:5 250:12
questionable 145:8
questions 22:10 53:13
 98:1 134:9 158:16,20
 199:11
quick 7:10 20:16 41:9
 60:8 64:15 70:13 72:6
 77:21 99:14 127:22
 132:18 193:1 211:15
 225:11 250:12,13
 257:5 266:13
quickly 3:19 9:5 10:16
 19:20 48:18 61:20
 87:12 102:9 157:12
 196:7 245:10,10
quiet 250:8,8
quit 27:3 81:13
quite 51:1 68:19 238:18
 267:10 270:15
quorum 13:13,15 15:13

R

R&D 209:9
raise 13:4 187:19,20
 214:11

raising 168:4 195:9
rare 58:22
rarely 256:15,15
rate 3:10 5:20 8:16 36:8
 36:15 119:12
ratio 227:9,11 232:13
 232:15 246:15 249:2
ratios 236:18
re-assessments 172:20
re-authorization 18:5
re-authorized 18:6
re-evaluate 222:19
re-perform 45:22
reach 87:12 154:5
 195:1
reaching 73:6
read 12:21 93:8,13,17
 95:11 99:21 100:3
 107:2 153:9 190:1
 193:6 199:5 200:3
 215:4 216:21 221:22
 234:7 259:21
reading 4:15 153:20
 253:19 262:16
reads 146:21 193:15,21
ready 13:16 16:8 24:17
 24:21 25:2,8,11 26:20
 65:13 91:17 107:3
 147:8 163:22 171:1
 175:5 195:16 201:13
 202:15 212:14 217:3
 226:7
real 61:20 64:15 70:13
 72:6 77:21 99:13
 127:14 193:1 211:15
 215:16 225:11 250:13
 266:13 272:3
realized 134:3
really 6:8,9,12 9:5 25:1
 25:13 26:1 27:1 28:6
 41:2 42:17,21 43:11
 46:5 48:5,6 52:13
 53:14,22 58:12 61:14
 62:17 63:12 66:12
 76:2 80:9 83:3 94:4
 94:21 95:6 117:20
 120:18 121:5,17
 128:4 134:14 143:2,9
 151:4,20 153:19
 154:10 157:10 159:20
 160:11 161:10,11
 163:7,10 178:2,22
 186:2,13 190:8
 204:15 205:11 207:21
 214:5,6,15,15 225:15
 231:18 238:14 239:20
 241:15,19 249:14
 253:4,8,15 256:3,5,17

261:8 270:19,22
 271:5,7 272:3,6,22
 273:3,5,7,9,14,19
reason 108:1 119:2,10
reasonable 33:15 53:5
 53:7 75:19 100:15
 107:7 113:8 115:16
 164:15 202:5 217:18
 222:5 263:16
reasonableness 15:19
reasonably 238:21
reasons 152:8
recall 195:3
receive 194:15
received 20:17,18 21:7
 33:8 136:5,6 138:22
 171:21 172:20
receiver 212:9
recesses 195:3
recoat 238:8
recognition 138:17
recognize 58:22 154:11
recognized 263:20
 265:6,13
recognizing 157:13
recommend 94:17
 95:11 126:14 168:16
 222:1 259:18 260:18
 266:6
recommendation 15:10
 51:3 89:9 137:21
 215:7 221:14 260:19
 260:22 261:4 266:5
recommendations
 18:11,15 258:8
recommended 95:12
 159:20 183:19 204:17
 230:11
reconsider 190:14
record 7:2 68:14 77:17
 88:2 93:8,17 99:22
 100:5 127:10 133:8
 142:6,8,9,12 144:21
 156:19 193:5,11
 222:17 223:9 225:6
 225:16,21 247:13
 261:14 272:18
recorded 6:22 13:2
 225:21 226:6 259:3
records 189:18,20
recovery 182:20
red 146:15 164:19,20
 165:15,20,22 166:10
 169:9 207:1
reduce 51:5 172:18
reducing 151:3
reduction 218:15
redundant 264:15

refer 196:10
reference 163:5 173:21
 183:15
references 184:2
 242:22
referred 41:15
referring 158:7
reflect 226:14
reflection 255:5
regard 113:9 251:17
regarding 38:21 39:9
 42:17 136:14 152:15
 263:17
regardless 168:9
regime 156:15 227:2
Register 15:8 100:14
 107:6 113:7 115:14
 164:13 202:3,9
 217:16 222:4 263:15
regular 56:17
regulate 35:1 36:3
 161:2 180:21 197:13
regulated 37:18 38:9,12
 47:20 51:3 52:15
 53:15 61:6 70:8 71:19
 71:20 72:5 73:13
 173:4 178:5 179:5,11
 180:11,16 181:3,9,12
 182:9,22 183:1 196:2
 196:12 197:11 198:4
 198:6,7,8 228:20
regulating 32:21 54:14
 72:16
regulation 32:6 37:14
 61:8 62:13 74:2 91:8
 109:11 110:8 144:6
 161:12,13 168:16
 231:5,5 252:9
regulations 18:12,18
 32:19 40:17 41:5 54:2
 58:3,6,7 73:11 81:12
 108:11 109:21 127:12
 136:20 137:18 179:16
 180:9,22 182:17
 196:8 217:20 238:17
regulatory 15:16 23:3,5
 23:10 26:2,7 35:17,18
 35:19 100:14 107:6
 109:19 113:7 115:15
 127:17 156:12,15
 163:3 164:14 193:17
 202:4 208:19 217:17
 218:6 222:4 263:15
 272:6 274:2
reinforce 169:12
reiterate 60:15 63:20
 146:20 272:8
reiterating 63:14

relate 53:14 82:8 90:4
 236:5
related 18:15 31:18
 35:4 37:21 38:16 40:7
 42:22 57:13 64:6
 69:21 70:5,9 91:14
 171:18 173:9 202:7
 231:8 232:22 234:13
 234:15 235:3,7 236:3
 236:10
relates 164:16
relation 73:22
relative 211:17 222:2,8
relatively 63:1 65:17
 238:16
release 17:20
relevant 23:22 24:1
 38:14 123:2
reliable 247:7
reliably 248:13
Reluctantly 228:5
remain 118:18
remaining 209:14
 210:10 229:9 237:20
 245:3 249:12
remains 232:10
remarks 3:3 4:20
 270:16
remedial 162:16
remediation 38:7 230:3
remember 86:19 93:6
 96:9 194:4 195:4
 213:2 215:2
Remembering 67:12
remind 6:21 67:4 215:1
 225:13
reminded 90:22 236:17
reminder 225:12
Reminding 209:5
remove 114:3 116:4
 242:22
removed 201:5
removing 107:21 108:8
 168:17 259:9
repair 2:22 20:10 181:5
 226:9,12,13 227:2,15
 227:19,21 228:1,3,9
 228:15 229:15,17
 230:5,12 232:9,11
 235:6 236:15 238:4
 238:10 244:5,8
 263:17 265:15
repaired 245:13
repairs 20:10,11 226:17
 226:21,21 230:17
repealing 32:2
repeatedly 12:8
replaced 209:22

- report** 18:9 24:20 32:16
 33:17,22 39:4,4,22
 40:18,20 51:4 53:17
 53:18 60:14 64:17
 89:16,19 90:2 101:7
 185:6
reported 41:6 53:21
 56:14
reporter 56:1 100:4
 134:11
reporters 134:11
reporting 19:4,6 32:1,3
 34:1,6,16 35:5 36:21
 38:2,10 39:16 40:8,9
 40:11,16,21 41:1,3
 50:19,21,22 51:8 52:6
 52:7,12 53:3,11,17
 56:13 60:4,6,17 66:8
 69:20,22 70:2,6,7
 71:4,6,14,20,22 72:1
 72:12,17,17 73:3
 101:3,8 103:14
 107:10,12,14 109:18
 178:19 181:1
reports 39:18 56:16
 173:1
represent 160:20
representation 21:12
representative 182:15
representing 11:10,12
 11:14,16,20,22
 156:22
request 39:13 43:7
 51:21 138:17 167:19
 172:3,8,12,22 214:22
requested 138:14
 183:14
requests 15:11 136:6
 172:1,18
require 19:7 20:5,7 32:1
 32:20 34:3 39:18
 40:21 42:10 45:1,19
 45:20 50:19 51:4 52:7
 109:12 116:5 148:15
 149:2 173:2,3 181:8
 186:2 191:3 199:19
 204:7 205:5 208:12
 213:21 227:10 265:8
required 34:6 41:21
 42:9 78:14 86:5 147:5
 147:17 148:8 153:13
 163:6 172:15 185:6
 185:16 186:11 200:19
 201:2 205:19 209:22
 227:18 265:14
requirement 33:21 41:2
 42:1,20 43:19 47:11
 79:16 83:17 95:16
 135:19 136:21 148:15
 150:21 151:7 171:11
 172:9,19 173:14
 179:6 206:5 218:4
 236:5
requirement's 232:22
requirements 2:5 16:12
 19:4,6,10 34:1 37:11
 37:12 38:6,8,11 41:18
 42:7 44:13 52:1 70:8
 71:21 72:1 79:12
 80:19,22 83:16 86:13
 89:11 109:18,20
 136:10,17 163:4
 174:11,19 181:1,2,5,6
 185:7 186:14 188:5
 198:18 226:18
requires 41:14 91:11
 147:14 186:5 188:2
 232:3
requiring 20:4 32:3
 34:4 171:12 172:19
 186:13 205:3 217:20
research 26:19 209:6
 229:12
reserve 119:7 120:7
reserved 256:11
reserves 8:4 67:13
resisting 140:1
resolution 21:13
 205:13
resources 18:22 59:7
 254:15
respect 70:12 72:22
 79:1 100:16,22 107:1
 107:8 217:19
respond 61:17 127:21
 192:21 194:17,17
 259:1,4 264:22
response 56:15 163:6
 210:5 228:2
responsibility 190:10
responsive 38:17
rest 7:3 12:9 88:15 89:7
 217:1
restarted 153:1
restricted 150:16
restricting 24:14
restriction 38:4
restrooms 5:9
result 218:3
resumed 88:2 133:8
 225:6 261:14
retrofitting 219:17
return 15:1
review 26:8 195:13
revise 45:18 47:10
 183:20
revised 143:21
revision 139:1 174:8,17
 183:19,19 184:11
revisions 164:1 174:5
 234:1,20 258:14
 260:19 261:1
RIA 36:5 56:9 210:6
 213:4
Richard 1:16 104:21
Rick 11:15 81:4,5 106:9
 111:11 112:17 115:2
 117:12 122:12 128:1
 130:2 140:15 166:20
 170:15 179:21 183:6
 203:9 220:16 224:5
 253:14 254:13 268:7
 270:3
Rick's 176:17 255:18
rid 176:20 177:1 196:17
ride 141:19
right 3:22 5:9 8:4 22:14
 27:3,11 28:17 31:13
 49:3,16 58:21 60:19
 63:11 64:13 67:13
 70:11 74:21,22 75:3
 79:4 81:6,7,8 84:12
 87:5,17 89:3,18 96:12
 96:14 97:14,20 98:21
 100:1 112:2 116:11
 116:20,21 118:2
 119:7 120:8 125:20
 126:7 131:13 133:10
 134:17,22 136:16
 139:19 140:3 141:8
 141:15 143:19 152:1
 152:10 153:14 163:9
 163:20 165:6,16
 166:16 168:10,13
 169:4,17 175:4 176:1
 176:19 177:17 178:11
 178:15 182:12 183:1
 183:2 185:11 186:15
 186:16,21 187:18
 188:18 191:13 193:15
 195:15 196:3 197:18
 197:19 198:12,15,19
 199:16 200:14,15,17
 201:15,22 203:21
 209:14 216:2,2,8,9
 221:3,16 222:10
 223:1 224:16,21
 225:3,8 226:10 237:2
 238:9 242:7 243:19
 248:19 258:2 259:11
 261:11,12,16 267:10
 268:1 269:10
right-of-way 63:3,13
riser 233:2 234:5
risers 241:2,9
risk 31:21 36:3,3,4,6,11
 45:5,5,12,13 54:9
 55:15 57:14 59:5,6
 63:1,3 90:3 96:7
 143:14,15 151:3
 153:2 160:11,15
 173:2,9 175:2 186:3,4
 186:4,8,8,20 234:8
 235:10,12
risks 200:2
river 143:7,11 149:21
 158:2
road 36:22 59:4 73:11
 259:16 260:11
Robert's 123:15 124:1
robust 233:18 234:15
robustness 42:6
rocket 266:18
role 189:9 209:18
roll 8:11 14:16 68:13
 101:22 102:2 120:14
Ron 1:17 11:21 65:5,6
 79:19 80:2,4 85:5
 86:15 87:11 88:5,8,21
 104:18 106:7 111:9
 112:15 114:22 117:8
 117:9 119:14,15
 120:6 122:10 129:22
 152:14 170:13 178:16
 178:17 179:5 203:7
 210:21 220:14 223:2
 224:3 258:3,4 270:1
Ron's 86:2 90:6 211:19
 222:14
room 183:8 203:9 246:7
rotating 174:22
roughly 72:9
round 31:5
route 195:13
RP 84:8 161:7
RSTRENG 229:10
rule 13:13 15:15,18
 17:16,17,19 18:8,16
 19:2,3 20:21 21:12,14
 25:12 33:13 34:8 38:6
 39:17 41:10 43:1 44:5
 44:21 46:20 47:7,7
 58:13 62:11 64:2
 82:18 88:13,20 89:3,5
 89:14 94:18,21 95:4,7
 98:19,20 100:13
 107:5 109:20 113:6
 115:13,18 118:17
 119:5,11,13,17,19
 120:4 128:12 136:5
 143:21 146:10 151:2
 153:5 155:20 157:8

158:10,15 162:21
 164:13 167:4,15
 185:20,21 188:2,14
 202:2,7 207:5 213:16
 213:20 217:15 222:2
 227:1,7 232:4,5,11
 233:6,9 235:16 261:3
 263:14 265:5,6,20
rulemaking 9:12 10:5
 18:1,13 20:20 21:3
 22:2,5 24:1 25:10
 36:20 43:5,13 47:5
 65:15,19 70:2 90:1
 95:21 109:12 110:1,3
 155:19 156:6,21
 157:5 161:3 193:12
 218:19 255:19 259:1
 271:1
rulemakings 21:22
 65:10
rules 4:21 23:9 80:18
 80:19 81:14 94:20
 100:9 122:21 123:16
 124:1 132:8 136:15
 167:1 201:21 209:8
run 26:3 35:18 60:19
 132:2,17 195:7
 199:21 231:13
running 63:4,8 152:17
 175:18 200:7,16,16
 216:11 247:10
runs 8:2 200:6
rupture 42:22 43:4
 246:17
ruptures 267:4
rural 37:10 38:3,9,18
 72:5 178:6 181:3
rusty 67:6

S

safe 157:12 235:19,20
 236:9,18 273:15
safely 147:16 148:7
 153:11
safety 1:3,21 3:6 11:18
 15:7 19:1 24:19 34:3
 34:4,8 37:21 40:13
 147:22 159:8,8,16,21
 160:3 191:6 204:9
 227:8 232:19 235:21
 244:3 245:2 248:2
safety-related 33:21
 35:5 40:16,19 53:2,21
 60:4 64:17 70:1 71:6
sake 34:11 73:8
Salerno 7:14 12:16
 102:9
sample 15:21

sandwich 132:18
satisfactorily 210:12
satisfactory 183:3
save 31:4
saw 134:12 146:15
 148:4 182:22
saying 5:18 6:11 11:3
 17:13 35:21 48:15
 50:11 56:2 57:9 60:21
 60:22 61:2 67:1 77:13
 91:12 98:17 99:21
 119:4 126:4 128:8
 136:9,12 141:14
 142:15 149:17 172:21
 180:14,18 194:14
 197:10,15 205:2
 218:1 242:9,10 243:9
 243:12,17 252:17
 260:7 267:17
says 74:14 84:8 94:8
 110:10 126:11 140:16
 191:13 193:9 199:18
 232:4 237:19 262:4
 267:15
SCC 230:4 233:5,6
 234:15 236:5,10,20
 243:1,3 248:5 249:8
 249:10 251:9 258:10
schedule 102:6 211:5
 227:4 273:18 274:1
scheduled 226:22
 245:7,20
scheduling 3:13
science 266:18
scope 24:10,13,15
 25:17,20 26:15 27:7,7
 27:8 34:5 37:12 38:2
 174:7,8,9 205:9
 213:19 218:17,18
scratch 85:15,17
screen 14:12 66:1 69:8
 77:4 116:13 121:15
 125:10 126:16 129:4
 133:13 151:9 164:10
 201:17 237:11
seam 184:17,20 188:22
 227:16 229:14 233:7
 234:16 235:8 236:6
 236:10 243:2 244:2
 245:4 258:11
second 5:20 6:3 10:13
 19:6 29:17 37:9 38:5
 47:2 67:1 77:12 81:16
 82:13 99:12 101:10
 101:11,11,14,16
 103:20 104:1 105:11
 107:16,17,21 108:4,5
 111:19 113:16,17

114:6,6,7,8 115:21,22
 116:1,8,9,11 118:10
 118:11 119:16 121:15
 121:16,16 124:5,13
 124:15,16 127:6
 133:3,19,22 165:1,2
 169:15 202:12,13
 217:13 218:8,9
 219:22 222:11,12,13
 223:11 232:13 242:21
 264:4,5,6 268:2
Secondarily 63:13
secondary 152:19
seconded 129:4
secretary 67:12 119:7
 159:10
section 38:13 74:12,13
 119:3,3 135:22 136:2
 137:18,21,22 138:5,6
 138:7 146:8,21 147:6
 147:10 157:7,16
 158:21 162:10,11,15
 163:8,11 174:6,18
 187:6 196:1,10 197:4
 198:10 200:20 201:3
 205:15 217:7,7,22
 218:1,4 219:5
sections 119:18 145:16
 145:18,22 181:7
 211:21 212:2 217:5
see 14:13 16:15 22:19
 23:2,4 27:16 29:12
 31:17 35:13,22 40:3
 48:17 51:6 66:2 83:19
 90:9 92:7,15 93:1,5
 99:13 108:20 115:12
 121:15 124:19 140:22
 146:4 155:9 165:4,9
 187:20 214:14 221:14
 226:17 228:11 231:2
 231:21 234:7 235:1
 247:6 250:7 251:3
 261:21 270:22 271:3
 273:7,10 274:3
seeing 77:2 82:11
 192:16 241:15 246:17
 268:13
seek 18:2 193:9
seeking 120:1 224:21
seen 7:19 15:5 25:19
 35:15 37:22 58:21
 95:20 137:7 141:16
 145:5 152:12 189:19
 235:1 262:17
segment 46:1 223:6,6
 236:16
segments 19:14 45:20
 227:21 228:14 229:18

229:19 263:18
selected 173:8
selection 173:18
 192:12,15
selections 173:7 184:1
selective 229:14 233:7
 234:16 236:6,10
 243:1 244:2 245:4
 258:11
selects 184:16
send 65:3 237:21
 239:12 271:12
sending 185:7 239:7
sends 257:18
senior 10:2 22:2,3
sense 28:12 52:12,16
 66:2 67:21 68:1,4,16
 71:4 80:21 119:11
 146:2 185:16 196:14
 196:15 197:12 252:3
 267:18
sensing 246:13 248:17
sensitive 37:18 98:18
 149:18 154:8 254:16
sent 240:14
sentence 74:14 147:6
 153:10
sentiment 82:13 152:3
separate 43:5 65:15
separately 31:1
series 156:5
serious 272:16
seriously 7:17 119:6
 120:15 255:17 262:20
serve 5:15
service 11:8 57:8
 273:11,12,14
session 161:16 225:9
 272:18
set 23:10 25:18,20 26:8
 40:17 41:5 52:8 65:17
 146:11 173:16 204:16
 205:1,10
sets 239:16
setting 43:1 215:20
settled 6:8
Seven 20:7 130:8
Seventy-two 150:13
severity 252:22
shallow 251:19,20
share 154:21
shared 62:2 160:7
 168:21 169:2
she'll 134:5
sheet 8:22 225:15
 260:21
sheets 8:20
Shell 11:11

- shoe** 16:17 17:14
short 6:9,21 46:9 60:11
63:9 79:20 150:1
172:12 211:20 212:2
261:7
shortcomings 268:13
shorten 204:22 208:5
214:20
shortened 101:4
107:11
shorter 66:20 75:20
76:10 205:16,17
208:13 210:19 212:22
213:21
shortly 18:8 133:19
show 93:3 174:14
195:17 221:6 231:3
showing 169:11
shown 164:19,20
shows 231:4 234:8
235:9
shut 10:9 151:1,19
152:16,18 218:2
shuts 10:8
shutting 11:4 152:20
239:5
shy 105:15
side 5:11 10:15 48:1
52:17
sides 237:15
sight 216:7
sign 225:19
sign-in 225:14
signatures 20:19
significant 6:16 46:1
62:13 142:13 143:1,3
143:4,17,20 150:2
158:9 210:11 211:12
233:5 238:9 243:1,3
258:10
significantly 208:5
silent 83:4 109:13
118:19,20 167:1,9
similar 25:8 32:13
38:22 51:17 69:22
70:20 107:2 135:16
136:8 140:19 141:4,9
168:6 228:11 236:1
simple 63:20 94:10
100:1 206:14 256:10
simplified 94:7
simplify 94:4
simply 68:5 197:3
Simultaneous 17:9
26:21 37:7 54:19 64:8
64:20 69:9 74:8 76:13
80:1 87:7 89:20 93:2
93:22 96:10 99:5
100:11 102:1 106:21
109:7 117:22 123:19
125:11 130:18 136:3
139:8 146:1 155:6
164:5 166:14 168:1
169:8 175:22 176:10
176:14 180:19 201:19
203:20 208:22 217:10
221:2,11 228:7
269:16
single 138:3 159:12
singling 242:6
sit 65:2 134:2 247:22
siting 61:7
sits 132:2
sitting 61:3,11 256:8
271:3
situation 21:7 71:17
153:21 200:2 241:16
six 18:2 20:5 33:7 37:14
71:13,21 72:9 105:7
117:18 178:7 230:7
six-month 101:7 107:13
sizable 90:16
slide 15:4,14 18:3 23:3
27:20 34:10,10 42:14
49:5 50:3,7 70:15
88:11 91:21 93:14
99:13 135:15 138:11
139:1 183:18,21
184:7,9,10 199:18
217:7
slides 91:17 92:7 93:1,4
94:5,9 232:12 235:14
slightly 121:2 213:14
slogging 161:9
small 29:21 54:15 58:15
62:7 77:6 238:16
246:10
smaller 54:16 57:8 61:6
61:10 96:2 149:19
211:17,18
smooth 154:15
SMS 159:10,13 160:21
160:22 162:1 256:20
SMYS 246:18
software 83:15 85:21
solution 44:2 55:1,6
57:18 235:13 251:7
263:2
solutions 8:14 231:6
251:16 263:3
solve 48:17 196:9
somebody 10:9 11:3
13:22 74:4 101:10
123:22 142:12 152:7
163:14 169:5,7
221:21
something's 253:19
254:18
somewhat 64:11 70:15
133:11 245:9
soon 5:18 53:22 133:12
147:16 148:12 149:10
271:13 274:4
sooner 17:7 40:1 50:11
sophisticated 246:5
sorry 7:12 10:19 14:5
16:1 29:18 60:9 66:22
69:6 71:11 77:1,20
84:15 89:16,21 93:20
100:22 102:11,15
105:6,20 109:8,9
113:19 117:19 124:22
125:17 126:20 129:10
144:17 158:22 169:21
174:8,15 175:19
179:21 187:22 201:11
203:17 213:18 217:4
218:12 234:10 236:20
249:22 253:2 265:20
273:7,9
sort 28:8 30:17 47:14
61:14 63:16 89:8
119:4 175:1 182:2
188:7 208:18
sought 18:1
sound 115:12
sounds 182:19 185:15
196:16 212:1,7
240:16
source 178:1
sources 44:17 46:17
space 150:16 212:10
spare 56:18
speak 13:3 22:11 55:22
80:3 88:6 268:6
speaking 17:9 26:21
37:7 54:19 64:8,20
69:9 74:8 76:13 80:1
87:7 89:20 93:2,22
96:10 99:5 100:11
102:1 106:21 109:7
117:22 123:19 125:11
130:18 136:3 139:8
146:1 155:6 164:5
166:14 168:1 169:8
175:22 176:10,14
180:19 201:19 203:20
208:22 217:10 221:2
221:11 228:7 269:16
speaks 79:13,15 83:2
200:15 250:7
specific 39:10 72:8
73:4 79:12 81:22 83:9
83:19 86:13 91:7
163:3 167:12 174:20
191:18 219:18 222:8
233:1,17 242:10,12
242:22 243:2 251:1,2
268:12
specifically 45:10 74:6
180:15 251:17
specificity 45:1 82:7
86:5 91:8 128:5,11,22
243:4
specifics 20:17 46:6
48:11 163:10 226:19
227:14 233:20 268:7
specificity 37:16 52:3
76:15
specifies 174:18
speculate 214:2
speech 249:22 250:2
spend 211:22 257:22
spent 154:8 259:13
spirit 8:13 126:13 200:1
215:15 216:5 246:1
248:20 262:15 266:16
267:16
spokesperson 261:17
sponsoring 161:20
sprinkle 33:14
SSCC 230:3,4
SSWC 230:4
staff 2:2 6:1 9:9 74:1
91:1 254:2,8 260:7,8
260:18 261:1
staff's 255:10
Stafford 1:10
stairs 5:5
stakeholders 156:22
stall 132:16
stand 140:21 254:12
standard 88:20 95:20
193:18 251:6,9
standards 9:12 10:5
22:2 34:3,4,8 65:16
146:11 230:2 251:13
255:22
standpoint 58:5
stands 233:12
start 9:3 10:14 11:4
30:9,14 31:14 88:7
128:20 133:13 149:18
152:20 157:22 167:6
208:5,11 221:12
242:8 267:3
started 48:21 126:11
128:21 148:17
starting 9:7 19:3 26:3
40:11,15 59:2 85:15
85:16 138:21 185:13
261:12

state 6:22 12:4 39:14
55:21 60:18 160:8
191:19 204:20
statement 144:19
station 176:8
status 65:11
statute 15:17 37:12
39:9 72:14 74:2,5,13
108:13 109:22 219:16
219:19
statutes 18:7
statutory 67:16
stay 142:1 195:4 216:21
stayed 10:10
staying 263:5
steels 249:17
step 28:2 160:13 188:6
189:18
stepping 51:6
steps 178:21 274:2
Steve 9:22 21:19 22:2
253:3
stone 23:10 26:8
stop 154:19 176:1
190:14 194:20
stops 142:16 194:18
storing 47:13
story 84:20
straight 5:10 222:20
strategy 36:16
Street 1:10
strength 37:16 52:4
229:9 237:19 245:3
270:22
stress 227:15 229:13
233:2 234:5 241:9
247:5,9,13,20 249:7
252:20
strike 143:4 218:22
striking 143:17
stringent 230:12
strong 215:6
strongly 120:9
struggle 82:9
struggling 65:18 81:21
study 22:21,21 214:8
stuff 25:22 53:17 57:9
61:15 103:17 125:6
133:12 154:4,6 209:9
209:14 237:12 238:1
240:11 243:18,19
244:12 248:10 252:8
254:15 257:7,11,20
267:3
style 154:15
subject 109:17 128:3
129:8 174:11,19
181:4 197:5 198:15

198:17,22 248:21
253:15 263:18
subjects 272:2
submissions 110:7
submit 23:14 26:7
submitting 110:9
subpart 109:18 185:2
Subsection 195:20
subset 41:2 51:8 54:16
54:16 186:12 238:15
238:16
subsidence 90:13
substantial 240:4
substitute 145:10
218:22 219:7
subtlety 252:4
sucker 247:11
suffice 242:22
suggest 75:13,20 102:5
103:21 123:18 124:4
139:13 143:4,17
145:10 219:3 223:7
240:5 261:6
suggested 13:17 58:16
83:10 99:3 175:5
208:7 218:14 229:6
229:11 230:8 264:12
suggesting 29:20 47:11
77:13 191:18
suggestion 30:10 36:16
49:18 96:6 123:5
151:11 167:13 190:4
198:21 208:4 260:17
264:9 272:16
suggestions 16:6 30:21
36:6 94:6 163:3,7
262:20 272:10
suggests 88:11
suite 98:5
summarize 27:20
233:16
summarized 44:12
135:20
summary 20:14 31:8
162:14 252:22 258:13
summer 33:14 45:6
support 68:12 99:1
100:2 118:15 168:17
171:22 211:10,11
212:21 213:4 249:20
261:22
supported 22:1
supportive 98:18
148:11
suppose 213:3
sure 5:6 8:22 10:8,10
14:14 15:5 20:15 27:6
29:16 34:1 53:15

54:20 59:6 61:13 76:9
77:15 91:1,20 92:17
95:20 116:22 119:16
120:3 126:1 136:4
144:4 145:6 157:5,10
163:2 171:20 173:7
177:18 179:10 182:14
189:16 192:3 193:20
194:20 195:12 216:17
222:22 226:1 233:13
234:14 245:16 255:14
257:7 258:11,14,18
surprise 127:19 246:16
248:6
surprising 57:3
susceptible 184:19
suspect 95:1
sympathetic 90:6
sync 22:18
system 2:5,10 16:12
38:8 41:17 47:18 57:6
59:18 60:3,20 62:5
75:2 86:9 97:9 136:21
159:8,21 160:14
187:1,4 209:13
systems 19:8 41:13,15
41:22 43:9 60:1 73:1
75:4 79:21 80:6,10
85:20 86:6,8 88:17
113:10

T

table 8:20 9:5 61:3,12
67:11 84:19 95:1
123:17 130:13 133:14
140:20 157:6 231:4
252:22 258:22
tabled 262:8
tables 231:20 240:6
tablet 9:2
tactic 251:21
tag 21:19
tags 273:20
Tahamtani 1:11,14 5:16
12:3,4,19,20 14:15
16:8 24:4 26:22 27:13
28:11 29:1,16 30:3
31:13 41:8 49:1,17
50:12,16 51:10 52:10
53:8 59:8,11 60:7
61:16 63:21 64:9,14
64:21 65:5,20 68:4
69:10,14,17 70:11,19
71:9 72:20 73:19
74:16,21 75:8,15
76:11,17,21 77:3,19
78:3 79:4,18 80:2,13
81:4,15 82:15 83:6

84:3 85:5 86:19 87:8
87:17 88:4,21 89:12
90:20 91:16 92:5,11
92:17,22 93:5,10,18
94:13 95:8 97:21
98:11 99:8,15 101:9
101:17,21 102:4,10
102:12 103:5,11,20
104:7 105:9,14,17
106:16,19,22 107:15
107:18 108:3,7,16
109:4,8 110:14,20
111:17 112:2,4 113:2
113:15,18 114:2,5,11
115:10,20 116:1,7,10
116:15,20 117:9
118:4,8,10 119:1,14
121:4,14,20 122:19
123:22 124:10,13,16
124:20 125:1,5,9,16
126:15 127:5,20
129:2,7,10 130:10,15
130:19 131:1,6,14,20
132:1,6 133:1,5,10,16
134:2,17,22 139:13
140:15 142:18 143:19
145:13,22 146:5
147:7,9 150:18 151:8
152:14 153:18 154:18
155:2 158:19 159:3
162:6 163:21 164:6,9
164:19,21 165:2,6,9
165:12,14 166:6,10
166:13,16 167:11
168:18 169:1,9,14,19
169:22 170:2,22
171:3 175:4,8,12,17
175:20 176:1,15,19
177:1,4,7,12 178:16
179:13,18 182:5,11
183:6 184:6,10
185:11 187:7,15
190:16 191:9 192:9
192:20 193:2 195:15
196:19,22 197:3
198:1,5,13 199:8
201:4,8,12,16,20
202:11,14,18 203:15
203:18 207:10,18
210:21 212:3,13,20
216:10 217:2,11
218:7,10 219:3,9,21
220:3 221:3,12,17
222:10,13 223:1,10
223:14 224:13,18
225:8 237:2 253:10
255:13 258:3 260:5
261:11,16 263:10

264:3,6,17 265:22
 266:12 268:1,17
 269:1,5,11 270:9
tailoring 137:15
take 3:19 4:5,11 5:2,3
 5:20 6:9 7:16 8:11
 13:22 25:7 26:8 28:16
 29:4 30:11,21,22 31:6
 46:13 62:18 68:7,13
 77:3 80:9 84:13,22
 85:8,22 86:6 87:18,20
 89:22 90:12 95:5
 98:20 99:7 100:5
 101:22 109:5 110:15
 111:20 118:18 119:6
 120:15 121:16 123:8
 124:18,20 129:5
 132:3,12,14 133:21
 135:10 145:14 146:3
 152:6 156:8 158:16
 159:1 162:20 166:15
 167:13 168:22 187:13
 191:5,7 195:19 199:9
 200:13 201:11 206:7
 216:22 224:15,20,22
 225:18 228:11 238:5
 239:17 243:10 245:20
 246:3,7 255:17 256:3
 258:17 259:5,11
 260:13 261:2 265:4
 269:6 270:15
taken 22:13 125:3
 158:13 159:10 178:10
 188:19 189:2 191:16
 211:18 219:19 241:21
takes 23:13,15 30:19
 62:10 63:17 88:15
 124:8 148:21
talk 4:2,8,21 17:15
 41:12 65:1 87:21 91:5
 133:22 160:5 223:4
 233:4,20 253:6 269:3
 272:21
talked 14:8 24:11,13
 26:16 57:2 128:2
 147:14 157:17 159:5
 166:4 209:8 212:16
 231:10
talking 4:13 17:4,7
 18:14 48:21 53:10,16
 55:14 58:13 73:21
 91:6,7 128:4 137:2,4
 139:6 140:6 153:21
 161:12,21 162:2,18
 167:20 179:5 199:21
 226:20,20 236:4
 237:9 257:17,19
 263:3 271:4,10 272:2

talks 72:8 162:16
tank 33:4
task 88:9
team 21:20,22 90:3
 156:18 241:11 248:12
technical 10:3 15:19
 22:3 89:3,5,14,16,18
 90:2 95:16 231:15,20
 246:9 250:19 251:14
 252:5 253:15
technically 100:15
 107:7 113:8 115:15
 164:14 202:4 217:17
 222:5 246:5 250:16
 263:16
technique 189:22
techniques 185:22
technological 157:19
technology 85:12
 157:22 158:3 185:4,5
 185:10 189:9,12
 209:5,19 237:16
 239:8,10
teeth 144:6 194:21
telephones 13:1
tell 4:22 5:12 23:4,8,17
 60:18 78:21 82:17
 135:7 144:22 157:8
 157:16 193:17,18
 233:11 248:1 249:3
telling 25:20 36:11 84:5
 142:6
tells 238:1
ten 63:22 81:6 87:19,19
 87:21 127:18 171:13
 172:16,22 205:1
 211:9 213:2,14
 214:20 221:1,10,18
 225:3 261:6 267:15
ten-minute 87:18
ten-year 172:19 187:11
 213:5,16
tend 255:9
tent 13:4 214:10 273:20
terminology 15:17
terms 23:11 110:1,2
 132:9 143:11 155:21
 196:17 213:12,19
 219:16 253:6 254:5
test 78:20 185:2,9
testify 157:9
testing 184:3 205:19
Texas 108:22
text 138:8 148:4
thank 12:20 14:19
 16:14,15 20:15 22:9
 32:11 38:19 42:13,15
 44:1 48:2 56:3 61:16

65:6 71:9 80:15 84:3
 88:21 105:20 106:19
 111:17 113:2 115:8
 115:10 127:20 133:10
 134:18 135:4 137:11
 155:1,3,10 156:16
 158:11,19 161:4
 162:6,8,9 171:20
 183:5,21 188:1 204:1
 204:13 205:14 214:17
 218:7 224:18 226:4
 226:10 233:14 261:18
 262:14 269:19 270:12
 272:7 273:10,13
 274:3
thankful 3:9
thanks 21:15 30:2
 31:18 40:6 71:1 89:19
 134:15 136:4 158:17
 161:8 162:5 212:12
 231:1 255:16 270:16
 270:17
theories 231:3
thickness 229:2 242:14
thing 14:13 26:2,11
 49:12 57:21 61:1,20
 68:19 84:12 95:14
 142:2,4 161:5 171:5
 175:1 181:13 182:1,3
 209:3 237:6 240:1
 246:16 247:1 250:2
 251:16 257:13 260:15
 269:2 270:18 273:4
thing's 225:21
things 3:11 7:19 16:4
 20:21 22:19,20 23:21
 26:3,8,10 31:11 36:18
 43:13 49:10 56:10
 57:11 59:6,18 63:16
 67:17 68:16 78:12,14
 84:9,13 90:4 94:6
 118:16 138:11 156:2
 167:7 187:15 195:6
 199:9 206:5 237:10
 237:21 238:14,20
 239:8 240:12,13
 245:16,22 252:13,16
 254:20,20 257:6
 259:10 260:6,9
 268:11,20 272:13,16
think 3:12,14,20 4:13
 4:18 5:17 8:5,6 12:11
 12:12 14:9 19:19 21:6
 21:11,13,15 22:15
 26:5 27:1 28:22 30:6
 30:10,16 31:5 34:17
 34:19 35:12,15 37:3
 39:21 42:4,5 43:20

44:4 47:22 50:6,12
 51:20 52:12,15,20
 53:4,6,10 54:4,21
 55:1,15,18 56:17 57:4
 57:10 58:8,18 60:3,5
 60:10,16 61:8,10,11
 61:20 62:9,11 63:1,11
 64:5,21 65:7,13,14,16
 67:6,10,22 68:9,18,21
 71:2,4,5,5 72:22
 73:20 75:10,18 77:6
 80:11,17 82:5,10,20
 83:1,10,21,22 85:7,12
 86:2,15 87:1,11 90:4
 90:15 91:5 94:3 96:5
 96:6,14,18 97:10,13
 97:15,18 98:2,22
 99:19 108:19,22
 109:2,9 110:7 119:18
 120:7,15 121:4 123:7
 126:17 127:14 128:4
 128:12,15 130:19
 131:7,12,16,18 132:9
 132:13,19 134:6
 137:20 140:10 141:17
 142:3,12 143:18
 144:1,21 148:8 150:3
 151:11,15 152:3
 153:3 161:10,14
 164:22 166:18,19
 167:12 168:9,13,20
 177:21 178:2 179:8
 180:16 181:14 182:10
 182:14 183:4 185:12
 185:15 187:8 188:8
 188:12,14 189:8,10
 190:1 191:5,11,14,16
 192:19 193:14 195:21
 199:8,10 200:1,18
 207:21 208:4,11,13
 208:20 209:2,3,11,12
 210:5,22 211:6,10
 212:22 213:1 215:5
 216:1,20 218:21
 219:9 226:7 231:14
 235:22 237:10 238:2
 240:14 242:1 247:8
 247:12 248:18,22
 250:2 253:5,5,6,8,18
 253:21 254:4,12
 255:7 256:5,22 257:2
 258:5,7,16 259:4,8,11
 260:12 261:8,9,20
 262:15,19 263:1
 264:13,22 266:5,9,15
 267:16,21 268:14,16
 270:19 271:3,5,7
 272:12 273:4,14

thinking 29:13 48:6
67:15 94:6 97:1
178:22 222:21
third 41:14 113:3 114:3
245:17
Thirty 211:11
thought 8:16 32:22
37:2 49:9 76:7 87:8
88:8 98:12 130:21
142:2 178:18 179:3
206:21 207:5 231:13
251:4 254:21 258:17
266:3
thoughts 29:11 231:12
thousand 211:11
thread 188:18
threads 47:16
threat 45:9 136:22
162:19 186:16,16
187:5 188:21 200:8
200:17 236:14
threats 45:11 82:11
136:18 200:10,19,22
201:2 216:3,3 233:1
three 29:7 44:5 48:8
68:6 75:5 76:18 79:8
84:4,10 85:7 86:16,20
86:22 87:3,15 88:10
88:16 105:5,7 115:19
116:5 118:5,7,14
121:6 123:21 124:7
125:10,19 126:2,3,10
126:13 127:3 130:8
130:22 131:2,10,14
131:17 199:12
three-year 76:3 98:14
threshold 244:19
threw 21:16 96:12
97:15
throw 140:20
tie 122:20 123:1,16
224:11,14
tied 123:11
tightly 190:2
Tim 11:19 104:12 106:1
111:3 112:9 114:16
117:2 122:4 123:2
124:3 125:16,17,17
126:4,5,15 127:7
129:16 170:7 199:14
199:17 201:4 203:1
220:8 223:19 269:17
Tim's 129:8
time 3:20 4:5,8,12 8:1,6
10:10 14:12 19:21
23:10,14,14 24:18,21
25:8,13,18,20 26:13
27:2 30:1,11,17,20

31:1,5,6 33:19 35:15
35:15 39:15 43:17
44:6 51:16 62:10
63:17 64:22 75:21
76:14 80:6 81:12
82:14 83:5,14 84:22
85:22 86:6 88:15,17
89:7 90:8,8 91:15
92:18 94:12 98:21
99:7 109:22 120:16
132:17 133:11 134:16
135:14 147:11,21
148:2,5,6 149:14
150:1 154:9 155:15
156:17,20 158:12,14
159:5 162:22 163:19
172:17 189:9 195:7
201:15 204:21 205:3
205:17 206:9 207:22
208:3,14 210:3,19
213:21 228:10 229:20
230:16,18 238:7,10
241:1,10 247:7
248:13 250:5 259:13
260:14 261:8 267:7
270:18 271:6 272:11
273:5
timeframes 235:16
timeline 137:14 190:8
191:17 209:4 216:17
timelines 22:18
times 6:8 29:15 35:13
216:12 244:1
timing 33:10 230:15
241:13
TIMOTHY 1:15
tired 266:14
today 5:17 15:6 18:8,14
21:20 22:1 43:21 62:7
102:6 125:3 135:10
155:15 156:14 161:11
181:9 208:12,13
226:12 231:10 238:3
238:20 249:18 255:12
264:2 271:17
Today's 13:11
Todd 1:14 12:1 51:13
51:14 56:4 69:6,10
75:8,9 104:10 105:20
111:1 112:7 114:14
116:22 122:1,1
125:13,15 126:4
129:14 170:5 180:13
192:9,10,21 202:21
220:6 223:17 269:14
toes 28:3
told 132:16 202:16
tolerance 227:19

tolerances 20:12
tomorrow 102:6
tonight 68:3
tons 57:5
tool 20:12 173:7,18
184:1,14 185:1 186:5
186:6,7,21 187:4
188:8,11,18,20
192:14 200:6,8,17
206:4,13 227:19
243:5
tool's 242:14,16
tools 2:19 20:7 172:6
173:7 174:1 183:14
183:16 184:4 191:5
192:12 199:19,22
200:8,16 203:22
204:3,5,11 206:17
217:20 222:3 239:18
242:18,19 247:9
255:8
top 16:5 200:21
top-side 233:3,13 241:4
topic 27:15,18 28:1,4
44:3 50:18 139:4
171:8 187:11 204:2
226:11 231:15
topical 23:11
topics 49:8 98:10
total 221:1
totally 148:11 247:3
touch 74:11 119:5
240:13
tough 155:12 240:11
toughness 236:8 248:8
249:17 268:10
TR 89:21
track 30:10
trades 271:21
training 253:16
transcript 7:3 260:3
transmission 74:7 77:9
78:2,19 81:11 172:10
173:13,15 174:10
175:11 176:5,8,12,18
177:11,14,16 178:13
179:10 180:5,10
181:11 182:8 196:1,5
198:2 215:12 228:19
transparency 156:12
160:15
transportation 1:1 3:7
159:9,12 160:2
trap 195:5,6
travel 7:14 52:2 66:18
travels 57:15
tremendous 78:15
tricky 10:7

tried 20:21 128:18
231:18 272:10
trigger 138:15,16
triggers 144:14
tripled 21:8
troublesome 240:1
troubling 238:18
true 7:22 8:2
truly 239:18
trust 11:18 196:20
260:8
try 3:19 6:14,14 16:21
21:1 36:1 67:2,8
77:16 84:20 90:18
99:13 120:10 135:14
152:22 167:6 168:12
196:6 208:17 240:10
248:10,17,21 251:15
256:20 262:3 267:20
271:18 272:15,18,22
trying 24:9 47:17 52:14
53:3 54:1,22 56:17
58:19 59:1 71:16 84:5
86:20 90:15 94:3 96:9
96:16 98:21 126:14
142:1,16 144:4 154:9
157:3 167:18 175:2
182:21 195:4 209:9
215:16 231:21 237:5
239:9 243:6 246:1
252:7 254:11 257:10
262:10 267:21 271:19
Tsaganos 9:14,15
TSD 233:11
tube 180:6
turkey 233:20
turn 5:19 7:7 9:6 12:12
12:18 14:17 20:13
32:10 42:11 78:12
228:3 257:18 270:14
turning 23:18 258:2
turns 218:17
twist 167:7
twisted 167:8
two 5:2 12:21 29:7 30:8
30:14 37:19 38:10
41:20 51:17 59:18
62:21 66:4,10 68:6
69:19 75:11,13 97:3
97:22 105:6 146:17
161:9 173:15 174:14
175:10 181:7 229:5
230:6 236:17 252:6
two-year 229:7
type 40:22 53:17 66:3
141:4 232:1,2,3,5
243:16 265:14 266:20
268:10

types 34:2 43:7,9 248:5
251:7
typical 238:3

U

U.S. 1:1 3:7
ubiquitous 62:6
uh-oh 257:10
ultimately 18:5 45:8
unanimous 68:15 102:3
131:8
unavailable 147:21
unclear 98:7
under-inspected
177:22
under-regulated
177:22
under-served 265:1
underestimate 86:18
underscore 159:22
understand 8:10 22:15
24:9 35:14 36:2 60:3
61:21 63:1 66:18 74:3
78:1 81:9 103:13,14
123:12 135:12 136:21
142:14 152:3 182:14
187:3 195:12 202:11
215:15 218:15 231:19
249:21 252:19 255:4
256:9 264:9
understanding 27:6
52:13 80:18 87:13
123:13 185:21 187:1
221:8 243:4 246:14
undertaking 156:14
157:7
universe 197:12
unknown 248:1 267:12
unnecessary 167:10
173:10
unpiggable 211:11
unreasonable 212:7
unusually 37:17
update 267:19
upstream 257:21
USA 72:10
USAs 37:17
use 16:3,4,16 17:14
20:7 45:13 58:17
134:20 148:20 172:2
174:1 179:12 184:4
184:15 185:22 186:7
186:20 187:4 188:7
188:15,18,22 190:22
204:11 206:17 207:1
217:20
useful 8:17 35:12,13
36:9 59:7 226:4

ushering 5:7
usual 225:20
usually 84:18 180:6
225:22 267:9,10
UT 242:18

V

value 6:12
valve 24:14 43:1
valves 18:16 25:7 43:4
181:20
variability 78:11
variation 140:9,10
variety 191:4
various 23:1 195:20
Vasiliki 9:15
vein 231:21
verification 19:12,14
44:19 45:19
verify 44:18 267:13
versa 171:17
versus 78:2 176:8
195:13 226:21 248:5
vertical 50:5
vessels 174:22
vice 171:17
view 20:3 67:11
views 84:6
Virginia 1:10 12:4 132:3
132:8,20
virtually 256:13
voice 17:2 93:19 134:21
134:21 155:17 157:6
225:2,3
voices 105:15
voluntary 145:2
volunteer 13:17 199:14
vote 7:20 8:10,11 13:11
14:1,17 15:11 28:5,10
28:16,18 29:4 30:8,13
49:6 68:7,15 77:16
84:13 85:2 86:21 87:2
87:3,5,20 91:17 94:21
95:4,7 98:12,20 99:16
99:17 100:6 101:20
103:7 105:15 107:20
109:5 110:15 111:21
116:12,12 117:10
118:16 119:16,18
120:3,3,16 121:17
122:22 123:1,3
124:18,21 129:5,11
130:20 131:2 135:12
138:2 145:14,17
146:3 163:22 169:18
184:6 187:22 195:16
202:17 215:8 216:14
218:11 219:4,7,10

245:20 255:16 257:4
269:7
voted 87:15 119:13
122:20 131:4,10,15
222:21
votes 68:13 121:18
125:3 187:17,18
voting 2:3 14:14,22
15:2 30:19 67:7 98:8
98:8,9 102:16 103:3,5
103:7 104:3,3,5
110:18 116:18 118:6
120:12,13 125:8

W

wait 122:21 194:16
208:11
waiting 214:17
waive 150:21 151:6
waiver 154:1
waivers 172:6
walk 9:4 193:15 240:11
261:19
wall 5:11 229:2 234:18
242:13 249:10,12
want 3:8 4:22 5:8,20 6:3
7:9,18 8:3 10:15
13:22 23:1,4,8 27:5
28:2 29:8 33:12 34:17
36:10 49:11 50:1,7
51:15 56:1,11 59:19
60:10,14 61:17 65:1
66:9 67:13,22 68:11
77:14 82:3 83:7,19
84:11 86:15 92:7,14
93:15,16 94:21 95:6
96:1 98:17,19 100:3
102:3 110:17 114:2
116:21 123:10 126:16
127:9,22 132:10,12
134:19 139:18,22
140:1 145:14,15,17
149:11 153:4 161:5
163:1 165:9 166:13
171:19 173:22 182:13
182:16 183:10,10
192:11 196:13 199:13
199:18 207:10 214:1
214:8 215:10,19
216:4,9 221:12,19
222:20 224:19 229:16
237:6,15,16,18 240:8
246:2 247:17 249:18
249:21 253:10 254:3
254:13 255:18 257:6
258:20 260:11 262:6
262:21 266:15 268:19
271:9,22 272:7 273:3

273:10,14
wanted 3:13 4:2 8:9
16:2 22:14 23:17
26:10 36:8 39:5 43:13
49:21 56:5,20 60:14
63:20 66:6 70:9 87:9
91:10 133:22 134:8
158:11,17 162:3
169:12 193:5,11
195:12,19 200:5
208:18 209:16 225:12
230:15 256:22 272:7
273:4
wanting 96:3 215:18
216:7
wants 63:17 75:16
84:11 121:7 124:5
131:2 154:21
warn 158:1
warning 248:22
warranted 187:4
wasn't 25:8,11 27:7
61:6,7 81:22 144:2
182:21 209:17 210:8
265:21
waste 254:15
watching 245:16
water 78:13 158:7
waters 39:14
way 3:12 5:6,7,8 7:15
12:10 23:13 26:6
31:15 50:4 60:12
64:22 74:17 76:22
79:2 109:16 124:8
125:1 132:16 152:13
156:7,9 168:11 171:3
176:4 177:21 182:7
193:6,14,16 195:1
196:9,12 207:6 211:6
238:9 246:11,19
257:9
ways 256:18
we'll 3:18,19,20 4:5,7,9
4:20 6:17 8:22 9:4
11:4 12:13,17 17:7
18:8 25:7 27:14,18,19
29:10,11,12,13 30:15
31:6,16,17 35:8 36:21
37:5,8 44:7 45:1
48:20 51:21 61:17
68:2 69:14 82:8 87:20
99:22 100:5 121:8
133:13 142:3 146:4
154:16 161:15 162:2
162:3,9 177:6 197:2
222:22 228:11 233:4
233:15,18,19 238:5
262:3 271:18

we're 12:12 14:14 18:14
 21:1 23:18 25:6 27:15
 30:7,10 31:22 32:2,9
 32:18 33:9,13 40:16
 41:3,4 43:3,14 44:17
 44:20 47:17 48:5,19
 51:5 53:10,11,16
 54:22 55:16,18,18
 56:17 58:13,19 59:1
 60:5 61:2 67:2,6,8
 68:9,18,19,22 69:3,21
 70:14 71:22 72:15,16
 75:11 77:13 79:10
 82:9 83:20 84:12 86:4
 86:11 87:2,4,5,17
 91:6,6,12,12 94:3,6
 95:16 96:5 97:15 98:8
 98:11,14,22 99:7,12
 99:15,16,16,17 103:3
 103:3,7 104:3,3
 110:18 116:11,12
 118:2 120:11,13,15
 123:7 126:8 128:4,8
 129:10 130:20 132:7
 132:13,20 134:18
 135:5,10,21 137:2,4,9
 137:11 139:6 140:1,6
 141:14 142:10 148:11
 152:1,9 154:17,19
 156:6 157:3,11
 158:21 160:20 161:11
 161:15 163:17,22
 167:20 174:16 175:4
 177:15 179:5 180:16
 181:1 182:9,10,11
 189:10 191:22 192:22
 195:1 196:20,21
 200:16 205:12 206:5
 206:17 207:16 210:8
 215:15,20 216:6,17
 217:5 218:20 219:16
 221:3 222:18 225:8
 226:11,20,20 231:3
 232:19 235:10 236:12
 237:5,8 238:8,15
 239:9,11,14,18,21
 240:13 242:9,10,13
 243:9,12,17,17,22
 244:3,12 245:6,16,19
 246:4,16 250:8,8
 251:1,2 252:7,10
 253:5,20 255:11,18
 256:18 257:17,19,21
 259:6 261:7,9 262:20
 265:17 266:16 268:12
 271:19 272:2,14,18
we've 15:13 20:22
 34:12,14 48:18 57:2

58:21 60:12 66:2 67:4
 67:10 68:5 76:15 82:4
 82:13 83:18 90:18
 91:4 92:19 94:22
 120:2 121:1 128:1
 137:6 150:15 157:8
 158:3 159:17 162:11
 169:10 182:14 183:18
 188:17 189:1,19
 192:1,2,18 210:14
 215:22 216:13 227:22
 231:10 234:21 237:11
 239:8,12 245:12,18
 252:6 254:22
weakness 45:15
weaknesses 228:1
weather 2:15 20:5
 135:2,9 137:13
 138:13 140:17 144:3
 144:13 157:11 164:16
web 215:4
webinars 21:2 156:6
 172:14 272:12
website 23:5 145:3
 193:22 225:22 226:6
weeds 231:16
week 3:10 273:18
Weimer 1:18 11:17,17
 24:4,5 27:5,10 53:9
 73:20,20 82:16 97:22
 98:13 101:13 103:13
 105:3,4 106:13,14
 107:20 111:15,16
 112:21,22 115:6,7
 116:9 117:16,17
 118:13 121:10 122:16
 122:17 130:6,7
 134:12 143:22,22
 170:19,20 179:7,7
 185:14,14 186:19
 193:4,4 203:12,13
 212:21 220:20,21
 224:9,10 270:7
weird 50:4
welcome 3:8 23:21
 56:21 135:3 155:2
 272:15 273:2
weld 182:2 229:14
 233:7 243:2 244:2
 245:4
wells 47:20 78:12
went 25:21 71:13 88:2
 133:8 146:14 156:2
 179:8 189:4 195:13
 225:6 261:14 272:11
weren't 24:17,21 26:19
 121:8
whatnot 22:14 189:13

Whetsel 9:10,11 13:19
 14:5 15:3 16:19 17:4
 17:10 31:8 55:20 93:7
 93:12 96:21 102:8,14
 102:18,20 103:2
 104:6,8,10,12,14,16
 104:18,20 105:1,3,5
 105:16,18,20 106:1,3
 106:5,7,9,11,13,15,18
 110:17,21 111:1,3,5,7
 111:9,11,13,15,22
 112:3,5,7,9,11,13,15
 112:17,19,21 113:1
 114:10,12,14,16,18
 114:20,22 115:2,4,6,8
 116:14,16,18,21
 117:2,4,6,8,12,14,16
 117:18 118:1,6,9
 121:19,21 122:1,4,6,8
 122:10,12,14,16,18
 123:11,14 124:19,22
 125:4,7,12,15,17
 126:3,17,20 129:6,12
 129:14,16,18,20,22
 130:2,4,6,8,21 131:9
 131:21 169:17,20
 170:2,5,7,9,11,13,15
 170:17,19,21 202:16
 202:19,21 203:1,3,5,7
 203:9,12,14,17,21
 220:2,4,6,8,10,12,14
 220:16,18,20,22
 223:13,15,17,19,21
 224:1,3,5,7,9,11,16
 260:2 269:8,12,14,17
 269:19,21 270:1,3,5,7
 273:17
White 9:17,17 93:21
 134:21 198:21 213:11
 214:1
Wi-Fi 8:19 9:1
wide 155:16 160:14
widely 138:18
Wiese 1:20 3:4,5 10:7
 10:18,22 11:2 12:7,15
 14:4,6 22:8,10 25:15
 30:16 35:10 49:21
 56:4 60:8 66:22 68:8
 77:11 81:16 87:1
 89:13,18,22 92:21
 93:20 94:3 95:18
 97:18 98:16 99:6,19
 119:2 120:7,20 123:1
 123:6 125:18,22
 127:22 132:13 133:3
 133:18 134:5,14
 141:22 144:16 152:2
 161:5 167:12 189:3

191:11,16 192:2
 193:19 195:1 208:17
 209:1 214:10 216:15
 222:17 225:11 255:14
 258:16 259:17 260:4
 262:14 264:20 265:16
 270:15 271:15,18
 273:22
willing 65:8
willingness 64:19
 211:8 248:17
wind 137:1
winging 134:6
wins 7:21 8:11 263:7
wiped 148:21
wise 154:16
wish 62:17 122:19
 169:2 194:3 273:15
withdraw 131:21
withstand 141:1
woman 9:7
women's 5:9
wondering 74:3 82:16
 214:19
word 103:12 151:9
 200:14 267:2
wording 211:7
wording's 192:17
words 96:19 124:9
 179:9 264:18 265:11
work 8:8 9:11 45:5
 48:22 85:14 86:10
 89:4 90:4,5 119:11,12
 134:4 138:12 139:18
 140:2 154:14 155:12
 156:14 159:18 167:18
 169:2,10 181:15
 229:12 232:16 243:7
 243:14 248:10 249:4
 249:15 252:5 253:9
 256:4 262:4 263:1,3
 263:11 267:17,18
 268:5 270:13 272:3
workable 54:22 57:15
workaround 206:6
worked 88:18 156:18
working 9:2 82:13
 124:2 158:4 159:19
 193:22 239:14 253:20
 254:5,18 255:12
 256:19 259:13
works 23:13 26:7 113:4
 153:5
workshop 45:6 209:6
world 78:15
worried 29:22 95:17
worry 102:13 273:21
worth 193:19

worthy 121:3
would've 144:12
wouldn't 92:20 119:18
 119:21 127:13 182:3
 197:22 214:1 219:20
 265:11

Wow 269:10

wrap 271:9

wrestle 82:10

writ 159:9,16

writing 144:5 250:6

written 94:18 109:16

152:7 178:8 182:8

250:10 257:9

wrong 55:11 141:15

182:6 190:1 247:1

248:9

wrote 229:1

www.regulations.gov

7:6

X

Y

yay 122:2

year 17:22 18:15 33:9

33:17 52:9 53:19

76:20 81:14 83:17,22

85:4 89:6 109:19

113:13 116:6,19

124:6,7 126:12,18

127:2 159:18 162:4

211:5 229:5 245:17

245:17

years 20:8 42:19 44:6

47:2 48:9 57:2,3

62:19 67:6 75:6,21

76:16,19 79:9 80:9,14

81:6,11 84:4 85:7,13

86:16,20 88:10,16

113:11 115:19 116:5

118:5,7,15 121:7

123:21 125:10 126:2

126:11,13 127:4,18

130:22 131:2,10,15

131:17 161:9 171:13

172:16,21,22 176:4

204:8,20 205:1,18,20

206:8 207:15,16,21

208:5,6,11 209:17

211:6 213:2,14,20

215:13 216:12,14

218:15,21 219:1,4

222:9,9 229:5 246:21

247:10 252:6 267:1

267:15

yield 37:16 52:4

young 125:2

Z

zero 64:12 233:16

zeroing 81:10

zone 143:11

zones 143:8

0

1

1 1:8 185:9 188:15

227:11

1(c) 265:16,18

1.1 227:11 244:1,3

246:15

1.25 235:20 245:3

1:19 133:9

1:30 132:17

10 88:14 216:5 221:9

222:9 227:10 232:19

10-year 212:17

10,000 211:5

10:00 1:11

10:04 3:2

100 157:2

106-E 184:18

11:39 88:2

11:48 88:3

1173 84:8 159:20 161:7

1176 250:3,6,9

12 82:21

12:31 133:8

13 15:8

135 2:15

15 2:3 88:14 176:4

209:14 210:9 211:3

16 2:4

171 2:17

18 227:5 229:6,20 230:8

230:20 232:8 235:7

244:17 245:5

180 20:19 21:10 230:9

239:3 241:17

180-day 230:5

195 37:11 197:5 198:18

199:1,4

195.1 196:10 198:10,15

198:15 199:5

195.1(b) 52:5

195.2 179:21

195.402 136:11 163:6

195.452 174:12 184:1

192:14 197:7 198:11

228:17

195.452(n) 222:8

195.452(n)(4) 218:1

2

2 98:3 184:15 228:22
 229:3

20 20:8 37:15 52:4

204:8,19 205:18,20

206:8 207:15,16,21

208:5,11,20 209:17

211:6 213:20 216:5

216:12,14 218:21

219:1,4,10 221:4,5,9

222:9 229:1 246:21

249:10

20-page 34:18 40:9

60:14

20-year 206:14 212:17

200,000 211:3

2008 240:21

2010 17:19 32:7

2011 18:4 38:13,14

2012 18:6,9

2015 15:9 25:19

2015-0173 7:7

2016 1:8

2018 33:17

203 2:20

21 38:14 88:13 126:10

126:10,12 127:3

21-attribute 88:19

226 2:22

25 21:8

270 228:21 229:4

244:17,17 245:5

3

3 184:15 251:10 252:22

3:05 225:6

3:15 225:7

30 55:9 248:16 258:18

259:4

30,000 211:4

4

4 7:21 184:15 219:1,2

219:15

4,000 211:22

4:03 261:14

4:12 261:15

4:26 274:6

40 199:18 252:22

400 211:22 212:7,8

404-D 162:7

414 138:6 158:21 164:1

414-A 165:7

416 171:12 181:5

422 181:6

45 133:2

452 79:10 174:19

192:17 193:21 232:4

452(g) 44:22

452(j) 45:19 79:15

5

5 7:21

5:00 102:6

50 2:6 235:5 242:17,17

242:18 244:19 246:17

248:16 255:1,1

6

6 82:21

6-4 120:14

60 230:5,9 239:3 241:7

241:17

66 12:2

69 2:8

7

70 156:20 234:18

242:13,15 243:10

244:18 248:16 250:12

250:16 251:3 252:19

72 147:13,15 148:16

149:3,8,13,15,18

150:4,6 151:6,10

152:13 153:22

72-hour 137:14 151:2

73-75 20:18

75 2:10

79 2:12

8

8 2:2

8:00 68:2 263:5

80 209:13 234:3 249:11

85 209:13 210:8

9

C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Liquid Pipeline Advisory Committee

Before: US DOT/PHMSA

Date: 02-01-16

Place: Arlington, VA

was duly recorded and accurately transcribed under
my direction; further, that said transcript is a
true and accurate record of the proceedings.



Court Reporter

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701