U.S. DEPARTMENT OF TRANSPORTATION

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA)

OFFICE OF PIPELINE SAFETY

+ + + + +

GAS PIPELINE ADVISORY COMMITTEE (GPAC)

and

LIQUID PIPELINE ADVISORY COMMITTEE (LPAC)

+ + + + +

JOINT MEETING

+ + + + +

TUESDAY AUGUST 25, 2015

+ + + + +

The Committees met in the Potomac

Ballroom, Crystal City Marriott at Reagan

National Airport, 1999 Jefferson Davis Highway,

Arlington, Virginia, at 1:00 p.m., Massoud

Tahamtani, Meeting Chair, presiding.

PRESENT:

MASSOUD TAHAMTANI, LPAC Member (Government),
Meeting Chair

CHERYL F. CAMPBELL, GPAC Member (Industry)

J. ANDREW DRAKE, GPAC Member (Industry)

SUSAN L. FLECK, GPAC Member (Industry)

PAULA A. GANT, GPAC Member (Government)

ROBERT W. HILL, GPAC Member (Public)

RICHARD F. PEVARSKI, GPAC Member (Public)

RICHARD H. WORSINGER, GPAC Member (Industry)

CHAD J. ZAMARIN, GPAC Member (Industry)

LANNY W. ARMSTRONG, LPAC Member (Public)

C. TODD DENTON, LPAC Member (Industry)

TIMOTHY C. FELT, LPAC Member (Industry)

MICHELE F. JOY, LPAC Member (Industry)

RICHARD B. KUPREWICZ, LPAC Member (Public)

CHARLES LESNIAK, III, LPAC Member (Public)

CRAIG O. PIERSON, LPAC Member (Industry)

JOHN D. QUACKENBUSH, LPAC Member (Government)

CARL M. WEIMER, LPAC Member (Public)

ALSO PRESENT:

MARIE THERESE DOMINGUEZ, Administrator, PHMSA
JEFF WIESE, Associate Administrator for Pipeline
Safety, PHMSA

KRISTIN BALDWIN

LINDA DAUGHERTY

JOHN A. GALE

ALAN MAYBERRY

JIM PATES

CAMERON SATTERTHWAITE

CHERYL WHETSEL

TABLE OF CONTENTS

ITEM	PAGE
Call to Order Committee & Staff Introductions	4
Agenda Item 1 Briefing PHMSA Administrator	12
Agenda Item 2 Briefing Stakeholder updates Current Policies & Initiatives	26
Agenda Item 3 Briefing Office of Pipeline Safety Senior Leadership	106
Agenda Item 4	
Briefing Update on Congressional	131
Mandates, NTSB, OIG & GAO	
Recommendations & Regulatory Agenda	
Agenda Item 6 Briefing Performance metrics	177
Wrap-up & Adjourn	223

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

1:00 p.m.

MR. WIESE: Good afternoon, everyone.

We're still in the informal session here. I

haven't turned it over to Massoud, because I know

better than that. As soon as I do, we'll be

marched down to complete everything, but I wanted

to take time out to welcome you all here. It's

been a while since we've talked, and actually,

looking forward to it.

We have some really good report outs.

Todd and Chad will be reporting to us, along with

Linda on midstream issues. I'm really excited to

hear how that's all coming out.

At any rate, I welcome you again. My name is Jeff Wiese. I'm Associate Administrator for Pipeline Safety at PHMSA.

We have kind of an aggressive agenda here. My apologies to those of you who are doing last minute catch-up and have a presentation to deliver, but I know there's going to be exciting stuff.

I'm pleased that we have an opportunity, as this committee has asked me numerous times before to engage in policy level discussions. For Marie Therese Dominguez, our new Administrator, I would say once upon a time, it was called the Technical Advisory Committee, but we really didn't talk many technical issues.

I think we crossed those years ago and moved onto policy. But we changed the name, not long ago, to sort of reflect that, and most of the debates that you're going to have today and tomorrow will be of a policy nature.

We have no votes for you now, but thankfully, we should have some votes coming up soon.

So, as the proposed rules play out, and we get the comment period, you know the drill. We will digest that. We'll bring it back, we'll talk to you about what we're hearing from all the stakeholder groups. We'll solicit your advice at that time and at that time, there would be a vote.

1	So, I think, you know, with no further
2	adieu, I would just say, I would like to get
3	started calling to order, maybe do a quick round
4	of introductions, since we have a lot of new
5	players in the room.
6	Lanny, am I catching you at a bad
7	time, or would you be willing to start over
8	there?
9	
LO	MR. ARMSTRONG: Lanny Armstrong, City
11	of Pasadena Fire Services Department.
12	MR. WIESE: Just as a reminder to
13	everybody, just press the red button, and then it
14	will
15	MS. FLECK: Thank you. Susan Fleck,
L6	National Grid.
17	MR. PEVARSKI: Rick Pevarski, Virginia
18	811.
19	MR. HILL: Robert Hill, Brookings
20	County, South Dakota.
21	MR. ZAMARIN: Chad Zamarin, Cheniere
22	Energy.

of Rocky Mount, North Carolina. MR. GALE: John Gale, PHMSA. MR. SATTERTHWAITE: Cameron Satterwaite, PHMSA. MR. PATES: Jim Pates, Counsel's office PHMSA. MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust. MR. QUACKENBUSH: John Quackenbush,	1	MR. WORSINGER: Rich Worsinger, City
MR. SATTERTHWAITE: Cameron Satterwaite, PHMSA. MR. PATES: Jim Pates, Counsel's office PHMSA. MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	2	of Rocky Mount, North Carolina.
MR. PATES: Jim Pates, Counsel's office PHMSA. MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	3	MR. GALE: John Gale, PHMSA.
office PHMSA. MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	4	MR. SATTERTHWAITE: Cameron
MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	5	Satterwaite, PHMSA.
MS. WHETSEL: Cheryl Whetsel PHMSA. MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	6	MR. PATES: Jim Pates, Counsel's
MS. BALDWIN: Kristin Baldwin, Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	7	office PHMSA.
Counsel's office, PHMSA. ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	8	MS. WHETSEL: Cheryl Whetsel PHMSA.
ADMINISTRATOR DOMINGUEZ: Marie Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	9	MS. BALDWIN: Kristin Baldwin,
Therese Dominguez, Administrator, PHMSA. MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	LO	Counsel's office, PHMSA.
MR. TAHAMTANI: Massoud Tahamtani, Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	11	ADMINISTRATOR DOMINGUEZ: Marie
Virginia State Corporation Commission. MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	12	Therese Dominguez, Administrator, PHMSA.
MR. MAYBERRY: Alan Mayberry, PHMSA. DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	13	MR. TAHAMTANI: Massoud Tahamtani,
DR. GANT: Paula Gant, U.S. Department of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	L 4	Virginia State Corporation Commission.
of Energy. MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	15	MR. MAYBERRY: Alan Mayberry, PHMSA.
MR. LESNIAK: Chuck Lesniak, City of Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	L6	DR. GANT: Paula Gant, U.S. Department
Austin. MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	L7	of Energy.
MR. WEIMER: Carl Weimer, Pipeline Safety Trust.	18	MR. LESNIAK: Chuck Lesniak, City of
Safety Trust.	19	Austin.
	20	MR. WEIMER: Carl Weimer, Pipeline
MR. QUACKENBUSH: John Quackenbush,	21	Safety Trust.
11	22	MR. QUACKENBUSH: John Quackenbush,

1	Michigan Public Service Commission.
2	MR. PIERSON: Craig Pierson, Marathon
3	Pipeline.
4	MR. McCLAIN: Ron McClain, Kinder
5	Morgan.
6	MR. DRAKE: Andy Drake, Spectra
7	Energy.
8	MR. KUPREWICZ: Rick Kuprewicz,
9	Liquid, Public.
10	MS. JOY: Michele Joy, Shell Pipeline.
11	MR. FELT: Tim Felt, Colonial
12	Pipeline.
13	MR. DENTON: Todd Denton, Phillips 66
14	Pipeline.
15	MS. CAMPBELL: Cheryl Campbell, Xcel
16	Energy.
17	MR. WIESE: Excellent. Okay, thank
18	you so much.
19	I think with that, I will and
20	Cheryl probably has me wanting me to cover things
21	here. I'm not going to go through the agenda,
22	because you all have a copy in your book.

There's only minor modification to that.

Now, I will remind you about the audience. This is a Federal Advisory Commission Act meeting, and what that means mostly is, we're here to solicit the advice from the members.

That doesn't mean that we won't create a public opportunity for comment.

But I'm going to ask people -- this is

-- those of you who have been with us a while

know this. We've had a few meetings that were

disrupted. I see some disreputable characters

out there, but they don't look like the kind of

people who are going to disrupt this meeting.

But should you choose not to use the public comment period, you'll be shown the door. So, it's that simple. We try to advise people up front, so we don't have a Christie Marie event, like we had in Dallas, where the whole meeting was put aside by people in the audience.

So, I think with that, I will mention that the meeting is going to be recorded. So, again, remind members that when you speak, it's

useful if you will use a microphone, the red button. If you'll introduce yourself each time. Sorry, we are making a court reporting, as you know, and it's useful to the Court Reporter to know who is speaking at that time and later.

Presentations and a transcript of the meeting are always made available on our website. So, I think that's it. I'll remind you that we'll run today largely until about five o'clock. Tomorrow morning, we'll begin again at nine o'clock here, and I just wanted to take a little bit of time to thank you.

There are a lot of people involved in pulling meetings together. By now, most of you know who they are, but John and Cameron and Cheryl, for sure, and a lot of other folks on our staff have been very helpful to that. So, I want to thank them.

With that and knowing what I'm doing,
I should probably turn this over to Massoud, so,
sorry, thank you, and I conscripted Massoud sort
of at the last minute to help me here.

MR. TAHAMTANI: Well, I'd like to thank you, Jeff, but that's all that I'd like to do is thank you.

It would also -- it would be good to know that I'm doing this, so I can practice a little bit before I get here.

Anyway, formally this is a joint Gas and Hazards Liquid Pipeline Advisory Committee.

Before we begin, a couple housekeeping items.

Please keep your cell phones on the 'quiet' mode. If you wish to speak and you are a member of the committee, please raise your card, put it up like we normally do. I will recognize you, turn your phone on and speak, and as Jeff said, if you're a member of the public and you want to speak, again, let me recognize you, and if you don't want to speak and provide a statement, provide it to Cheryl or the Court Reporter, and your statement will be covered.

With that, I will go to the agenda, and our very first item on the agenda is to hear from our newly appointed Administrator. So,

welcome.

ADMINISTRATOR DOMINGUEZ: Thank you very much. Not to acknowledge the aging population, but you know, glasses do help.

First and foremost, it's a pleasure to meet several of you. I look forward to meeting the rest of the members over the course of the day.

Good afternoon. It's a real pleasure to be here. Thank you all very much for inviting me, and I am the newly minted Administrator of PHMSA, Marie Therese Dominguez, and I am very much looking forward to working with all of you and learning from you, and listening to your ideas and your suggestions, as we jointly work to improve pipeline safety.

I'd like to thank Jeff and Alan and Linda, and John and Cameron and everyone here, Kristin, and I know Cheryl is here, and our Counsel's office, everyone who has had a part in organizing these meetings and facilitating the program. I greatly appreciate your efforts. It

does take a good amount of time and energy, and it's valued and I thank you.

I'd like to also introduce a few members of our team, some new faces to PHMSA.

For those of you that haven't met
Stacy Cummings, our interim Executive Director.
Stacy is back here, and Artealia Gilliard, who is
our Director of Inter-Governmental and
International and Public Affairs.

I just wanted to make sure that if people haven't had a chance to say hello to them, as well, they're our newest members of the team.

I'd also like to acknowledge that I'm really very honored to be here today, and I really thank you all very much for your continued service on these committees. It is not -- I'm sure, given your demanding jobs and what you have going on in your personal lives, and the work that you do, we very much value your service and it's really quite a distinguished group of individuals, and your expertise is very valuable, no matter which sector you're representing. Your

feedback is important, your perspective, and as we look to set public policy and move forward on new regulations, we very much value your input and your ideas and your specific hat that you wear and the experience that you bring to those recommendations is very, very important.

Our nation's industry, energy industry is rapidly changing and it's growing and it's expanding, and we all know that, and thanks to the innovations and new technologies that we continue to experience, a very, very large increase in production, which is leading to energy independence for our country, as well as new products and services, and as we grow, we also have a lot of change that's occurring, and it's our responsibility as PHMSA, to use our regulatory and enforcement authorities effectively, to ensure that all American's -- to assure all American's, that even as the landscape changes, safety of our pipeline infrastructure and our operations remains paramount above everything else.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

So, how are we positioning PHMSA for the future and for long-term success?

I would like to start by stating that PHMSA is an agency committed to continuous improvement. So, as the economy changes and poses new challenges to the energy pipeline and HAZMAT transportation sectors, we must look to make sure that PHMSA, as an agency, is in deed structured to be responsive and to drive innovation that enhances our safety mission.

PHMSA employs world-class engineering and science professionals with extensive technical expertise and a deep knowledge of the pipeline and HAZMAT sectors, and thanks to increased appropriations from the Congress, PHMSA has expanded our workforce by -- we're expanding our workforce by over 25 percent right now. In fact, in the pipeline sector alone, we're recruiting 109 new positions, and we want to make sure that we make good use of the additional talent that our new employees are going to bring to us, and to position the Agency for long-term

success moving forward.

As we assess our structure and our processes, we have a great opportunity to align our organization for the infusion of people and resources, and in doing so, we'll gain greater efficiency as we grow.

But effective regulators need to stay ahead of industry and trends, which is why PHMSA is investing in safety innovations, assessing our data collection and analysis and leading the conversation on safety technology.

In doing so, we will better position

-- we'll be better positioned to leverage our

data, our research and our development, and other

predictive capabilities that we use to manage

risk.

Some of you have heard me talk about the Agency becoming synonymous with safety, trust and innovation, and I wanted to expand on that a little bit.

So, moving forward, I'd like PHMSA to be synonymous with those three words, with

safety, trust and innovation, and safety and hazardous materials transportation is the driving force behind everything that we do at PHMSA.

It's the reason we exist, in essence.

We're self-assessing, adapting and optimizing our regulations, our enforcement and our processes to maximize safety, as the regulated industries that you all represent in many ways and the public, continue to evolve.

On the trust side, what we're looking at is the trust factor that is so foundational to any relationship, including our relationships with our safety partners and other key stakeholders.

So, the question we have on the table is how can we assist with and incentivize high performance among our many safety partners?

In the area of innovation, as regulators, we need to stay ahead of the industry and trends, and look to see why PHMSA -- which is why PHMSA is really redoubling our efforts to find potential safety innovations and lead the

conversation on pipeline and HAZMAT transportation safety technology.

So, moving forward with the Advisory

Committees, I've talked about how PHMSA is

working to assess our structure and our processes

for strengthened safety partnerships, better

compliance and improved accountability.

We also have many opportunities to improve, and your role as advisors is critical, as we move forward. We rely on you to represent our stakeholders, including the American public.

We understand that it demands not only an adequate level of technical knowledge, but also considerable time and commitment.

So, I want to sincerely thank you for your time, your interest and your dedication to serve in this important role on the Advisory Committees.

There are obvious challenges we face moving forward. Membership in the committees continues to change. In the last 24 months, we've seen eight members representing the Government

and the public sectors have to step down, but we're working to recruit new members to the committees, and I want your -- I want you to know that we're aggressively pursuing that.

We're also working to balance representation on the Advisory Committees to ensure that your recommendations are born out of diversity of interest, as well as a robust discourse and consultation.

I am committed to fully staffing the Liquid and Gas Policy Advisory Committees and to working with the committees moving forward on our aggressive agendas.

Your input moving forward for PHMSA's priorities is critical to our ability to achieve our safety mission. We know that the rule making process is methodical, to ensure that new rules are effective, efficient and reflect feedback from all stakeholders, including the Advisory Committee.

As I understand it, you'll be discussing these recently published NPRM's

tomorrow, and looking ahead, PHMSA is focused on publishing the NPRM's for the gas transmission and hazardous liquid rules by the end of the calendar year, and we're working aggressively to try and do that.

Additionally, we'll be -- we will continue to push forward to address the remaining six open mandates on the 2011 Pipeline Safety Act. Many of those mandates and actions are being addressed in the proposed safety rules that I just mentioned.

Further, PHMSA is also continuing to address our open NTSB, GAO and OIG recommendations through ongoing rule making activity, studies, work groups, metrics and other regulatory efforts.

I also saw that on the agenda, you all will be discussing many other initiatives and priorities over the next few days, including the hazardous liquid integrity verification project workshop, which is scheduled for Thursday, and I'd like to point out that we have an upcoming

risk modeling workshop scheduled for September
9th and 10th, and I really hope that many of you
can join is. I know that it's an effort, but for
those of you that can, we would very much value
your participation.

In closing, I'd like to thank you again for your time and your service. I'm committed to safety and I know that you are equally committed to that same goal, to make sure that our pipeline system is as safe as possible in operation.

We need to move forward toward an enhanced safety management system for the pipeline industry, and to do that, we will need all of you to remain engaged, passionate and committed to that safety objective.

Your perspective is incredibly valuable to us, and I want to hear your ideas for how we can best engage the Advisory Committee and continue to raise the bar on safety at PHMSA and across the board.

I look forward to working with you all

and I know that you have a very, very busy 1 2 agenda, so, let's get started. MR. TAHAMTANI: Thank you very much. 3 I would assume you'll take some questions, if 4 5 there are any. ADMINISTRATOR DOMINGUEZ: I'm happy 6 7 to. MR. TAHAMTANI: Are there any 8 9 questions from the committee members? I know 10 it's right after lunch. 11 Let me -- this is not a question, but it's a comment. As I said earlier, when I 12 13 introduced myself to you, I have worked with PHMSA for almost 25 years, and Stacey Gerard 14 15 trained me. Jeff continues to train me. 16 I've straightened him out. MR. WIESE: MR. TAHAMTANI: But I must tell you 17 18 that you mentioned safety, trust and innovation. 19 Clearly, there is no other mission for 20 PHMSA or for the state commissions that are involved with pipeline safety. The problem is 21 22 that when something really bad happens, and the

industry hasn't done what they're suppose to do, we both know that the people come after the Government too.

It used to be that they didn't know who regulated the industry, but today, even the smallest fire that didn't damage anything, gets on the six o'clock news, and I know that Jeff deals with it, I deal with it regularly.

So, my comment is that PHMSA is going a good job, even though you haven't received that much good press lately.

The problem is that when people are hurt, starting with PG&E and the Philadelphia and the Harlem and all of that, people are looking to the Government to fix it all, and we can't fix it all.

So, your message is very well, I
think, on time to ask the members of the
committee, ask the industry, ask my counterparts
across the states, to do all we can. I'll talk
about what the states priorities are at the end,
are used to the authority given to me as

Chairman, to go last, even though he wanted me to go first, to talk about some of these things.

But we must -- and you're saying this, we must look at 192, 195, 193 as the floor, as the price of entry into this business, not the price to stay in the business, and it is all up to PHMSA and it's up to the states to make sure that our good friends in the industry do what's right.

Every accident you look at, there is this safety culture aspect of it, that has gone bad and was going bad for years, to get us to that point.

So, having said that, that was my relaxing the rest of you to ask some questions.

So, once again, are there any questions? This is a great opportunity. We may not see her until next year. If you have any questions, please put your card up or speak up at this point.

(No audible response.)

MR. TAHAMTANI: Great. I've got a bunch of shy people here. We'll move on. Thank

you so much again.

ADMINISTRATOR DOMINGUEZ: Thank you very much.

MR. TAHAMTANI: Jeff, I'm sorry.

MR. WIESE: No, just thank you for the time. I just wanted to acknowledge the Administrator and to encourage you to find time. We've structured the agenda the way we did on purpose. We wanted to provide you an opportunity to get -- she probably gets more opportunity than she wants, to hear from me, from Alan and from Linda. We want her to hear from you.

So, we've structured the agenda this way. We thought we'd do the Q&A and then go to a series of stakeholder updates. Massoud will arbitrate and using the authority that he has, he chose to do clean up, so that he can pick all of the good ideas people had and then said 'me too'.

That being said, I thought it would give you a good opportunity to hear from -- what people are doing and for the people in the audience and maybe some of the members who don't

engage in this business full-time, as we do, to 1 2 understand, you know, kind of the breadth of things that are happening. 3 It's not all about rules. It's not 4 all about inspection. It's not all about 5 There are a lot of other activities enforcement. 6 7 going on and we have a good group of people here

from a fairly diverse set of work places.

So, any rate, we'll have a structured presentation, just five minutes each from these folks, and then open it up to the rest of you.

So, if you hear things that you want to jump in on later, make a quick note to the members of the committee, and we'll be glad to call on you at the end of this.

So, any rate, I wanted to welcome you, to thank you, and thanks for putting up with us, as we try to, you know, fire hose her with tons of information, but any rate, thanks so much.

ADMINISTRATOR DOMINGUEZ: Thank you.

MR. TAHAMTANI: Thank you, Jeff. We are now in the second item, stakeholder update,

8

9

10

11

12

13

14

15

16

17

18

19

20

21

and our first speaker is Carl, with pipeline safety trust. Where are you, Carl?

So, again, introduce yourself for the record, please.

MR. WEIMER: All right, I'm Carl
Weimer. I'm the Executive Director of the
Pipeline Safety Trust. I didn't bring any fancy
slides for this five minutes. So, I'm just going
to kind of wing it.

I was asked to kind of talk about what our priorities are, kind of in the short-term over the next year, and we mainly have five main priorities that we're working on right now.

One of them is kind of the reauthorization, the National Pipeline Safety
Program, it's up for re-authorization in Congress
this year. It's something we don't control. We
tend to get a call 10 days before some committee
decides to have a hearing, and get drug into
those things. I was one about a month ago, where
the Executive Director at that time of PHMSA did
a marvelous job. I was amazed at how much

information she had crammed in her head in the month she had been at PHMSA.

ADMINISTRATOR DOMINGUEZ: That's that fire hose.

MR. WEIMER: Yes, must be. So, that's one that we have very little control over and we're starting to hear inklings of, you know, other hearings coming up. So, we'll be responding to those.

I think most of the players are kind of on record of wanting a fairly straight and clean re-authorization with not adding a lot more mandates into PHMSA, and we share that belief.

One of the other main issues we're dealing with right now is we have our annual conference. I think this is the tenth annual conference, November 19th and 20th, in New Orleans. So, a lot of my time between now and then will be trying to figure out that agenda and lining up speakers, and if anybody is interested, I know there is a bunch of people in the room who already signed up, that will be happening.

Then as always one of our main priorities, it's a transparency and measurable metrics, and they kind of go hand in hand, how do you let the public know what's really going on with pipeline safety in a way that they understand those things, and make that information available, so they can kind of verify it on themselves, if they want to.

A few different examples of that, I'm suppose to do a key note next week at the NAPSR meeting in Phoenix, the state regulators. So, I'm trying to figure out some time in the next few days, what I'm going to say during that time.

But one of the things we'll be doing there is warning them that we're about to do our state transparency review again, where we review all 50 websites, and some states like Arkansas and Maine have risen from mediocre to top of the list, very short order, and other states seem to not care if they're transparent to the public.

So, that's one transparency issue.

We're also entering into an agreement

with CEPA, the Canadian Energy Pipeline's Association. Anybody that operates in Canada or that pays much attention, realizes that they are way behind when it comes to providing transparency and data to folks in Canada, and we've been asked by CEPA to play king of the pipelines in Canada, so to speak, to think about as if we were in charge of pipelines, what information, what measurable metrics do the people of Canada want to know about, that tells them a true story of pipelines up there and what transparency needs to go hand in hand with that, so people can verify that, and they said, "Don't worry about what's already available up here," which is good because very little is, but design the system as you would see it, and then they hope to hold a workshop with both the Federal and prudential regulators and the industry up there, to use the white paper we used to design that system, as kind of a strawman to shoot arrows at me, I suspect.

So, that's an interesting thing to try

21

to kind of re-vamp the whole Canadian transparency system for pipelines.

Then we're doing a more local project in California right now with Contra Costa County, California, where a home owner's group there contacted us and wanted us to come down and look at the pipelines, and they have numbers of refineries in that county and lots of pipelines.

The main interest is the Kinder Morgan Pipeline, and Ron and I have been talking about some of the issues that the community down there is interested in.

We're also interested in all the rules and I'm really hoping to see those -- those proposed rules come out at the end of the year.

So, we're gearing up for that an other rules, and we started to chime in on state rules and local rules also.

Then the last thing that we increasingly get drug into is calls from local Government, trying to understand what their authority is for pipeline safety, and we always

say to them, "Well, in reality, you don't have much authority when it comes to pipeline safety," but there are these gray areas, and we're learning more and more examples around the country.

I think the spill in California not too long ago, opened people's eyes up to how in California, local Governments have asserted some authority under some environmental review in spill response planning.

There has been examples in both

Colorado and Utah recently, where local counties

have used their zoning and permitting authority

to steer pipelines through certain parts of the

county, liquid pipelines, because there isn't any

other citing agencies.

So, we're trying to help local

Governments understand what their authority is

and is not, and I think I'll leave it there, but

I'm glad to answer questions, if anybody in the

audience that -- any of those peak their

interest, after we're done.

MR. TAHAMTANI: Do you take any 1 2 questions about what you just said? MR. WEIMER: 3 Sure. Any questions? MR. TAHAMTANI: I have 4 a question. Carl, at this rate, we could finish 5 this meeting in about --6 7 MR. WIESE: Yes, you have to put your tent card up first. 8 9 MR. TAHAMTANI: You know, Carl, when 10 you sit in this seat, you don't have to do 11 anything you don't want to do. Make sure that's on the record, and keep that up and I may have to 12 13 un-invite you from the national. Having said that, what are you doing 14 15 as the pipeline safety trust, to help the 16 industry and the state advance damage prevention? Again, we know excavation damage is 17 18 the highest risk to pipelines, and we've had some serious accidents. What is your association or 19 20 trust doing to help advance damage prevention? 21 MR. WEIMER: Sure. No, good question,

and we're a member of the Common Ground Alliance,

so we plug in there.

Damage prevention hasn't been one of our top tier issues, just because there's so many other people spending so much time on it, that it isn't one that we need to spend a lot of time on, but we certainly support it.

Like, every report we put out, like this one we're doing for Contra Costa County, has a strong section in it about damage prevention, and we've encouraged that home owner's association there to promote that stuff, and they actually are using some grant money they got, to do some 811 promotion, because of our recommendations.

Even in the transparency reviews, we do of each state, there's issues about what the states are providing, so people understand how damage prevention is important.

So, it's kind of a tag-along on just about everything we do, although it's not one of our top tier issues.

MR. TAHAMTANI: Any other questions

for Carl? All right, our next speaker is with APGA and Rich Worsinger. Rich?

MR. WORSINGER: Thank you. Good morning, everybody, or I guess good afternoon.

There are some handouts being distributed, when you get a chance to look at them later on.

Hi. My name is Rich Worsinger. I'm with the City of Rocky Mount, North Carolina, and I'll be speaking on behalf of the American Public Gas Association.

APGA is the national association for public gas utilities. By public, I mean publically owned by their citizens. In my case, owned by the citizens of Rocky Mount, North Carolina, but others may be owned by counties, specially created utility districts or other Government entities.

There are about 1,000 public gas systems, public gas utilities in the United States, and little over 700 are members of the American Public Gas Association.

are owned by their customers, and we are therefore, very concerned about the safety of our customers, who are not just our customers, but they're also our friends and our neighbors, and we're also very concerned about the cost of gas to these customers.

Since I was asked to talk about our number one priority, at this point it actually is a furnace energy efficiency rule that has been issued by the Department of Energy.

DOE would require all gas furnaces to have a minimum efficiency of 92 percent. APGA supports and advocates for energy efficiency, but believes this rule would actually increase energy consumption by forcing many gas customers to switch to electric heating.

Ninety-two percent efficient furnaces are more costly and require special venting, which further drives up the cost, and in many instances, such in row homes, is near impossible to accomplish.

The higher cost of installing 92 percent efficient furnaces will drive some customers, especially those on low-income, to another initially less expensive heating source, such as electric heat, yet the generation of electricity to power an electric resistant furnace releases twice as much CO2 as a noncondensing furnace.

The rule would actually increase energy consumption as a result of fuel switching. Please take a look at the handout I provided, when you have a chance.

Jeff, I know you and your staff would never try this, but DOE issued this rule first, as a direct final rule, with no opportunity for public comment. APGA had to take legal action against DOE, to have our voice heard and the DFR repealed.

DOE is now proposing an even more onerous version of the rule, and Carl, I know you'll appreciate this. We had to pay \$15,000 just to see the proprietary study of which this

rule is based, and adding insult to injury, because the study is still proprietary, APGA cannot cite it in our public comments back to DOE.

Budding this rule, unfortunately, is expensive and consuming a significant portion of APGA's resources that could be better used helping its members in compliance with safetytype issues.

Turning to the pipeline safety initiatives.

Approximately two years ago, APGA created its system operational achievement recognition program or SOAR, to identify and recognize members who are at the forefront of excellence in distribution operations.

We judge systems in four areas, system integrity, employee safety, workforce development and system improvement.

System integrity includes pipeline safety. Some of the criteria are whether the utility conducts internal audits of its pipeline

safety program, if it had an probable violations in the last state inspection, and whether those have been resolved with the state.

Is upper management involved in decisions concerning system safety? What is the percent of unaccounted-for gas? Does the utility have a policy to investigate unexpected changes in the unaccounted-for gas?

Do they participate in CGA's DIRT program? Do they participate in the plastic pipe data collection project?

There are about 200 such areas we review and systems achieving at least 80 percent are recognized at the bronze level. Ninety percent qualifies for the silver level, and you have to score 97 or higher to be recognized at the gold level.

The purpose of SOAR is to encourage all APGA members to strive beyond mere compliance and constantly improve.

I'm pleased that Rocky Mount achieved the gold level of SOAR this year. This is a

picture of Bert Kalisch, the President and CEO of APGA, there in the dark suit in the center. He came to Rocky Mount to present this award to us.

All 22 members of our gas utility were present. Out of that 22, I'm lucky that we have one engineer on staff to handle compliance, design and the other technical issues that come up. That's all 22 members of our gas utility, and Jeff, I just brought this slide for you and your staff to recognize, that's it, that's all we have.

So, when you have those onerous rules that require a lot of -- there is ones from DOT also. Remember, these are the same people that are installing the mains, they're inspecting the mains. Thank you.

That leads me to one last priority.

With 22 employees, we have about 17,000 customers and a service territory that almost fits inside a 10 mile square. That's Rocky Mount highlighted in the blue shading to the right. The little town of -- the first Nashville, that's Nashville,

North Carolina just to the left, that's 10 miles from the center of Rocky Mount, just to give you an idea of how large or how small we are.

Rocky Mount is hardly your typical public gas utility. We are actually huge, compared to most. We are the 40th largest out of the 1,000 public gas systems in the United States.

This graphic shows PHMSA's latest distribution annual report data, showing the number of distribution systems by size. The majority of U.S. distributions systems regulated by PHMSA operate between 100 and 10,000 service lines.

They don't have an engineer on staff.

They don't have other technical support staff.

APGA will keep reminding PHMSA that its rules need to be technically feasible, reasonable, cost-effective and practical for all the operators it regulates, not just the superlarge operators in the left tail of the distribution curve.

I hope this committee remembers this 1 2 chart when we discussed proposed rules later today and in the future. That's all I have time 3 I'm glad to answer any questions. 4 Thank you, Rich. 5 MR. TAHAMTANI: Any questions for Rich? 6 7 Our next speaker is with AGA, and I believe, Cheryl. 8 9 MS. CAMPBELL: Yes, sir. I'm Cheryl Campbell with Xcel Energy, and I am speaking on 10 behalf of the American Gas Association today. 11 12 AGA represents more than 200 local 13 energy companies, and we've got local distribution companies, intrastate transmission 14 15 operators, vendors and service providers. 16 it's a pretty diverse group. Very much a group that's dedicated to 17 18 enhancement of pipeline employee and public 19 safety. In fact, I got to spent some time on the

pipeline and public safety. So, it's very much a

stand last week in Colorado, talking about

topic of conversation.

20

21

We are very committed to collaborating with public officials, emergency responders, excavators, consumes and safety advocates, to continue to improve the industry's long-standing safety record.

Our Board of Directors votes annually to determine our advocacy priorities, and it's no surprise that they 2015/2016, one of the top --well, the top priority is pipeline safety. It's very difficult to move away from that as our number one priority, as an industry.

Our members are very busy making necessary operational and procedural adjustments, resulting from the numerous final and proposed rules released by PHMSA this summer. AGA largely supports the intent of the rules. It is working with the members to prepare for the changes in the rules and ensure compliance with the final rules.

We do appreciate the open dialogue with PHMSA around the rules, and certainly hope that the communication continues and that will

allow for efficient and effective improvements in pipeline safety overall.

I do want to note a couple of things that AGA and its member companies are doing that go beyond the rules, and in our continuing commitment to improving pipeline safety overall.

Couple of them of note, the peer review program. I don't know -- I don't think there are very many people in the room that are aware, but I know Sue Fleck and I have both been involved. It's a terrific program. We just started it this year after piloting it last year, and it's basically, other member companies come in and review an operator's procedures, processes, talk to the employees. We're not just talking to management, we're actually talking to the employees.

Going through the manuals, understanding how people are implementing things, such as safety culture, operator qualifications, worker training and integrity programs.

We're noting best practices and then

at the end of the week, there is read-out with the executives, that basically says, "Here is the things and the areas that are going really great, and we think you're doing best practices. Here is some places where we think you might have an opportunity to improve."

I think this is really going to be an incredibly valuable program over time for the member companies, and we are scheduled in February of next year, and I'm looking forward to being on the other end of that.

The best practices program is another one that I feel very strongly about. This is a long-standing and the topics in 2015 include contractor oversight, a topic near and dear to my heart, pipeline construction, collection of maintenance of the as-built documentation.

Records continues to be an interesting challenge for a lot of folks, but also very, very important, and system reliability.

That program collects a lot of industry data and facilitates the identification

of leading practices, and then we have
roundtables over the course of the year, and
you're identified by your peers as having a best
practice. It's not AGA and it's not like a state
or somebody like that. It is your peers that are
saying, "Hey, that is a best practice in that
particular area."

So, a lot of good information is shared in the best practices program. We also have 17 different technical and regulatory committees that focus on a lot of the areas around pipeline operations, engineering, safety and security and compliance. A lot of great valuable information gets shared in those committees. They meet regularly during the year, twice in person and also meet on the phone and via web-conference.

A lot of technical notes and it's meant to be an industry resource for different member companies.

Another tool that AGA uses are discussion groups. There is nine of them this

year and they focus on the more detailed challenges facing pipeline operators, such as the temp-risk models, GAS mapping, damage prevention and pipeline safety management systems.

So, another opportunity for people to share how to implement these programs, and then lastly I'll mention the mutual assistance program, including mock national drills.

Lot of ways for people, while it
doesn't happen as frequently as it does in the
electric industry, where you have mutual
assistance, certainly, we've seen some
experiences lately, right, where people have sent
employees across the country, Hurricane Sandy is
one that's notable, and people came from as far
away as California to assist in the restoration
efforts around Hurricane Sandy.

There will be another mock drill in the first quarter of 2016, and they're a learning process for all of us.

Last thing I want to mention is security, both cyber and physical. There is a

lot of information around that and a lot of work that AGA is doing.

The information sharing is one such area, providing participating companies with timely information and analysis.

We just got the -- the downstream natural gas ISAC was welcome in the member of the national -- and I'm going to botch this, the National Council of ISAC's, which is the conduit for interaction between and among the various ISAC's.

So, lot of good information sharing about that, cyber security and the regional cyber security assessments, lot of workshops to help member utilities understand where they are in cyber security, and additional steps, you know, best practices and things that they can do to move forward.

We also have an annual safety summit.

Jeff and Marie, I would invite you to the safety summit, if you're not already so engaged. It's a great venue. I think -- I can't remember if this

was the fifth or sixth year, but it's gotten 1 2 better every single year, and with that, I will end my comments about AGA. 3 ADMINISTRATOR DOMINGUEZ: Can I ask a 4 quick question, Cheryl? 5 On the -- you said you were -- the top 6 7 of your list, you were conducting reviews? MS. CAMPBELL: Peer reviews. 8 9 ADMINISTRATOR DOMINGUEZ: Peer 10 reviews. So, can you explain a little bit about 11 the philosophy of how you're pulling together that peer group and what you're covering? 12 13 MS. CAMPBELL: You bet. If you have not participated before, there are three topics. 14 15 One is safety culture. One is worker procedures 16 and the third one is -- I think it's integrity, pipeline risk, thank you, Andrew, pipeline. 17 18 What we do is, we select other member 19 companies to come into your operation. 20 week long. Pretty intense. You can set up different employee groups to speak with the 21

representatives from the member company.

22

We have

a lot of questions we're asking right, looking for do you do these, you know, best practices, and if you don't, what do you do, and over the course of the week, we identify, here are some areas where you're doing a great job. going, basically, and here are some areas where there are other best practices that you might want to consider to move forward.

ADMINISTRATOR DOMINGUEZ: And on those best practices, where are you deriving those best practices? I mean, I understand there is a lot of different areas that you can pull best practices, but what I'm trying to get to is, is there -- what element of an SMS system or anything else, are you actually drawing from?

MS. CAMPBELL: It is the collective knowledge and experience of those people that are doing the review, plus AGA's collective knowledge over time.

That's something that frankly, I would expect to evolve over time. You know, everybody that's in that room is usually very experienced

pipeline operator in certain aspects, and I think 1 2 AGA has already changed some of the expectations around best practice, based on what we've learned 3 that operators are doing. 4 So, it was modeled after the nuclear 5 peer review, and I do think it's something that's 6 7 going to evolve and change over time. What was a best practice today, right, three years from now 8 9 is going to be something entirely different. ADMINISTRATOR DOMINGUEZ: 10 Absolutely. 11 So, these are all companies that are selfselected and volunteered? 12 13 MS. CAMPBELL: Correct. 14 ADMINISTRATOR DOMINGUEZ: Okay, to 15 participate? 16 MS. CAMPBELL: You agree to participate. When you do participate, not only 17 18 do you get reviewed, but you are sending --19 you're committing to send employees and an 20 executive to do a review of another company. ADMINISTRATOR DOMINGUEZ: Wonderful. 21 22 Thank you.

MR. TAHAMTANI: Thank you. Any other questions for Cheryl?

Next speaker is Andy Drake with INGA.

Andy?

MR. DRAKE: My name is Andy Drake. I will be speaking on behalf of representing INGA, the Interstate Natural Gas Association of America. It represents the natural gas transmission operators in the United States and currently, there are 25 members. It represents probably about 75 to 80 percent of the U.S. transmission mileage for gas transmission.

We have had, as I think folks around here know, a very long-standing commitment to integrity, but I think in PG&E's failure, pipeline gas -- pipeline failure in San Bruno, almost now five years ago to the day, I think it was cause for us to pause and really reflect on what are our values and what are our principles?

We pulled the Board of Directors
together shortly after that incident, and really
looked for, what are we about and clarified in

that moment that we are committed to zero.

We're not going to rationalize any performance less than zero incidents in this industry, and we will not stop until we get there.

That was quite a catalyzing conversation, quite challenging too, because no one really understood how to get there. just a values position, and then came the next hard work, how do you get there, and we sat down, and I think there is some handouts coming around. I don't know where Terry and those guys are, but there were some handouts that were coming about, that really lay down what were the guiding principles that came out of that conversation, and this -- many of the folks here have seen I know you've have not, and that's one of the reasons I wanted to share them for you, to get some insight into what founded the actions that followed that value statement, value thought.

It was really a commitment to a safety

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

culture. It was really trying to understand how to continuously improve to learn from ourselves, to have the humility and the where-with-all that we would honor an opportunity to learn and be open to that, not just from ourselves, but from those around us.

That we would apply integrity
management beyond HCA's on our own accord without
regulation, and that we would engage stakeholders
all across the bandwidth of this energy
infrastructure, to try to understand what are
their needs, what are their concerns, to help
shape our decisions and to help get their
participation and trust in the pan forward.

I think that as we define that action plan, and put those principles into motion, you'll see they're kind of outlined here on one of the attachments.

I think that over the past four years, we've been working really very hard, to advance those principles. I know that words are interesting, but actions speak much louder.

I think that over the last few years, we've seen a significant increase in the amount of the system that's been assessed. We're currently sitting about 75 percent of the system, not HCA's, system mileage that's been assessed.

We have 90 percent of the HCA's that have been hydrostatically tested. I think when we made these commitments, we committed that we would have 100 percent of the HCA's tested by 2020, and we're well on the way to that.

We have committed to and engaged in the development of the API 1173 management system standard, which we believe is fundamental to defining behaviors of a culture and the structure around which an organization must function to propel safety excellence, operational excellence.

We have also that -- as one of our key premises in our action plan, that members will institute management systems.

We have meetings, have had many, many oncoming -- ongoing meetings. We have a meeting in two weeks now, to talk about our SMS workshop

on how to institute that standard. We have lessons learned workshop in Houston next week, and we have a technology workshop next week, and those are just -- are the ones that are coming up this next month.

There's been an ongoing commitment and it needs to be an ongoing commitment.

I was happy to hear your commitments and your goals for this organization. They resinate with me, and I think they resinate with the Board at INGA too, and it's good because I think that is common ground for all of us, to have groups that is committed to safety, a group that is committed to the evolution of technology and learning, and to have a group that comes together on the common ground of building trust, to propel our activities and a basis for conversation.

I think fundamentally, that is important as the fabric that holds us together, and we intend fully to keep stepping into that space, trying to propel ourselves and do a little

bit better.

I know that PHMSA has been very busy.

I know you might not get that right out of the news media, but I think PHMSA has been very deliberate to call a lot of workshops and try to gather the groups around the table, the various stakeholders, to get insights and opinions and the needs of the different stakeholders, to fuel a good choice, an important choice on a good path and a good step forward.

There's been a lot of discussions. I think right now where INGA is, is we would like to see the proposed rules soon. It's time, so that we can see what has been the product of so much conversation, so that we can start getting a tangibility of what is that path forward and how to make it as practical as possible.

I know that one of the other successes that has been achieved in this committee, actually, or a sub-part of this committee has been the midstream work that was done, and I know Chad led that. Maybe, Chad, if you can give some

insights of where you've been with that group.

MR. ZAMARIN: Sure. Chad Zamarin with Cheniere Energy. Maybe just to put a bow on what Andy is talking about.

I think with INGA, you know, we talk about the rules coming out the end of this year.

I think what we have tried to commit to is that five years ago, we re-committed to zero as our goal and we laid out a plan and we started working it.

We engaged with PHMSA. We engaged with the stakeholders to help ensure that the direction was correct, but we -- we, as an industry aren't waiting for the rule. You know, we have been actively, aggressively pursuing that goal of zero, and I think I can say the same.

We've seen that from our PHMSA counterparts, as well.

I think the Advisory Board has served as an opportunity to collaborate and make sure we have that alignment. You know, Andy mentioned recently, we used this committee as a vehicle to

address a real challenge and a real problem that needed to be solved on midstream regulatory oversight, and we'll present on that tomorrow, but I think we show that this can be a vehicle where we come together. We have a diverse stakeholder group and we can solve -- we can solve challenges and get people aligned, so we can stay focused on achieving the goal.

So, I think that will be a positive report out tomorrow, and I think it will also be a vehicle, an example of how we can move other issues forward in the future.

Then lastly, just to take the opportunity to recognize, I think Andy mentioned it. You know, we don't -- we don't get a lot of great press for the good things that we do.

PHMSA doesn't get a lot of great press for the good things that they do.

But I think INGA clearly believes that, you know, this is an agency that's got a lot of smart people that work really hard.

They're tough. You know, they do their job

10

11

12

13

14

15

16

17

18

19

20

21

22

diligently, but we also believe that we've benefitted greatest from the ability to work, and the public doesn't like to recognize often times, or the media, the idea of a partnership, but understanding, having enough trust and understanding to know the priorities and make sure we're pointed in the right direction is really key to achieve the common goal that we have of zero.

So, you know, I would just say that our philosophy has been as INGA's, to engage with the stakeholders, to engage with PHMSA, understand the priorities, understand the direction we should be heading and get moving to accomplish the goal, and then when the rules come, you know, we'll make sure, I think to Massoud's point, that we're checking the box on our ticket to entry, but we're making sure that we're focused on, you know, that higher level of execution.

So, that's really, I think the focus for INGA going forward, and will continue to be.

MR. TAHAMTANI: Thank you, Andy and Chad. Any questions for these gentlemen, and I have no questions for you too, so that should be good.

Our next speaker -- our next speaker is API, Michele Joy.

MS. JOY: Hi. I'm Michele Joy with the -- representing Shell Pipeline Company on the Advisory Committee, also the Association of Oil Pipelines and the API Pipeline Committee.

So, we represent the hazardous liquid or oil pipeline industry, and in 2015 we really focused on four main safety goals.

First, enhanced threat identification.

Second, improved inspection technologies. Third,
expanding the industry's safety culture in new
directions, and fourth, boosting emergency
response capabilities.

Now, obviously, we have many other initiatives that we're working on. If you want a full spectrum view, we have a little booklet that is issued each year, that the industry looks at,

API, AOPL annual liquid pipeline safety
performance report, as well as our strategic plan
for improving safety, but I really want to focus
on the four main initiatives I just mentioned.

So, these four goals drive the industry initiatives, and they're spear-headed by AOPL and API pipeline committee, but they have the full commitment of the entire industry, and a lot of participation of different companies around the table, to try to achieve these goals. So, what are they?

With respect to enhanced threat identification, we're really focused in three areas, data integration. So, we need to do a better job of understanding our data and providing industry guidance.

So, lots of people pig their lines, hydrostatically test their lines, do different things, but what we find, when we look back on incidents, sometimes the very incident signature, the flaw signature is not being recognized until after the fact.

So, I know we at Shell have done a lot of work in this area, and we have found that by overlaying different kind of pig data and getting new tools on how we look at that integration, we are finding things we would miss looking at things individually, and that is an effort that's working across the industry, to figure out how we can take the data we already have and put it to better use.

The second thing we're doing under threat identification is better crack detection. So, crack issues have been growing, in terms of being a more significant percentage of incidents, and so, really trying to better understand detection, analysis and response to cracks.

So, we've been in the process of developing a new recommended practice on this topic that will be available at the end of the year, and for those of you who are not familiar, our recommended practice, while it's spear-headed by the industry, it is open to the public. There are lots and lots of participants, and we

encourage participation, so that we get a full spectrum of input, as we develop these recommended practices.

Then the third initiative under threat identification is really trying to understand better, when and how best to use hydrostatic testing.

So, when does it enhance testing and when -- or enhance safety, and when does it create issues? So, we're doing a lot of work in that area.

The second initiative, major initiative is improved inspection technology of development, with respect to crack detection and diagnosis, in particular.

So, this is obviously related to our threat identification, but we also think that there needs to be new technologies in this area, and so, there's been investment in research and development in this area.

The third area is really expanding the industry's already strong safety culture in new

directions, with a real focus on the safety management systems.

So, the first step on this was the adoption of the recommended practice 1173, which is now being promoted and training materials developed throughout the industry.

The has really been a step change for the industry, which is really traditionally focused on assets and people and safety culture, in terms of how it -- how safety culture is at the senior levels.

This is really kind of further incorporating processes and systems into the safety culture and the safety management practices.

We're also compiling a database of past learnings. We do a really good job of analyzing incidents and learning at the time, but we don't always do a good job of really sharing that learning over time, particularly as we're dealing with crew change.

So, people coming in who didn't live

through that incident may not know that there is data out there. So, we're creating a database of past learnings and developing a formalized learning demonstration program.

Then finally, we're also developing a construction quality management system, as we're looking at new construction.

Then the fourth main safety goal is boosting emergency response capabilities.

So, that is really working on it in two main areas. One is developing a new recommended practice for leak detection program management, one that's actually currently out for balloting, and also building on our prior pilot programs on deployment of a nationwide emergency -- pipeline emergency response training, outreach and standards programs, aimed particularly at first responders.

So, we obviously have other initiatives in 2015, but that is the main focus. We have already started -- also started developing what are going to be our initiatives,

what are our policies, what is our outreach, what 1 2 is our -- what are we doing in 2016, and one of the areas I wanted to highlight is, we are 3 looking at for 2016 initiative, to also being and 4 updating our industry guidance on river 5 crossings, and really trying to do up -- to be 6 7 understanding -- a better understanding of what's happened with river crossings, what are the 8 9 threats, what are the changing water patterns, as 10 both weather and sometimes policy changes, like some of the things that we're seeing in Shell, 11 with Army Corp of Engineer process -- water 12 13 management in our area, like Louisiana, and how that is affecting rivers and river crossings and 14 15 things of that nature. 16 So, the industry is going to go back and look at those, and that will be a focus for 17

2016.

So, with that, I'll stop. We didn't go into everything, but those are the high points.

> Thank you, Michele. MR. TAHAMTANI:

18

19

20

21

Any questions for Michele? 1 2 MS. CAMPBELL: I just want to know if you're going to share? 3 MS. JOY: Absolutely. 4 I mean, the crack MS. CAMPBELL: 5 detection stuff, as an operator of a lot of 6 7 transmission lines, I would give a lot of that data. 8 9 MS. JOY: No, we absolutely intend to 10 share and we recognize this is not an issue just for the liquid lines. 11 It's certainly an issue 12 for just about everyone who operates pipelines, 13 and we could also benefit from what other people are doing, as well. 14 15 ADMINISTRATOR DOMINGUEZ: Just out of 16 curiosity as a follow up, how do you usually share that information? Like, the things that 17 18 you just went through, in terms of your

MS. JOY: Well, the recommended

priorities, is most of that made available just

to your membership in the industry, or is that

more publically available?

19

20

21

practices, all that work is very public. 1 2 public participation. We want other industry participation. 3 The research and development we do is 4 often shared through PRCI and some of the other 5 research organizations. So, yes, we definitely 6 7 share in that capacity. With respect to our database, with 8 9 respect to sort of past learnings, I actually 10 don't know the answer to that question. 11 can get back to you on that. ADMINISTRATOR DOMINGUEZ: 12 You don't 13 know whether or not it's proprietary or not? MS. JOY: 14 Right. 15 ADMINISTRATOR DOMINGUEZ: Okay. 16 Craig, can you answer? MS. JOY: MR. PIERSON: Yes, the -- we'll be 17 18 publishing a paper with the data and the summary of the data. 19 20 MS. JOY: Okay. 21 ADMINISTRATOR DOMINGUEZ: Okay, thank 22 you.

1	MS. JOY: So, yes.
2	MR. TAHAMTANI: Any other questions?
3	DR. GANT: Yes, Paula Grant, U.S.
4	Department of Energy. Thanks, Michele.
5	I'm not sure if this is what the
6	the answer to the question which question you
7	were answering, Craig. Was it about the crack
8	detection research or the best practices?
9	MR. PIERSON: The accumulation of ILA
10	data.
11	DR. GANT: Okay.
12	MR. PIERSON: And the actual
13	DR. GANT: So, my question
14	MR. PIERSON: compared to actual
15	teal versus actual.
16	DR. GANT: Okay, I was making sure you
17	hadn't answered my question.
18	MR. PIERSON: Sorry.
19	DR. GANT: Sorry. So, two quick
20	questions. On the analysis that you're doing on
21	hydrostatic testing and when is it needed and
22	when is it useful, is that an analytical exercise

you're doing? Do you have a research project that you all have initiated?

Second, the same thing on the anomaly or crack detection. Have you -- is PRCI doing that? How are you all executing on that because that's certainly something that links up with research that we're initiating at DOE, and we'd want to try to tag in wherever we can, and I think I saw Robin around here somewhere else.

So, maybe you can make that happen.

MS. JOY: Looking through my notes here. So, there is a team working on it and they are -- they do have some work that they're doing with outside contractors, as well as operators, and they are putting together a draft report and they will be meeting with PHMSA's technical staff for input, but actually, beyond that, I don't really know.

MR. DENTON: Todd Denton, Phillips 66.

One of my employees is actually leading that team, but it is -- and there is a lot of -- an analytical piece to it. They're

using Keithner, for example, for analysis, some of the data that they've developed over the years, as of course, there is a lot of hydro-test data out there to analyze. So, they are using that data.

MS. JOY: And I understand they've also had input from a number of the pipe manufacturers and others, as to sort of, what are their recommendations around, you know, handling of their pipe, both in terms of initial hydrotest, static testing, as well as subsequent hydro-static testing, because clearly, we want to understand from the manufacturers, you know what they think, based on their history of their development of their product, is the right way to manage this form of testing.

MR. TAHAMTANI: Any other questions?

Now, it's my turn to speak on behalf of NAPSR.

NAPSR is the Association of all pipeline professionals that work for the states, from managers and chiefs, to inspectors. I want to recognize the current national NAPSR Chair,

Mr. Robert Miller, who is in the audience.

Under his leadership, we have done a number of things, but again, our priorities line up pretty much with PHMSA and with the industry.

Within the states, our mission is the safe delivery of product, reliable delivery of product to the consumers, and where the commissions have great authority, at reasonable rates, and under that, a number of states have come up with various rate recovery processes to help the industry do a number of things, including getting rid of old pipelines.

We work very closely with NARUC, which is an association of the commissioners, and speaking of re-authorization, I believe this time around is the first time that NARUC and NAPSR, they are taking an active role to actually advance some positions, in the past that have been reactive. We react to the industry and to the PHMSA's proposal. This time around, we're advancing some positions of our own.

States and PHMSA, we are in the

compliance business. Again, it goes back to doing the right thing to make sure that safety is advanced, that the citizen and the industry trust the Government in doing its job, and where we can, advance innovation.

It's exciting to hear all the things that our industry is doing to make sure again, safety is advanced by the use of technology.

A number of states have advanced additional rules above 192 and 195. My state hasn't. We haven't seen the need for it, but when the states see that additional rules are needed, and PHMSA allows to do that, we do that.

I can't say this enough, that compliance with 192 and 195 is not good enough anymore. PHMSA believes that. States believe that, because bad accidents have happened under that regime, if you will.

It is very encouraging and exciting to hear that a number of the associations are moving forward with workshops and other ways to advance RP 1173, which under Ron McClain's leadership and

two years of hard work, we have now -- have a document that not only will hopefully streamline some of these holes and gaps that all of us know exist in our current processes, but the safety culture.

I can tell you that behind every accident, behind every violation, behind every, if you will, departure from the rules and procedures, there is a safety culture aspect to it, and I look forward, at least in my state, to work with my industry and the rest of you, to implement RP 1173, without either PHMSA or NTSB pushing that to become rules.

Ron, I needed to say that, so you know that I'm still committed to not pushing that as a rule.

We continue to -- states continues to see that is still a check the box approach, not for all operators, but for some. It says to do this. We've done this, and so, we're okay, let's move on.

We're beginning to see some of that

with DIMP. DIMP is only a few years old and we've done our first round of DIMP implementation reviews and Jeff, I'll be sharing with you, a survey that we did with the states, next week, about the concern that the states are expressing.

It is still, you know, a check the box approach. This is the rule. This is what we've got to do. We've done it, now, do I get a 'yes' for that question? Do I get a 'satisfactory' for the other question? Can we move on?

As long as we behave that way, we're going to have problems. We're going to have bigger issues.

OQ. OQ was passed more than a decade ago. I can tell you that after about 10 years of compliance inspection in my own state, I decided to have a meeting with my executives and say, "Look, this is not working." It was right after PG&E, and I -- I am proud to say that we committed to rewrite every single module, 77 modules in the gas part, where my staff sits with the industry and we go through every single task

and talk about what is the right way of doing this, and then write the training program to actually make sure that the individuals that get trained and pass the test, know how to do it.

I can tell you that the first module that we released, it was simply going to a meter set and looking at a meter set, and Jeff, knowing what's wrong with it. It is corroding? Is it upside down? Cars hit it? It's still not leaking? I mean, simple stuff.

On the average, 30 percent of the industry employees, both contractor and the gas company employees failed those tests, 30 percent, 12 years after the OQ was passed.

The good news is that again, our industry in Virginia and I know in some other states are picking up the Virginia enhanced OQ program. I'm selling it for a cheap price, if anybody is interested.

A number of states are making part of their settlement with the gas companies to say that you have to adopt the Virginia OQ process,

but I'm proud to say that the individuals in the field now proudly have passed the test, and we're beginning to see good results.

Damage prevention. The highest priority for you, for us. It is when no one knows and someone is out there causing a major issue. We've had some major accidents in the recent year or so, that again, points to this being our highest priority.

States are very engaged in working with their industry, if you would, and their states to advance their laws and best practices.

Safety culture. As Jeff has heard me, and Ron has heard me, it's the glue that keeps everything together. If we can do something, if we can come up with some sort of potion that tells people to do the right thing when nobody is looking, we would not have half of these problems.

So, in short, NAPSR is aligned with PHMSA. We're partners. We're trying to help the industry in any way we can, to make sure again,

our pipelines in this country is as safe as it can be. I'll take any questions you have.

MR. WIESE: You're not going to let him going to get away with that, are you? I mean, he opened -- he had you for a few minutes. You have him.

MR. TAHAMTANI: I seriously would be happy to answer any questions you have. I know that a lot of you don't like the states. Let's just put that on the record. Not you.

It's a tough job to be in where you are going, on top of a ditch, and you look into the people, they're trying to do their work.

They're tired. It's raining. You name it, and now, you got the state of the PHMSA inspector standing up there and looking at you. It's not a good job to have.

But and then people walk away saying, "Well, I was doing it the right way, and you just told me that I wasn't doing it the right way," and all of that goes into the culture.

So, there has been enforcement, there

has been all sorts of other issues that I'm sure you faced. I'll be happy to answer any questions or have Mr. Robert Miller help me answer any questions you have, with respect to NAPSR, NARUC. I shouldn't speak on behalf of NARUC, or the states priority, if you will, in terms of going forward.

Like I said, we're committed to work with PHMSA and with the industry to achieve our common goal. I believe no industry wants to have a major accident like PG&E or others. It changes everything for all of us. He's got to have more rules. Congress pushes on him and the rest of us, "Why aren't you doing the right thing," and so, it is not about just coming up with rules. It's about doing the right thing without the rules.

If we did the right thing, I say that, the industry did the right thing, we wouldn't need rules.

So, with that, let's have some tough questions.

MR. McCLAIN: My card fell off when I

tried to stand it up, Massoud.

MR. TAHAMTANI: All right, Ron.

MR. McCLAIN: Well, first, I
appreciate your kind words, and of course, there
was a large committee collaborating to get to the
RP 1173, of which you were a big leader in that
process, and more on that tomorrow, we'll talk
about it.

But I think you're right on with safety culture, and how many accidents are there where people say, "Well, if I had known, I would have done something," and you know, from the initiatives that Michele spoke of and Chad and Andy, and yourself, you know, better technology, better data integration, more participation with top management.

I mean, it's not just a function you relegate to an IMP team. Really, the top management of the company has to know and care and have processes to regularly update.

But I think at the heart of what you were talking about, in a safety culture, it's

hard to define, but you know it when you see it, and what happens in that case is, everyone is engaged. I believe there is a collaboration between operator and regulator, to work toward, you know, continuous improvement.

so, we'll certainly talk about the RP a little bit more tomorrow, and I believe, find out how industry makes the commitment, so that the regulator can be confident that there is the appropriate sense of urgency and the appropriate enthusiasm, you know, to move the ball forward on those things, and then you know, your touch on damage prevention.

You know, we both serve on the Board of Directors, along with some others here for the common ground alliance, and it is one of the biggest threats we find. In some ways, we get used to it.

You know, we talk about crack

detection and the RP and other things, but you

know, these issues around exemptions, poorly

understood exemptions, lack of enforcement, I

mean, those are things that I think industry and 1 2 regulator come very closely aligned on, if we can figure out how to get through those things. 3 MR. TAHAMTANI: Thank you, Ron. 4 other comments? 5 MR. KUPREWICZ: Rick Kuprewicz. More 6 7 of a comment issue, representing the public on many investigations. 8 9 I think the public is looking for not 10 a turf battle between state and Federal, not that 11 you're implying that. But where it becomes obvious, you talk 12 13 about loss of credibility, both parties lose. What we want to see is a partnership, one 14 15 observation that's fundamental core to the 16 integrity management applications. If you go back and look at GAO reports 17 18 and NTSB, the evolution many of you have worked 19 on in this room, in the development of both

transmission, liquid and gas, as well as DIMP

distribution, you don't have enough people. You

never will have enough people. You don't have

20

21

enough resources. You'll never have enough money.

You must work together. If you don't work together or get the appearance you're not working together, if you're in a combat, you're going to lose the credibility of the public, and that's just not -- and time and time again, that has shown its case to be true.

Where DIMP is working, and by the way, there are many states where it is working quite effectively, you can bet there is some sort of cooperative, not love-in, but communication working towards a positive goal, and I'd like to credit people in PHMSA, in terms of the development.

Many of you in the room went through that painful process over many years. Not a perfect regulation, but in those states where it's working effectively, it's because rather than fight, the parties are trying to work on what's the best solution that is codifying some of the fundamental principles of the regulation.

So, with that, I'll just let go. 1 2 MR. TAHAMTANI: Thank you. Susan? Thank you, Massoud. 3 MS. FLECK: Sue Fleck, National Grid. 4 How do you work with your economic 5 regulators to get them onboard with the going 6 7 above compliance, because we get a lot of pushback in rate cases. I'm sure others in the room 8 9 are in the same situation, when you're asking for 10 more money to do the right thing and to go above 11 and beyond maybe the letter of the code. 12 A lot of time, you get some 13 significant push-back during rate making proceedings where, you know, the opposite, you 14 15 know, the pull is to try to keep rates as low as 16 possible. So, it's a delicate balance. I think 17 18 we're all trying to find the right place, but I 19 just want to know in Virginia, how do you manage 20 that? MR. TAHAMTANI: Well, in Virginia we 21

have two laws. One is called SAVE, which is

basically to give the gas companies a right above their main rates, their base rates, to recover costs much faster, to replace old pipes.

We're replacing bare steel and cast iron at a very, very high rate, within a few years, five or six years, we'll be completely -- we won't have anymore.

Now, City of Richmond will have some, but that falls under Jeff's jurisdiction. I simply inspect them. Let that be on the record.

So, we also have another law which deals with DIMP. As you look at your DIMP plan and you come up with new risks, we wanted to make sure that our industry can come to us and say, "Hey, I found these risks that are not in my rate structure, and I want to address them much faster."

So, they can come in there and ask for another rider on top of the SAVE rider. These are limited, two or three year type issues. My division gets involved, presenting testimony on safety issues in all these cases, and we align

ourselves with the gas company that's before the Commission. We make sure that we're on the same page, if you will, and I go in there and talk about the AA's and everything else, and we support the industry to get the money they need, to address not only the old stuff, but also to continue to address the risks based on their DIMP.

A number of other states have those laws, and I know I've seen a number of others from PHMSA that is encouraging commissions to have those type of rate structure. AG has been encouraging the states to pass such laws to do that. That is the right thing to do and I'm glad that we have that in Virginia.

MR. WIESE: I think there is something like 30 states that have --

MR. TAHAMTANI: Yes, I believe so, about 30 states have some form of rate recovery mechanism for again, getting rid of the old pipelines and also, dealing with hopefully, additional 38 states.

ADMINISTRATOR DOMINGUEZ: How can we encourage that more with other states?

MR. TAHAMTANI: Well, I think you've done everything you can. I mean, you've sent those letters. It's up to either the commission or the industry within that state, to pursue legislation.

The commissions can only do what the laws of the states authorize them to do. So, it requires legislation, and again, the industry needs to go forward, talk to legislators, pass laws that allows the commission to provide those types of rate mechanisms to do this. Jeff?

MR. WIESE: I'll swing at that a little bit, because I'd be interested in feedback from folks here.

There are groups who are nontraditional stakeholders that we have begun to
engage with, the National Conference of State
Legislators, for example, the Council and State
Governments, you know, love to go to National
Governor's Association.

But I think the Secretary actually has done those, you know, and has come to NARUC. The department has weighed in heavily on the need to accelerate the removal and replacement of riskier pipe.

We've partnered actually with some companies who had really aggressive proposals to do that. So, I think there is more of that, that is needed, and I think we need to engage some of these.

NASUCA is an example, if you're in the distribution world, you know who I'm talking about. They are the state utility consumer advocates, and I sit in these meetings with these people who basically say, "Not a penny more."

You know, "Not a penny more," and that flies in the face of what I think we all know needs to be done, to step up the game in safety.

You know, I think it has to be moderated. So, you know, I'm not the one who advocates, just open the doors to anything the company wants, but you know, somebody needs --

with checks and balances, needs to go after these remaining states.

You know, Jon and others with NARUC, I think we can partner with them, you know, to sort of accelerate this, but I think there is more that needs to be done, and would certainly welcome thoughts and ideas, you know, whether it's now or in the future, I think particularly, to the Administrator on how she and the Secretary and others, maybe with a little more clout than I have, I can barely get through my partner here I crime, he'll be shutting me off in about 10 seconds, I'm sure. So, any rate, just a thought for you.

MR. TAHAMTANI: Thank you very much.
Your card has been up for a while.

MS. CAMPBELL: That's okay. Thank
you. First of all, it's great to hear you say
that code is the minimum and the floor, not the
expectation. I am a firm believer, as Jeff knows,
that we need to be doing the right thing.

I would suggest, and I think it's

consistent with what you're hearing here, that
the safety culture and education needs to be
beyond the industry. We all get it, or at least
most of us do.

You know, Jeff, your comments about the consumer groups, in some of the staff, we've been blessed with people who will listen to us and have been relatively supportive.

I do have writers in key areas, but I will tell you that it's an incredible battle, and I think it's a cultural and an educational issue for people outside of the immediate industry,

NAPSR and NARUC, to move forward, and to change the conversation.

It's really not whether or not we need to do the work. It's more about the time period we need to do it over, and how do we make that right balance for our customers, and it takes a lot of our energy for our team, frankly.

We keep visiting the same conversation around why do you need to do the work, and I don't know, you know, one of the reason why I

like the peer-to-peer review program, the AGA
people in the room are going to cringe, I do
think it helps us move towards, here is industry
best practices, and frankly, I think my
commissions ought to be saying, "What are best
practices and why aren't you there," and we ought
to be talking about how we get there over time.

But the conversation has morphed over the last few years, and it's certainly a very interesting conversation right now, and I do think it's cultural for some of those folks as well.

MR. TAHAMTANI: Thank you. Chad?

MR. ZAMARIN: Thank you. Chad Zamarin with Cheniere Energy, and just to follow up on the -- on the comments around how to deal with the issue of funding safety investments, and it is -- it's not something that we talk about a lot, but it is one of the fundamental challenges that we have, not just on the state side, but on the Federal side.

You know, our vehicle for recovery of

costs is not always efficient and is not always consistent across a diverse set of states.

I would say that Jeff is absolutely right. You know, we dealt with this at Columbia Gas, where we operated across 14 different Shining a spot light on the states where states. they don't have efficient cost recovery mechanisms is powerful, and I think even for the Administrator, there are some very good presentations that show which states do have efficient cost recovery mechanisms, some that don't. You know, the Secretary having those, that -- just that pressure of shining a spot light on those states that are actively supporting safety investments through efficient cost recovery mechanisms, I think is a very powerful tool, and I think that's something that is pretty easy to do.

So, I would just encourage all of us to keep those numbers handy. You know, 38 out of 50 states and you know, there are some presentations that kind of rank the quality of

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

those programs in different states, and I've 1 2 seen, I think over the last five years, that has made a difference. 3 We've seen states, and as 4 commissioners have turned over and new people 5 have come to the table, we've seen them move and 6 7 want to be moving towards that better in class utility commission. Thanks. 8 9 MR. TAHAMTANI: Thank you, Chad. 10 Jeff, did you have a question? 11 MR. WIESE: Well, do you want to -you know, so far, we've spent a lot of time 12 13 talking about states. But I would ask you to maybe put you guys on the spot. What about FERC? 14 15 I mean, so far, we've only talked 16 about the states and what the states can do, and there is plenty that states can do. So, that 17 18 will keep us busy for a while. 19 But I'm just curious about your 20 thoughts about FERC. That's the other rate making entity in the room. 21 22 MR. ZAMARIN: Yes, I think it's -- and Andy and others can also chime in.

The transmission industry is a bit unique, as well. Important to remember that though we do have a cost recovery mechanism through a rate case proceeding, it's typically not efficient and it's often times, not available to operators because we're in a competitive environment, and you know, we can't always -- we don't necessarily have captive customers where rate increases can be passed on to our customers.

So, the challenge that the interstates have is how do you invest and increase investment in a competitive environment where not only do you have the inefficiency of the rate case mechanism, but even if you had the ability to get a rate increase passed, you may not be able to use that because you're competing and setting your rates in a competitive marketplace.

So, it's a unique model. It's something that is a challenge. We have been working, you know, as an industry to educate FERC on the types of investments that we think make

sense for more efficient -- for a more efficient process.

A rate case proceeding is a very contentious model. It's effectively, a litigation, and when you're in a litigation with your customers, it's not a good place to be.

so, we try to avoid that, that vehicle, but it is -- it continues to be a challenge, and Andy may have other thoughts, but I would say that we're not there yet on the Federal side, on figuring out how to make sure there is a level playing field that we can continue to be aggressive in investing in these systems, but know that there is a predictable, efficient recovery mechanism and know that we're competing on a level playing field in a very competitive marketplace.

MR. TAHAMTANI: Thank you, Chad.
We're about to take a break. Now, if we go
passed the break time, you get a shorter break.
Is that a deal? All right, go ahead.

MS. JOY: Michele Joy, on behalf of

the oil industry.

Just wanted to echo many of the comments that Chad said regarding regulation at the FERC.

However, with respect to the oil pipeline industry, there is a mechanism that the FERC engages in, because there is different methods of regulation, and one of the primary ones that applies to the oil pipeline industry is indexation of rates.

Every five years, the FERC looks back at what has been the cost experience of the industry over the prior five years, and then determines what should be the index for the coming five years.

We are in the process of that review at the moment, and there actually have been a number of challenges, as to whether or not the ongoing costs that have been reflected by the industry, with respect to safety spent, are likely to continue into the future.

So, one of the things that we would

1	ask if and hopefully, the Administrator would
2	be amenable to is, in the past, DOT has weighed
3	in on that rule making and has actually put in
4	comments with respect to what the safety program
5	is and the nature of investments that have been
6	going ongoing by the industry and in part,
7	supportive honestly, of what the industry spent
8	has been and that the numbers that are reflected
9	in the indexation analysis, and we would
10	certainly welcome and encourage the
11	administration to file comments in this
12	proceeding, as well.
13	ADMINISTRATOR DOMINGUEZ: Thank you.
14	We'll certainly take a look at it.
15	MR. TAHAMTANI: All right, go ahead.
16	You have some comments.
17	MR. QUACKENBUSH: Yes, I am John
18	Quackenbush from Michigan Public Service
19	Commission.
20	I agree with a lot of what was said,
21	so I won't repeat it, but I wanted to make one
22	point. I didn't hear anyone talk about, in

response to your question, about how can we get more states onboard with focusing on this?

One is to focus on the total customer bill that customers are paying, not necessarily on rates, because when we have rate cases, there is interveners that participate and like Jeff said, there tends to be a focus on not one penny more. We don't want to pay another penny for anything.

But when you look at the total gas customers bill, and how far down the commodity cost has come, there is a lot of head room to be able to pay for accelerated safety programs, and that's one of the things, in Michigan, we've done several rounds of that, and we're doing more -- more is on our plate this year.

But when you look at that, that seems to be something that kind of gets lost in some of the analysis, is that there is a lot of head room on the rate and bill side.

MR. TAHAMTANI: Thank you. Jeff?
MR. WIESE: Well, thanks, and at the

risk of making your break shorter, I just have a couple of closing remarks for this session.

One was to Administrator Dominguez and appreciate, first of all, you making time. I know you move more meetings, but I hope you'll stay engaged with this committee. The more you engage with the committee, I think the more you'll grow to appreciate it.

I think I've told her the story that
I've told many of you, that when I first
inherited the committee, I thought, what a pain,
you know, just trying to get ready and go to all
the meetings, but it's even more of a pain to
Cheryl probably.

But that being said, and I know that many of you know this. I came -- I evolved my view on it to say that I think that it's essential to how we do business, because through this committee, we -- what you haven't witnesses is voting, which is quite interesting, and I'd just say, raise your hand if you remember a number of times that we counted votes and said,

"You won. You lost."

I don't -- I personally only remember one, and since Mike Comstock is not here, I can take a shot at it. He voted against something and he came to me later and said he apologized because he was frankly, okay with it.

So, I think this group managed to work itself and votes out to a place of consensus, which most people understand. I think that discussion has educated a lot of people to the -- you know, countervailing points of view.

So, I think in the long run, we've gone ahead with marginal litigation against the rule makings that we've done. So, I appreciate your coming over today and listening to people.

We structured this session, and out of fairness to the other members here who really didn't get to talk to you, over time you'll hear from all of them. So, this was just a sampling of what people are doing.

I think you'll see, there is a fairly robust set of activities. I just wanted to agree

with a couple of things and then turn it over.

One was, you know, I inherited the integrity management rules. I didn't write them. I inherited them and the oversight of those rules. I'll be the first one to tell you, and I think I have consistently, that IMP is not perfect. IMP is good though, and the framework is solid. It needs to be flushed out. It needs to be followed, and that some of the key tenants, like data integration, I think, you know, maybe it's been natural, the evolution.

As people ran one pig and they were looking at it, then they would run another pig later and they're not doing enough data integration. So, I was really pleased to hear Michele talk about that in particular.

But that being said, I think the evolution going forward, which we'll talk a lot about tomorrow, is about safety management systems and safety culture. Honestly, spent the passed two years of my life with a couple of people in this room, you know, including Linda,

you know, Ron, Robert was in there, Massoud. I know I'm forgetting others, forgive me.

But I think that we have come to see
that that's clearly the future and integrity
management is part of that. It's not separate.
It's part of it, right. But the other parts need
to move and evolve, as well.

So, I'm glad to hear, and you'll be hearing tomorrow, what we're doing as a collective, to collaborate over a period of time and help flush out a mature SMS, and then I'd particularly liked Chad's metaphor about shining a flashlight on things. I think that is really important, whether it's rates, or you know, some of us, have a real passion for damage prevention. That's why we ask questions about it, that's why we try to shine a light on it.

We have -- how many Board members do we have here? We have a number of them. Tim is there. Ron is there. You're there. I'm there. Rick is there. So, we have a lot of commitment to damage prevention here, and I think most of

the stakeholders here realize what a threat that is.

There is a lot of work to be done at a state level. Bob Kipp will be here tomorrow, along with Sam Hall. You'll hear a lot more about what we're doing on damage prevention, particularly PHMSA's thankful that we got the final rule out, thank God, you know, on damage prevention, and we intend to implement that rule.

So, that being said, I'd just close by saying there are four members who could not be here today. Brian Salerno, who is with BSEE, will be here tomorrow. Bill Kipp from Common Ground Alliance will be here tomorrow. Mark Brownstein with Environmental Defense Fund will be here tomorrow. He had a family emergency that came up.

The only person who is currently on the roster who can't be here this day, or the two days at all is Don Stursma. He represents NAPSR and the State of Iowa.

So, it's a really good group of

people. We want to thank you for your time and thank you for coming over. I don't know if there is any closing comments you have.

ADMINISTRATOR DOMINGUEZ: I just want to say thank you all very much. I appreciate the information that each of your shared, and I look forward to hearing from all the members of the Hopefully, have a little bit of time committee. at the break, to say hello to those of you that I didn't get a chance to say hello to, when I came in, but again, look forward to working with all of your moving forward, and I can't overemphasize the importance that I see of the Advisory Committee process and how we're working together and how we'll move forward, really on this safety management system and safety management culture. I really do believe that that is the most important thing that we can work toward moving our industry, moving the regulatory entity, as well as all of our partners, state and otherwise, in a very progressive direction. thank you, all.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

Thank you all very much. MR. WIESE: 1 2 About 15 minutes. So, 3:00 p.m., please be back 3 in your seats. (Whereupon, the above-entitled matter 4 went off the record at 2:47 p.m. and resumed at 5 3:07 p.m.) 6 7 MR. TAHAMTANI: All right, thank you for being so prompt in coming back, although it's 8 9 about 3:06 p.m., but nobody noticed. 10 We're on Agenda Item No. 3. At this 11 point, we're going to receive a briefing from the Office of Pipeline Safety, and Jeff, Alan and 12 13 Linda. Jeff, I assume you're go first? I'm going to start it off, 14 MR. WIESE: 15 because I know the least and I can talk at the 16 highest level, and then we can have people who actually know something come behind me and 17 18 correct me. 19 Well, any rate, thank you all again 20 for being here. I do appreciate it very much. apologize that when our preparation is less than 21

it should be, want to try to commit to you to get

information to you sooner. I'll just tell you, it's not for lack of working. It's just trying to keep everything on the table.

So, I think that most of you have known us for a long time and you know what I'm going to say, is largely true. I'm saying this for those who might be new here.

There is a lot going on in our world. There always is in the pipeline world. There always has been. You know, as long as I've been associated with this group, 16+ years now, I was just thinking of the people that I knew at the very beginning, between Andy and Massoud and others, who have stuck it out. I'm trying to figure out what we were thinking about.

But there is always something going on in our world. It's up and down world. It's driven by the wrong things. It's driven by failures instead of successes. We shine a light on failures and not successes, but I guess that as SMS would teach us, we need to learn from those things, try to figure out how to be better

and go forward.

So, I did want to hear about other things and priorities that people are doing. I appreciate your members taking time to kind of just touch on that stuff with the Administrator, so, she understands better, our world that we work in. So, thank you very much for that.

We're going -- you're going to hear in just a couple of minutes, about mandates and recommendations and rule making, but I did want you to know, despite, you know, popular press to the contrary, the Agency is committed and has been committed. I think most of the members know that, to getting all of the rule making out.

You know, I realize that we won't necessarily agree on exact specifics in each rule making when it comes out, and that's okay.

That's part of this process, right.

We propose. We discuss. You comment, you know, we eventually bring it back to this committee and we go forward.

I just wanted to tell you that that

_

5

commitment to getting this stuff done has never waiver for one minute, regardless of what you read.

We have fought it about as hard as we can, and I'm very thankful to the new

Administrator who came in, and I think she talked to the Secretary, and the Administrator and the Secretary have talked to others, you know, involved in the review process, and we kicked out three things, including something near and dear to many of our hearts, the final rule on damage prevention. That one, we're going to hear a little bit about tomorrow from Bob Kipp and Sam Hall.

But anyway, I just wanted to reassure you that we're committed to clearing all mandates and recommendations that are before us, as we were in the last round.

I will say that the mandates and recommendations that we got, that's one of the things I've learned the hard way, is that there's no cost benefit done on those things before

they're handed to us. You know, they're just given to us and said, "Do it."

But there is a framework that I think

Jon and others have been -- Cam, have been, you

know, laboring mightily, you know, within this

framework to try to move and advance these

things.

So, did want to say that, but also wanted to make the case that while this committee does talk a lot about rule making, our work, and most of you know that, is about way more than rule making.

As my friend Massoud says, that is the point of entry. Really shouldn't even be talking about that very much. That's kind of the floor.

Let's talk about where we can go, you know, and now where we have to be. You know, it's where we can go, and I agree with a lot of the comments about the need to collaborate to get there.

So, as we go forward, I will tell you that I think the collaboration is going to offer a lot of value. I'm all for transparent

collaboration. Let's not collaborate in ways that people think we're sneaking around. Anybody wants to join in the collaboration is welcome to.

But I do think we have to get together and knock heads for a while, in order to figure out the best path forward, and forgive me, I mean, Ron and Massoud and Robert are sick of hearing it, but for the rest of you, I think the SMS story is a really good example of that.

We'll get into it in detail tomorrow, but as we've said to you before, and I meant that, that when we started, I was unsure that we would finish, but when we were finished, I was sure that pretty much any member of that team would have given the same presentation, and delivered it the same way.

So, that's a real testament, you know, to the power of collaboration. We had state regulators on there, as well as Federal regulators. It wasn't just industry. It was all sides of the industry. So, a real testament to the power of collaboration.

I will tell you that we have significant technical issues ahead of us. I know everybody is onboard with our integrity verification process. I was just waiting for that. You know, we have issues relating to liquified natural gas, LNG and kind of the -- trying to get our rules current there, the role of hydrotesting.

But I will tell you that we'll work our way through those, whether it's in a committee structure, these -- you know, I really look forward to the midstream update, because I do think it's a good example of how we can partner and collaborate and do better for the public, than just waste our time in Court, right.

Other thing I wanted to comment on was to tell you that in addition to writing rules and taking care of everyone's recommendations, we have implementation galore. We're still working on integrated inspections, and that's something I know many of the members know about, some of the state partners know about, but others don't.

So, maybe at some point, we should talk about integrated inspection, more of why did we pursue that path?

The damage prevention final rule and beyond, meaning where are we going to focus our time and effort, in order to make a real difference in damage prevention? You know, we can't do the whole U.S. at one time.

I think that's the shine a light theory. You know, let's figure out the states that we need to focus on and then let's do it, you know, let's help these people move beyond.

know, I think Carl talked about that a little bit. But there are lot of people in this room and Carl, who have been involved with this. We've wrestled with performance metrics for a long time. We've committed to making that effort public, as well as the performance of individual operators.

The midstream issues. There is implementation there. We have R&D program award

coming really soon and some exciting stuff, and
our CAAP program. You'll hear more from Ken Lee
about that tomorrow.

A lot of work with our state partners, you know, in making improvements in our overall structure, working together, expanding, strengthening states and I think we're committed that.

You know, one of the biggest challenges we have honestly is -- relates to organizational issues. The Congress unexpectedly, despite the fact that we had been asking for several years and assuming we wouldn't get it, unexpectedly gave PHMSA a significant bump in 2015, in our pipeline safety program.

They only funded half of the position so far, but I'm telling you, it's quite a challenge to try to recruit those people. We're trying to take advantage as we can, of the downturn in the economy, pitching places where there are people being laid off. We're talking to companies who have technically skilled talent

out there, and trying to tell them we have opportunities, if they want to come.

So, I'm just telling you, we're hiring. If you know people who need to look for work, our regional offices, particularly in D.C., where it seems go figure, it's almost impossible to hire anyone in D.C.

So, I wanted to -- I won't talk about SMS here. But we'll talk a lot about it more, but there's a lot of implementation over a number of years that we have to do there.

The last things I wanted to say is that we will hear a lot more, and I'm trying to use this forum to talk to you more about our engagements in larger policy issues.

National Energy Policy is one. You know, we've known Paula Gant for a long time, and we got to her in a weak moment, like this, when she wasn't sitting there, and recruited her to join the committee.

I think Paula will bring a lot to this committee. She'll be talking to you about their

_ ||

QER exercise, which in think if you're not familiar about it, you'll find it quite fascinating.

We've been talking a lot with the various people, including the environmental defense fund, who we invited to join the committee, to talk about methane emission reduction. That is going to be a facet of our life going forward.

We need to figure out how are we playing in that arena, how do we contribute. You know, are there things that -- I think there are a lot of things that we do that contribute, that we're just not taking credit for, you know, to be honest with you.

Infrastructure modernization and reinvestment, we've talked a lot about that, but I think that's part of the shine the light again, trying to figure out how we can talk to states that are sort of sitting out on the edge about coming in with more innovative recovery structures.

Then the last thing I wanted to do before turning it over to Alan and Linda, was to say, you know, I think much of what we do depends on people. We, as organizations, can do a better job of employing those people and using them to achieve our goals and objectives. Culture is one of the biggest things we have to focus on.

But the thing that I think we haven't focused on collectively, I know individually we do things, is on workforce recruitment and development.

Now, I know AGA for example, I think the liquid industry, for example -- I don't -- INGA, maybe others, are doing things, but we haven't collectively gotten together and say, "How do we prepare the next generation, you know, to come into the workforce and contribute?"

You know, if you look at our enterprise in its totality, there are lot of different job opportunities out here for kids, you know, from technical to, you know, degreed, you know, you name it.

But somehow or other, we need to get together and strengthen that message and get out to universities, and I would just tell you, I think that you can count on the department to partner with you, if you're willing.

The Secretary in particular has announced his Ladders of Opportunity. He's trying to find ways to bring kids into the workforce, partnering with different academic institutions. I think as you listen to our CAAP program tomorrow about partnering with academic institutions on research, you know, it was critical to us.

One of our performance metrics is how many graduate and post grad students are employed on that grant? You know, we're interesting in developing talent and attracting them to work in our arena.

So, any rate, I just wanted to close my remarks by saying I think that is such an opportunity for us to collaborate collectively across the enterprise and do sort of the next

generation a favor, by showing a clean path into 1 2 the, you know, workforce, whether it's with you, or with us, the states, whoever. 3 So, I think with that, with your 4 permission, I will stop and I would certainly --5 I'm not taking any questions from Linda, so, but 6 7 I would certainly turn it over to her. MS. DAUGHERTY: I have just a few 8 9 I want to share with everybody, some real exciting news. 10 11 I'm Linda Daugherty, for the reporter. A few things that we're doing 12 13 internally that I am -- I'm scared and excited and thrilled about. We're on a cusp of a few 14 15 major changes. 16 Over the last couple of years, as we've worked with the committee on 1173, I think 17 18 we've all had a learning curve on values of the 19 concepts. It's a steep learning curve for me. 20 So, we are, in recognition of what's good for the goose is good for the gander, we'll 21 telling the industry they need to adopt, you 22

know, these concepts and implement them, that we are also trying to do that internally.

So, it's not a straight fit, but it will work, and so, Jeff and Alan and I have a number of activities underway to educate our own folks about the concepts of SMS and safety culture, but also, ways of socializing them into our own organization, such that they become part of the way we do business.

So, that's an exciting time. We'll see how that proves out. As with everybody else, it's going to take time to go to full implementation, but I'm sure you all will hold us accountable. So, that's one item.

The other item has to do with a bit a reorganization in field ops. Not a big change.

Not a big C, but a little c.

We are creating what we're calling the Accident Investigation Division. That is going to take our accident investigators and move them into a separate group, so they can focus on lessons learned.

I've asked Wayne Lemoi, some of you may know him. He has been our southern region director, to move into a new position as the national safety coordinator, and his role is to

look for lessons learned.

I was very happy to hear what you said, Cheryl, about you know, gathering information. You know, you've got -- and I think also, Craig mentioned that, as well, how we need to learn from lessons in the past. Michele, maybe you touched on that, as well, how we gather information and don't lose it from generation to generation, how we share that information, and I think we can improve.

So, we've got a bunch of different things we've put in play, to hopefully help us do a better job of sharing lessons learned, internally and externally. Alan?

MR. MAYBERRY: Yes, thanks, Linda. As you probably know, we're kind of -- Office of Pipeline Safety is really divided into two major groups, and Linda and I kind of are partners in

crime, Linda covering the field operation side of our field -- our region offices and then I cover what we call the policy and program side.

There's a little bit of an education, for those of you who haven't been here as long, or are newer to the committee.

But certainly on the -- Linda has probably the larger number of people. On my side, it's a fairly diverse portfolio and Jeff really did a good job of highlighting a lot of the major things that we're doing. I thought I'd just touch on a few of those.

But you know, it's that portfolio that covers the -- our training qualifications group in Oklahoma City, our engineering group, which is like our corporate engineering. Many of you have those in your respective companies or in your agencies.

Program development and outreach was

-- which is a big focus, has a big focus in

outreach, especially here lately, with all the

activities around damage prevention and 811, and

in fact, we just celebrated a -- you know, 811 day at the nationals game, and appreciate the involvement of many stakeholders to help us celebrate that and bring -- shed light on that, as well as many of the initiatives that you have within your respective companies or within your respective groups to shine light on that major issue, relative to pipeline safety.

Then of course, the standards and rule making side of the house.

You know, and Massoud, I appreciate your comments. It's not all about, you know, the regulations we put out, the regulator. It's a partnership really, and that doesn't just involve the regulator. It involves the operator. It involves the public as well, to shed light on issues and to -- you know, to make sure that their voice is heard, that we all collectively understand.

But I assure you, you know, as far as our participation and our role in the pipeline safety arena, we are doing everything we can to

ensure that the regulations are relevant, ensure that the regulations put the right resources where they need to really move the safety ball forward.

So, for that, under John Gale's leadership and standards and rule making, you know, I'm very grateful for all the work that's been done there, that we'll be hearing more about, especially in the next break. You know, John and I are up to talk a little bit about rule making and then where we stand on mandates and recommendations.

Then lastly, I was going to mention state programs. Jeff mentioned that, as well.

That had a heavy focus, certainly in the last few years. We had an IG audit on that. We had success in closing the recommendations out of that audit. Very proud of that.

But beyond our -- you know, what are

-- what we would call taking care of business,

you know, which a lot of people know is mandates,

recommendations, rule makings and the like, you

know, our agenda is just so much more than that, and Marie Therese had mentioned it earlier, a few things that we have going on that are coming up, that really illustrate that we are doing more than just working on mandates. Our program is just much richer that.

You know, as far as moving forward on our understanding of documentation of pipeline, and ensuring that they're fit for service. We have the hazardous liquid IVP public meeting coming up on Thursday. So, I'm looking forward to a good dialogue and you know, really learning more about some of the issues, as we really try to advance the understanding of assets that are in the ground, and improving safety.

That really follows on our gas IVP initiative that we had, that we had -- that we also had a public meeting on. So, similarly, we're doing it with the liquid side.

You know, then on the -- later in September, we'll have a two day, or essentially a day in a half workshop on risk modeling.

You know, we had a workshop in 2011 on risk assessments, and that was a workshop that kind of -- this is really a sequel to that workshop, and this is one to say, what can we do better in risk modeling to move beyond simplistic models and better understand where we need to be on modeling, and Michele, I think, you know, many of your comments -- and I was glad to hear related to, you know, detection and data integration, that's where things -- very important to that effort, certainly to, you know, make sure we don't miss things.

I know, you know, it's -- you know, we want to see in that workshop, what we can learn and just come out of it maybe with -- we're looking to better inform how operators use risk models and maybe ways to improve risk models, to really better take into account, interactive threats, in particular, and then just guidance on which models to use and that sort of thing.

By the way, that will also -- well, you know, that's self-initiating effort. You

know, it just turns out that it will fall in place nicely to deal with some of the NTSB recommendations that came out of the IM report, with things like interactive threats or risk models and that sort of thing.

So, that's a day and a half workshop,
September 9th and 10th, and then after that,
actually on the last half day of the second day,
we will have a workshop on NPMS data gathering,
and that will -- we'll actually be announcing
that in the Federal Register this Friday. It's
actually a notification of a 60 day notice for
information collection. It's a revised 60 day
notice, if you will, and then we'll have a public
meeting to further, you know, discuss that and
see where we need to go out of that.

That will also be responsive, you know, it's just in addition to an NTSB recommendation that came later out of the IM report as well, related to accuracy of, you know, mapping information that is sent to us.

Then lastly, well, you're going to

hear later. I think Jeff covered this, R&D, Ken will be providing a -- you know, an update on that. We are soon to award some R&D funds, from our mainstream R&D program, but also from our CAAP program, that we're very proud of.

But I wanted to end on employee training and development.

As many of you know, or some of you know, we have a state-of-the-art training facility in Oklahoma City. It's where we train the state and Federal inspectors. We're looking to really -- as we've moved into the facility, to really grow the program, because we are hiring more people. We're also looking to improve the training that we do provide to our inspectors, both to make sure it's relevant and you know, up to date.

We're developing new curriculum. We are getting ready to have an audit curriculum, that we're piloting, and that curriculum is designed to train our inspectors on safety management systems. It will really be a training

class on 1173 and just how do you, as operators, implement these types of programs, how do you inspect those?

So, that will be -- we have a couple classes there, coming up.

Additionally, as we hire these 100 -well, we're hoping 109 or I guess about 83 in the
field, how do we train them, and plus the state
inspectors, as well. How do we get them trained
up efficiently?

So, we're looking at developing a boot camp protocol, or a boot camp curriculum for those new inspectors coming onboard, just to make them useable and give them they tools they need, you know, as quickly as we can after they come onboard. So, we're looking forward to that, as well.

You know, let me give one bonus topic.

It will be covered at some point over the next couple of days, but another area relevant, very relevant on our agenda is related to LNG, certainly with -- you know, everyone has heard,

especially in the media, about the export, the rush to export LNG.

We've certainly had some growing pains with the volume of work and working with FERC, and I think we've made a lot of progress. We work well with FERC, to make sure that these applications are processed in a timely manner.

As we do that, we're also seeing an advent of small and mid-sized or smaller scale LNG facilities. So, we're looking at policy changes that are needed for those, and those are applications that really aren't conducive to our current regulation 193, and because of that, we're also developing rule making, in the early stages of developing rule making on Part 193.

Again, here is a way that we need to be relevant to the current technology. It's been some time since 193 was robustly updated. You know, a lot has changed since the days of really, the LNG plants were mainly peach haven facilities. Now, you know, they're large scale export facilities, and then there are, you know,

small scale facilities. 1 2 So, we're going to take a look at So, that will be -- you can look forward 3 that. to that, as we go forward. 4 That's kind of it in a nutshell. I'd 5 be glad to -- are we open for questions? 6 7 MR. TAHAMTANI: What I'd like to do, Alan, if you don't mind, to go ahead --8 9 MR. MAYBERRY: I don't mind. 10 MR. TAHAMTANI: -- and go into your 11 new subject, Item No. 4, you and John, and then we'll open up for questions. 12 MR. MAYBERRY: Okay, sure. 13 14 MR. TAHAMTANI: John, you want to go 15 first? 16 MR. WIESE: I'd just say to cue it up a little bit, I thought -- to make sure that we 17 18 use your time well and we get there, you really 19 sort of -- apologies. You're sort of getting the 20 OPS show this afternoon, and so, we can combine that quick little update that we provided you on 21

topics.

There is a lot of meaty stuff in 1 2 I mean, if you haven't focused at all on small scale liquefaction on LNG, that's a 3 fascinating topic. Ken will talk about it 4 Fascinating. 5 tomorrow. But that being said, if you'll indulge 6 7 use, we can -- between what we just said to you and this update here, we'll kind of let you know 8 9 what's on our plate, and so, I think it gives you 10 a better opportunity to ask us Q&A and all of 11 So, I'll turn it back to you, sir. that. 12 MR. GALE: As Cam's giving the 13 presentation right away, got a little bit of a 14 curve ball there, so, we're getting it up to 15 speed. 16 MR. TAHAMTANI: I want you to know that the curve ball came from your boss. 17 18 MR. GALE: I figured that one. 19 so I appreciate that. You know, I'm Bryce 20 Harper. I can hit it. So, at the last meeting, you know, I 21 22 made a comment about, you know, being frustrated.

We've got some rules out, and sometimes you got to be careful what you ask for.

In the last six months, we've published three final rules. We've published a standards update rule. We publish a rule -- a final rule on excavation damage, as Jeff has mentioned. We published a final rule on miscellaneous amendments, which dealt with a variety of topics.

We also published three NPRM's dealing with issues such as excess flow valves, the rule making title operator qualifications, but that also dealt with incident reporting requirements, cost recovery issues and the like.

We also published an NPRM on plastic pipe, and as -- and even though we got those rules out, we are extremely -- Ms. Dominguez mentioned, aggressively working on, we are extremely aggressively working on getting the hazardous liquid and the gas transmission rule makings on the street.

Actually, it's been -- quite

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

surprising that Cameron and myself haven't been 1 2 pulled out of this meeting, it's so actively being worked on. We've been at meetings with 3 both the General Counsel of the Department, the 4 head of OIRA on a regular basis right now, on 5 just trying to get these rule makings on the 6 7 street and begin the dialogue with both the hazardous liquid industry and the gas 8 9 transmission industry.

So, hopefully, you know, all that hard work is going to pay off soon. We can get some of the bigger rules on the street. We're also working aggressively on our valve rule. We're all set. Not yet?

Okay, on our valve rule, and also working hard lately on our NPMS changes, as Alan just recently mentioned.

Some of the challenges we're facing is -- it's pretty much the same story for us in a lot of ways on our rule making program, and that's on our cost benefit side.

Washington DC

Though we have mandates, we still have

10

11

12

13

14

15

16

17

18

19

20

21

to pass cost benefit analysis. We have executive orders, this is referred to as executive -- the common one is Executive Order 12866. There's another one, Executive Order 13563, which reaffirms the earlier executive order.

But basically, dictates to us that we have to follow good cost benefit processes. We have to use the best available techniques in developing our cost benefit processes, and basically, one of the things that 12866 does, it sets out the process that we're suppose to follow through the Office of Management and Budget, in getting their approval on what's called a significant or non-significant rule making action.

You know, those are the challenges to us. We're continuing to try to improve our processes, improve our data. I call it improving our benefit formula, so to speak.

You know, we've historically looked at things, you know, like property damages and fatalities and injuries and environmental

restoration charges, but we're trying to -- you know, we're looking at other things now.

We're looking at social cost of carbon, public opportunity costs and the like, to try to take -- to fully capture, what is the benefit to some of these changes.

You know, we have people -- you know, like INGA making commitments to get to zero incidents, and we're struggling to get some of these rules out. To me, that's a -- you know, that's a difference. We've got to figure out why is that difference happening. If they're making that commitment and making those changes, and we're struggling to get those rules out.

So, our challenge is to close that gap, so to speak, and we're hoping to get there.

What I'm going to do is give a very quick regulatory update, later in the week.

We're going to have -- or sorry, tomorrow. We're going to have more thorough presentations on our excess flow valve rule, our operator qualification rule, plastic pipe rule and

excavation damage.

But we're not looking for a vote yet, as Jeff mentioned. We're not yet. We're hoping to do that later this year. My recommendation is going to be some time in, you know, January. As I've been told by some of the members, we've got to start -- you know, we got to get on the calendar soon. Your calendars fill up quickly, and hopefully we can get that set up.

We also -- our goal is to get the information out to you with enough time, so you can analyze the information appropriately, and so, you can come to the meeting ready and discuss those topics, and that is one of our commitments.

Sometimes they get kind of, you know, butt up against the goals of other priorities, to get these rule making actions out.

So, kind of bear with us a little bit, but hopefully maybe December or January time frame, we're probably looking at actual committee meetings to have votes on these rules.

So, the rule is, of course, is our

hazardous liquid rule. It's passed DOT. As many of you know, it's at OMB. It deals with a variety of issues from assessments of high consequence areas or expanding of IM principles beyond high consequence areas, leak detection requirements beyond high consequence, piggability of lines, prepare criteria, the gravity line exception, and of course, gathering lines.

So, we're hoping, as Ms. Dominguez says, to get that rule out by the end of this year, and we're hoping that we can accomplish that.

Kind of like its sister rule of course, is on the gas transmission side. It deals with very similar topics. As many of you know, this rule is also at OMB, and then those two rules are basically taking up my -- probably 110 percent of my staff's time right now, and dealing with very, very similar issues.

Expansion of IM, gas gathering, corrosion, the selection of assessment tools and the like. Also deals with good old IVP. As Jeff

said, you know, the very -- very popular topic there, which again, gets into, you know, your problematic issues, such as grandfathered pipe, pipe record -- pipe with inadequate records, legacy pipe and pipe tested below 1.1 MAOP.

So, we're hoping to get that rule through, both of these on the street by the end of this year, be able to bring them to the committee, and you know, have the discussion, have the tough discussions and have that vote, shortly thereafter, but of course, we're also trying to balance getting the other three or four rules that are at NPRM to the committee at the same time.

So, we are actually planning, trying to stage all this stuff as best -- within our control, so that we can do this effectively as possible.

As we mentioned, the excavation damage rule is going to publish final. Sam Hall is going to give us a presentation on this tomorrow, and it has an effective date of January 1st,

2016.

One of the things I'd like to mention is, you know, this past July, we saw a flurry of rules get out, very quick pace, and normally when we publish a rule, we like to, you know, get some information out to not just members, we try to get information out to our stakeholder, and I think when these rules were coming out as quick as they were, we weren't able to be as effective on that as we'd like to be, and I'd like to apologize for that. But I hope you all understand also, the amount of stuff we were getting out at one given time.

The miscellaneous rule making was also published final. The important thing to point out on this is that we received three petitions for reconsideration on that rule and a letter from NAPSR.

The petition from -- we received a petition from American Gas Association, asking for an extension of the compliance state from October 1st to January 1st. We received a

petition from APGA to ask us to deal with -- more effectively with the smaller operators that are in their membership.

We also received a petition from INGA dealing with pressure vessels tested to ASME versus tested to 1.5 MEOP.

We recently published in the Federal Register, a document notice that we weren't ready yet to respond to that, but we are hoping, and we are -- more than hoping. We plan on publishing the response to those petitions and the NAPSR letter in September, prior to the effective date of October 1st, that we believe is going to deal effectively with all those petitions.

One of the things we also hoped to do in this Fall is to get together and identify some of the issues that have come up, especially with the issue on construction inspection and come with some FAQ's that we think will help not only our inspectors, but also will help the industry help comply with this new requirement, and we hope to have that out before any effective date

of the rule.

We're going to have a presentation tomorrow on excess flow valves. But this was a rule long time in coming. Tried to get it on he street, to expand excess flow valves from the single-family residences that came up through DIMP, to expand them to branch service lines, multi-family residences and commercial buildings, and also dealt with the issue on curve valves, for you larger commercial buildings, larger buildings.

The comment period on that ends in September, and we're just -- we'll have a more thorough discussion of that proposal later tomorrow.

We also published a rule on July 10th on what we call operator qualification cost recovery, and other pipeline safety proposed changes. We're going to get a more thorough discussion of this again, tomorrow. The comment period ends September 8th, but some of the other issues dealt -- deals with is a proposal related

to incident reporting.

There is a mandate to go from a two-hour reporting window to a one-hour, but upon confirmed discovery, and I think we'll probably have some comments on confirmed discovery tomorrow, as I understand.

We also issued an NPRM back in May, comment period just ended the end of July on plastic pipe issues, with a variety of issues that had come up through the years, and also mainly, you know, from either petitions, some internal requests to make changes to the regulations and we'll also get a more thorough discussion of this tomorrow.

We're also actively working on our rupture detection and valve rule making. That is based one some mandates we've received and some recommendations from NTSB. This rule making is - there is a correlation to this between this and the hazardous liquid rule and the gas transmission rule, as we develop the cost benefit analysis for these rules.

us. It's been a challenge, especially in terms of cost benefit. But we're going to work through it and we're going to try to solve this issue as quick as we can, and we hope to start to move this rule -- this rule is still within -- internally within PHMSA, and we hope to be able to move this rule out of PHMSA very shortly.

So, this rule has been a struggle for

We also have a couple of other rules on our plates that we're in the processing of getting moving.

We always do a standard update rule every couple years. We finalized one back in January. We're starting up another one, probably dealing with about 25 to 30 new standards. Of course, when we do a standards update rule now, we have to deal with what's called Section 24 regarding availability of standards.

We thought -- we believe we were adequately addressing it. We actually had received a comment on our plastic pipe rule, with dealt with the 12 or 13 standards. Yes, that

they -- there is at least one comment, I believe that we have not, you know, we have agreements with many of the SDO's, all except one, to make those standards available.

Some of them have some requirements in terms of registering and submitting email addresses and the like. But the standards are available, but at least there is at least one group that believes we're not complying at least with the letter of the law.

So, we're taking a look at that comment and we're going to try to see if maybe there is some things we can improve on, on providing access to those documents.

We're also working on what we refer to as the state de-certification rule making, which would just basically add to our regulations, the administrative process for de-certifying the state program, and assume intrastate regulatory inspection and enforcement responsibilities, if we think a state is not up to speed.

But not that we're -- we plan on using

that very often, but it would be another tool in 1 2 our toolbox that we'd have in our regulations that if need be, we can address appropriately, 3 and that's all I got. 4 Thanks. I just want MR. MAYBERRY: 5 Cameron to tee up the next one. 6 7 MR. TAHAMTANI: This delay is designed to allow you to write down all your questions. 8 9 It's an appropriate MR. MAYBERRY: 10 pause. 11 MR. TAHAMTANI: So, it's a lot of 12 parts to be up, when we get to the Q&A. 13 MR. MAYBERRY: The next topic will be mandates and recommendations, and there is a lot 14 15 of connectedness between mandates and recommendations and rule making, obviously. 16 Certainly, mandates have been a theme 17 18 today. We've heard a good bit, you know, this is 19 -- it's no secret that we're under a number of 20 mandates, so wanted to give you an update on 21 that, at least where we stand.

Again, you know, we've had a laser

focus on, you know, really adequately resolving these, effectively resolving these and doing an excellent job. So, I'm proud of the work that our group has done, our agency has done on this.

You know, it is a very deliberative process. It's not -- it's intentionally that way to ensure that, you know, all stakeholders are -- you know, concerns of all stakeholders are addressed.

So, that is a bit, you know, part of the slowness of it, but I assure that we are focused on, you know, on resolving the mandates, and then of course, recommendations and when we say these things, when we say mandates, we mean Congressional mandates that came out of our reauthorization here most recently, the 2011 reauthorization. The recommendations, the NTSB, from the NTSB, the GAO and the Inspector General, the IG. So.

My plan is really not to go through each one. I think that would, you know, really not be a good thing after lunch, here later in

the day, but I will summarize where we stand and hit a few high notes.

If there are any that you may have a question about, I'd be glad to drill down and you know, address specific ones, but anyway, moving on.

I just -- I'm going to hang on this slide, because beyond this, I do have a status on all the mandates and all the recommendations.

So, you know, line item by line item.

But really, where we stand now is, we have completed 28. There are 48 total for mandates. These were in the re-authorization.

Twenty remain open, and the 20 that remain open, 11 of them, like I said, they're connected to rule making quite a bit. Eleven will be addressed through our current efforts on the valve rule, the gas transmission rule, hazardous liquid rule, the excess flow valve rule, operator qualification rule makings, obviously, what has been recently put out, as well as the MPMS information collection.

5

So, that will deal with 11 of the 20 that we have open, remaining, and the four of that 20 will be addressed through reports to Congress, currently under review or edit. We've got the reports written, but they're just in final vetting. Really can't say they're final. They're under vetting.

so, until that is finished, those deal with class location or integrity management.

That's one that's near and dear to us, as far as one we spent a good bit of thoughtful time on,

Section 5 mandate. CO2 pipelines, that is transporting CO2 and gaseous phase and mandate related to developing rule making on that, and then lastly, on non-petroleum hazardous liquids.

By the way, these are reports, not rule makings, by the way, just to -- and then five of the 20 will be addressed through future regulatory activities, and possibly through some information collections, but that kind of summarizes the 20.

Nine of 26 NTSB accident related recs

are closed, and when I say accident related, that's coming out of San Bruno, Marshall, Michigan in particular. Of course, we do have one of our oldest recommendations that came out of a failure that was much older, back in Ashburn, Virginia, which -- what resulted in the excess flow valve recommendation from the NTSB, but that will be resolved with our rule making that we hope will become final. It's currently a proposed rule.

Then later, more recently, NTSB finished integrity management audit, the report, the results of which created 22 additional recommendations.

We recently sent a status to the NTSB on the 22 recommendations. One item was closed in that update, because one was actually implemented while the report was being finalized, and then one was -- we had a report back -- actually, it's the first time I can remember this has happened. We have one that came open/unacceptable.

In other words, the response that we 1 2 had, our position on that was not one that, you know, really, they were looking for. 3 We're still talking with them about 4 it, but it has -- that one specifically has to do 5 with qualification of people carrying out 6 7 assessments on inline inspections, and why they're -- and the need to adopt that, or to 8 9 require that in rule making. 10 We're looking at other options outside of rule making, but we're going to continue 11 discussing that with NTSB. 12 13 Let's see, and then related to the OIG, 14 of 16 recommendations are closed. 14 The 15 last two related to the hazardous liquid 16 integrity management. Those are primarily -those recs, all collectively are dealing with 17 18 hazardous liquid integrity management and then 19 the state programs audit that was done. 20 Then one of seven GAO recommendations are closed. 21 22 You know, just for comparison, when I

last updated, I went back and looked when I last updated you on where we stand on these, it was February of 2014, and since then, we've closed three mandates, one OIG rec and six NTSB recommendations.

So, we made a bit of progress. We'd like to have made more progress. More progress will be made after we get some of these rules freed up, you know, that will come out as proposed rules, but then they won't really be cleared up until they're final rules. So, after we finish that process.

That's really it, in a nutshell, where we stand on the mandates and recommendations.

Like I said, I have beyond this, for your use after the meeting or there is just for reference, just the table by -- table of each recommendation and where we stand, and whether or not they're complete.

I had this last time. I thought it was a little bit laborious to go through each one, but like I said, I'd be glad to answer any

questions you may have on them.

Also, I might add, we have good information on our website, on where we stand on these. I'd really recommend that you go there, if you're curious where we stand. We keep that up to date, and that's a good source of information on where we stand on the recommendations and mandates. So, I would send you there, or call me.

So, with that, that's kind of an update on where we stand on recs and the mandates.

MR. TAHAMTANI: Thank you, Alan. Now, questions on everything that's been covered since the break.

MR. PIERSON: Craig Pierson, Liquids.

Just clarifying, do we want to talk about the

NPRM on notification? You want to talk -
question and answer now, or tomorrow? Is there a

preference?

MR. GALE: I would recommend it tomorrow.

MR. PIERSON: Okay. 1 2 MR. GALE: You're talking about the issue of confirmed discovery? 3 MR. PIERSON: Yes, tomorrow? 4 It's going to be a more 5 MR. GALE: thorough discussion of that whole rule tomorrow, 6 7 of all the different proposals, and it would probably be best to have that tomorrow. 8 9 MR. PIERSON: We'll look forward to 10 it. 11 MR. GALE: All right. 12 MR. PIERSON: Thank you. 13 MR. WIESE: Just for what it's worth though, I think that there is probably whatever, 14 15 a quarter of us in the room that know what we're 16 even talking about, and so, if the other people want to think about this before we get to a 17 18 presentation tomorrow, do you mind just kind of 19 humming a few bars on that, so other people can 20 talk to you guys later, you know, this afternoon 21 or tomorrow? 22 MR. PIERSON: I don't have a very good voice, but I'll try.

MR. WIESE: We know you're probably really good.

MR. PIERSON: So, the question is that we all -- we all share the desire and need for prompt reporting and trying to change the language to get us all on the same page with that, and of course, the devil is in the details of the words, what confirmed discovery is and one hour notification.

So, we share the same concern, but want to talk through the words and some of the implications.

MR. WIESE: Forgive me, I would just say that what seems like such a simple issue, when you start peeling it back, becomes a little more complex. That's why I wanted to say, the other -- a lot of the other members have wrestled with this.

You know, I think it's crucially important to the Government entities, you know, the states, ourselves, other emergency

responders, to get the quickest possible notification about what's going on, but there is a yin and a yang, which I hope to draw out in the conversation here, about also, spinning people up, you know, when there is nothing happening, you're not sure.

It is not an easy thing, you know, and
I just wanted to get on the public record, so we
can do it tomorrow, you know, kind of understand
-- help other people understand why it's not cut
and dry, right. Okay, thank you.

MR. GALE: Also, just real quick point of clarification.

What we can do is actually get you -we can help provide you some clarity of what was
proposed. We can't really get into a debate yet.
All right, that will be at the meeting where we
actually have a vote on the rule. But we can
provide clarity, we'll try to provide clarity.

MR. PIERSON: Craig Pierson, Liquids.

Yes, I think getting an understanding of some of
the difficulties would be some good conversation,

and get to the right wording. 1 2 MR. TAHAMTANI: All right, Carl? MR. WEIMER: Yes, just a quick 3 question. I didn't find this presentation or the 4 previous one in the packet that Cheryl sent us, 5 and I was wondering if we can get those, at some 6 7 point. MR. WIESE: What we plan on doing is, 8 9 any presentation that we get electronically, we're going to email out to all the members at 10 different breaks and different times during the 11 whole meeting. 12 13 MR. WEIMER: Perfect. 14 MR. WIESE: And post to our website. 15 MR. TAHAMTANI: Thank you. Sue, you 16 have a question? MS. FLECK: I do. It's a simple one. 17 18 Do we expect the pipeline re-authorization to 19 complicate any of this or stretch it out farther 20 or add more mandates, and I know Jeff is going over there. Again, it's Sue Fleck, National 21

22

Grid.

How does pipeline safety re-1 2 authorization impact this, because we have budgeting and planning and resources we have to 3 do to get ready to comply with this stuff, so 4 having a better idea on time lines is super 5 helpful. 6 7 MR. WIESE: Sue's well prepared to swing at that one. 8 9 I think it's a really good question. 10 I don't know that we have a really good answer I think the conversations have just 11 for you. I think the administration is talking 12 13 about, you know, does it want to introduce a bill, and if so, what are the elements of that 14 15 bill? 16 I think they are pre-disposed to put something forward, but they will -- there's a --17 you know, I just have to reserve to them, that 18 19 judgment. 20 I know there are others in the room, you know, who are interested in things. 21

has put forward a number of things in their

testimony, back whenever it was, a month ago or 1 2 so, you know, at the House, Energy and Commerce. So, I think a lot of that is yet to 3 unfold, but I was led to believe the Senate 4 Commerce Committee is holding a field hearing in 5 Montana on September 18th. Ms. Dominguez is 6 7 testifying. There might be others in the room testifying, as well. I think Todd might be, and 8 9 they say it's a combination re-authorization hearing and field hearing, at least that's what 10 11 I'm told. Focused a lot on river 12 MR. DENTON: 13 crossings. MR. WIESE: Yes, river crossings will 14 15 be big. I think those will be. 16 Yes, I'm just not prepared to swing at I apologize. I wish I could. 17 that. 18 MR. TAHAMTANI: Chad? 19 MR. ZAMARIN: Chad Zamarin. Gas 20 Just, could you just provide a little bit more color? I think I heard 83 field 21 22 positions of 109 that you're recruiting.

1	Could you give a little more color
2	around the hiring and where those people will be,
3	what the focus is, and I may have missed it.
4	There may have been other information that came
5	out at one time, but it sounds exciting. It's
6	interesting. So, just curious to get a bit more
7	color.
8	MR. MAYBERRY: I guess some on
9	that's 83 field folks. On but also seven
10	attorneys, five safety grant specialists, but for
11	state programs, sorry, and then training will
12	cover four.
13	Is that what you're looking for, Chad,
14	as far as like what
15	MR. ZAMARIN: Yes, it was just mostly
16	the 83, it's actually boots on the ground and
17	MR. MAYBERRY: The 83 inspectors.
18	MR. ZAMARIN: inspectors?
19	MR. MAYBERRY: Yes.
20	MR. ZAMARIN: Okay, so, these are
21	folks that are going to be doing audits?
22	MR. MAYBERRY: Right.

MR. ZAMARIN: Going to be out in the 1 2 field? MS. DAUGHERTY: Yes, we have -- what 3 we did is, we split the group up. Some of those 4 were designated as inspection enforcement. 5 most of those are going to go to the field. 6 Some 7 of them, as Alan mentioned, are going to be our attorneys, you know, you up your inspector ratio, 8 9 you're going to have to up your enforcement capability, as well. 10 11 So, we added into Alan's group in 12 headquarters. They got a bump up, but a lot of 13 these are going to be inspectors. We also are creating that accident 14 15 investigation division. We want a stronger focus 16 on our investigatory abilities. So, we're spreading them across the 17 18 regions. I can give you a better break down 19 later, but you know, specifics, Southwest 20 continues to be our largest region. going to have about 50 inspectors. 21 22 Then as Jeff is hinting to me in the

background, we are bringing in some other skill sets into our region offices.

You know, traditionally, we have only hired engineers, and we found that increasingly difficult. It's just almost impossible to compete with you all. It's just hard to get them.

So, we are bringing in -- yes, yes, what you didn't hear him say is, you guys often hire some of our folks and then we have to figure out a way to back fill behind them.

So, we train them up and anyway. So, we're going to be bringing in what we call transportation specialists, and those might be people that are not engineers, but have pipeline experience, or have experience in other areas that would translate into good inspector skill sets.

We're also bringing on a brand new skill set for us, which is auditors.

We have traditionally focused on the technical piece of pipeline inspections. We are

going to be transitioning in new people that can 1 2 think more of a programmatic big picture idea, look at how the programs are functioning, how are 3 companies implementing things like SMS, although 4 we're not inspecting SMS, but how are those 5 management concepts being related down throughout 6 7 the company. So, it's front line to management. 8 9 Does that answer your question? 10 MR. ZAMARIN: Yes, thank you. 11 MS. DAUGHERTY: Thanks. 12 MR. TAHAMTANI: Andy, you had a 13 question, but it was answered. Any other questions? 14 15 Alan, I notice that nine out of 26 16 NTSB recommendations out of PG&E accident investigation has not been addressed. 17 18 As Andy said this morning, about five 19 years has past, right? Can you talk about some 20 of those recommendations that have been -- have not been addressed? I would think NTSB may not be 21 22 happy with that.

MR. MAYBERRY: Whereas you know, when we get a recommendation, there is no time frame, but they're fairly open-ended, but we look at developing policy to address them.

But of the ones remaining, I mean, they're tied up in rule making. For instance, out of San Bruno, certainly we had a number related to -- that are being reflected in the gas rule.

A key one there, for instance, is valve -- valve -- the valve rule, for instance. That is one that we -- that we hope we're close on. We think we're close on. I know the impact on cost benefit and what we're learning from gas transmission rule, I think is helping inform that better, what it will ultimately look like from the regulatory impact assessment.

But that is like a key one out of that, that remains pending. But and then Jon, you wanted to --

MR. GALE: Yes, one quick note is our operator qualification rule making, we just

1	received comments from OMB. I mean, sorry, NTSB.
2	MR. MAYBERRY: Right.
3	MR. GALE: On that rule making. They
4	were very positive on our responses to about four
5	or five of the open recommendations.
6	MR. MAYBERRY: Yes.
7	MR. GALE: So, they were related to
8	like operator control room operator training
9	and work groups, and the like. So, we're making
LO	progress.
11	MR. MAYBERRY: Yes, and also, just one
L2	follow up thing.
13	We do update NTSB periodically, and
14	they are all open/acceptable, except for one, the
15	more recent one that came out of the integrity
16	management audit.
L7	MR. TAHAMTANI: All right. Thank you.
18	MR. MAYBERRY: We try to keep them
19	that way.
20	MR. TAHAMTANI: I knew that if I asked
21	a question, we'll get more people to ask
22	questions. So, Andy, you're next.

MR. DRAKE: This is Andy Drake with Spectra Energy.

I thought it would be maybe a good opportunity, just to throw out there, something else that's happening around us, that may precipitate further rule making or some sort of guidance from this group, in regards to an issue that's been on the table for a couple of years, and that has been jurisdictional authority over underground storage.

If you, you know, as you know, we have been working with API to develop two standards, one for salt caverns, 1170 and one for aquifers and reservoirs, and those two standards were developed with a cross-section of a lot of folks, including folks from the states, folks from PHMSA, folks from different regulatory agencies inside the states, and industry.

Those standards were intended to try
to help clarify what is best practice on salt
cavern management and integrity protocols around
storage caverns, to try to help get some

continuity across the playing field of what good looked like, quite contentious discussions, over a long period of time, but I think all the players, including the states, were happy with the outcome, and they have supported it.

It has now closed. Those standards are being approved. One of them has been approved by API and the other is in the process of being approved. The comments came in and they were all addressed. So, I suspect that it will close within a couple of weeks.

I think that provides us an opportunity, you know, to get the stakeholders to rally around the clarity of that standard and the exercise that went to -- in front of that standard, to resolve some problems with who has got the ball on storage oversight, and what are those practices that should be employed in managing them.

I don't know if you guys have a schedule for that. I mean, this is just real-time. This is just happening right now. But I

think the fact that those standards are finished and that the folks that were participating in them have unanimously agreed that that is the appropriate benchmark and performance standards around caverns, gives us an opportunity here.

I don't know what your thoughts are on that.

MR. WIESE: I'll swing at it by telling you that that is -- to my knowledge, and there is a fair amount on the plate, as you can tell, and there are -- and has been. We're trying to get if off of the plate, but it's still on the plate.

But that doesn't mean -- I think the formal mechanism to kick that off, honestly is a petition. You know, we would welcome it. It's not necessary. Honestly, again, just talking, we understand that, but formally, it's helpful to us, to have that as part of the record for initiating rule making action, to be able to say -- we have to -- by the way, we have to get approval, you know, to initiate a rule. You

1	know, there is a process for that.
2	So, it's very helpful to us in that
3	process, to go forward and say, "We've been
4	petitioned to proceed." You know, the time is
5	ripe. You know, and all of that stuff.
6	So, I think we understand that. I
7	think NAPSR does too. We've had a lot of
8	conversations with NAPSR about underground
9	storage.
LO	So, I think we're receptive to a
11	petition, is what I'm broadcasting to you. Does
12	that sound workable?
13	MR. DRAKE: I think I've got your
14	hint. We will put together
15	MR. WIESE: So, subtlety is my forte.
L6	So.
L7	MR. TAHAMTANI: All right, Chuck?
18	MR. LESNIAK: Chuck Lesniak. Liquids
19	Committee.
20	So, you know, I think it's encouraging
21	that we've got so many rules coming down the
22	pike. You know, I think that's awesome, and this

is something that Jeff and I have talked about a 1 2 lot now, and you and I have talked about is -and Jeff and I were just talking about it with 3 Administrator Dominguez, is that it seems like to 4 me, it would be appropriate for at each 5 significant stage of the rule making process, 6 7 that the committee got notified, this is happening with this rule, this is where you can 8 9 get more information about it.

As we get closer to a vote on something, you know, I think it would be appropriate for all the committee members to get a summary of the public comment, access to all the public comments, if we'd like to go through them, as early as possible.

A lot of people in the room here live and breath pipelines every day. I don't, and I know there are others on the committee that don't, and I feel a lot of times, at a real disadvantage, as a representative of the public, at some of these committee meetings.

So, whatever the agency can do to help

10

11

12

13

14

15

16

17

18

19

20

21

that, to help with that and get information out.

I'd rather have too much information and not have

time to get through all of it, then to have not

enough and not know where to go look for it, and

be trying to scramble at the last minute to get

caught up.

So, you know, I could probably sketch out an outline of what, for me, would be helpful, that I could provide to you all, and I think that whatever we can do, I think it ought to be provided to all committee members, not just the poor ignorant ones, like me.

MR. WIESE: Well, I'll let Jon swing in a second, but I'm very receptive to that idea, and I want to commit to do a better job of preparing you. You know, that's on us.

I just tell you, it's not for a lack of working. It's just usually, you know, there is such pressure to move this stuff so fast, that it often times, we're holding meetings shortly after we've finished the comment digest.

You know, so, I'm wondering if it's --

if it's useful for us to periodically set up -- I don't know how to do that, you know, a webinar, you know, before the meeting that said, "Hey, members, we're going to go ahead and set up this webinar. If you want to dial in, we'll try to brief you up really quick on that stuff." Then, here is the documents that are available to you through -- they're your's. I think that should all be publically available, but I want to try to make sure that you get what you need in order to vote knowledgeably, and next time we meet, we'll be voting, I'm hoping.

You know, but I think those won't be all that hard, the next couple of votes, but yes, Chuck, we'll do that. John may have other ideas on how to do that.

MR. GALE: Yes, one other comment I wanted to make, Chuck, was you know, for all members, to make sure you're aware, all the public comments are available to everybody.

They're actually available not just to people in this room. They're available to everybody in the

United States.

So, if you want to look at the public comments, at any time, you can go take a look.

One thing to remember, or just to see is, if a comment period ends say, July 31st, you can be about a two-week lag, by the time, you know, somebody like API submits a comment, by the time -- sometimes it will get up into the website.

So, don't just go there on, you know,
August 1st and expect to see everything. You may
have to give it a little bit of time.

But also, when I mention -- really, when I said the goal for my office is to have the meeting in January, is actually because -- the goal is -- the second -- secondary goal is to have the summary of the comments done by

November, which will be about two months after the rule is -- the comment period closes. Give you guys about two months to look at those comments, and so, that's the idea where January comes from.

As long as other pressures don't 1 2 dictate something different, like Jeff mentioned, we're hoping to meet that goal. 3 MR. LESNIAK: And I think that that 4 will help a lot, but also, just early notice on 5 these rules, like we're getting today. 6 7 I think -- I think this is awesome, so that I or others can flag these rules that are of 8 9 particular interest. 10 MR. GALE: Okay. 11 MR. LESNIAK: Maybe are more technical than others, and so, that we can follow them as 12 13 it goes through the process, at significant milestones or if there is a significant delay or 14 15 a significant change. 16 You know, I think as committee members, we're a pretty significant stakeholder, 17 18 and you know, notice of those things, rather than 19 us having to go out and hunt for it, would be 20 helpful. 21 MR. GALE: Right. 22 MR. WIESE: And I'll just tell you, I

personally don't have time to look through every 1 2 comment, so I really rely on the comment digest. You know, honestly, I mean, because a 3 lot of times, you don't know until you're like 4 five paragraphs in, it's exactly the same thing 5 as somebody else. 6 7 So, the digest may be more helpful, if you don't have a lot of time, and it's not your 8 9 day job. So, yes, I think that's a fair comment. 10 We have to figure out. 11 I would also say, by the way, that public members are at full liberty of having side 12 13 conversations, you know. You know, I'm sure that -- I don't think the industry guys ever do that, 14 15 but you know, the public -- sorry, I couldn't 16 even deliver that with a straight face. But there is nothing saying that the 17 18 public member shouldn't do that, you know, get 19 together and talk. 20 MR. WEIMER: Well, we do. MR. WIESE: You do? Blame Carl. 21 22 okay, Chuck, we'll do -- we want to commit to do

a better job.

MR. WEIMER: Yes, I was just going to comment, Chuck, on the -- if you got a regulation stepped up where, you know, the repository of a lot of it -- the comments, it could be a bit clunky. So, I can appreciate the pain, and we'll look at options maybe to, you know, help with that.

MS. WHETSEL: I'd appreciate the outline.

MR. MAYBERRY: Certainly --

MS. WHETSEL: Let me know.

MR. MAYBERRY: -- I think you'll find a value, the distilled version of the comments, I think will greatly help, but I know when you go there, it's not always intuitive to find all the comments that are relevant, that you want to see.

MR. KUPREWICZ: Just to build off of that excellent perspective is, there is tendency to try to over-compensate. Maybe just starting with kind of a quick background, and then they can ask further, rather than try to get a perfect preparation.

You kind of got everybody focused on this issue, on a fairly light level. That's a good way to start, and them more detail can come later.

MR. TAHAMTANI: All right, great conversation. Any other questions?

We're going to move right into the last item of the day, Item No. 6, performance metrics, and Linda and Alan.

MS. DAUGHERTY: Well, I was all set to have a wiz-bang presentation today. I was going to impress you all, send you off on a great note, but kind of fizzled with some IT challenges. So, bear with me, okay.

So, you're going to have to use your imagination a little bit.

You know, we've talked about metrics a lot. We all know how valuable they are, but we also know that for all their value, they can be very dangerous if misused or if mis-portrayed.

Now, I'm going to go over a few things to begin

with.

I would mention that there are a lot of metrics, development efforts underway within PHMSA, and I think also, there are metrics, identification groups elsewhere. We heard Carl talk about the effort with CEPA, and I would be very interested in learning from that group.

We had also talked to CEPA, about some of their efforts, and we need to share across the border.

When you look at metrics, there is a couple of things -- couple of things that we've learned over history.

We know that metrics can be very good.

They can be very bad and they can be ugly, but
they can really provide insight that you might
not otherwise have.

You know, we have -- PHMSA has long said that we are, you know, data driven and I think over the last few years, we've realized that it's better to say that we're data informed, because if you use data without providing

understanding and context, you can actually head off in the wrong direction.

Similarly, poorly chosen metrics can mislead or mis-inform. I think we all know of examples where, you know, good intentions, people have used information data or various information, and in the wrong context, and in the wrong setting, it actually misleads or mis-informed, and when you have people that are mis-informed on what the data is actually telling them, it can drive them in the wrong direction.

It can drive you to invest resources where they don't belong. It can drive you to make changes that can be counterproductive to safety or to efficiency.

So, I guess the main point of everything I'm going to say today is understanding context is critical. If you want to have value from metrics, you must understand where the data is coming from and the overall context, and we'll go through a couple basic examples.

This is a metric right off our website. It's for hazardous liquid pipelines. It's from their report on -- IM report, and so, the first question that I would present to you is, this is how you chart it out, and let's see where my pointer is. There's my pointer.

So, you got a real interesting line going on here. This right here, for those of you that are far away from the screen, this is 180 day condition repairs and HCA's. This whole chart is about repairs done in HCA's.

The lines down here tell you that the brown one is the 60 day condition repairs in HCA's, and then the immediate repairs in HCA's.

So, for those of you not familiar with the integrity management rule, it basically says that when you become aware of a condition on a pipeline, that meets a certain seriousness of criteria, what we call immediate conditions, you must go out and immediately repair those, and you have 60 days, for some, 180 days. Kind of selfevident.

1	So, look at this chart and tell me
2	what it tells you about the pipeline
3	infrastructure. What does it tell you?
4	So, if I were to ask Todd Denton, what
5	this tells him about the hazardous liquid
6	pipeline infrastructure, what would he say?
7	MR. DENTON: Todd Denton. Liquids.
8	Not a lot.
9	MS. DAUGHERTY: Okay, so, if I were to
10	ask Chuck Lesniak, what this tells you about the
11	pipeline hazardous liquid pipeline
12	infrastructure, what would you say?
13	MR. LESNIAK: This is Chuck Lesniak.
L 4	Liquids. I think I'd agree with Todd. I think
15	it doesn't tell you a lot.
16	MS. DAUGHERTY: Okay, my point is, is
L 7	that when a member of the public looks at this,
18	without the education and knowledge that people
19	have sitting around this table or in this room,
20	this may tell a very different story.
21	This could be alarming. What does it
22	mean? Oh my gosh, you know, we're having

immediate repair conditions. Every year, we're
finding all of these numbers of immediate repair
conditions? Why aren't those down to zero? How
can there be any more than zero, if you're
driving them down? Why are these numbers
bouncing up and down up here?

The other thing is, when you look at the overall context, the chart doesn't tell you everything. It doesn't tell you the whole story. It doesn't tell you about changes in different types of tools.

When people are running tools, it doesn't tell about the different cycle of inspections. Would the average person from the public, my Aunt Emma, would she know that there a certain cycle, the hazard liquid companies go through, that determines how often they run their assessment tools? Not for everyone, but there is a general cycle that's going to affect this cycling cycle.

Why is there a peak here? Maybe it's because more tools were run. Maybe it's because

the tools that were run in this year were 1 2 different type. Maybe it's more advanced type of tools than what we had back here. 3 Tools are improving all the time. 4 So, my question is, does it tell you 5 what you think it tells you, and maybe it does, 6 7 maybe it doesn't. Context is everything. I'm going to give you another couple 8 9 of examples, and I made these numbers up, so Ron Dyck is here from -- the director of our 10 11 enforcement division. He is probably cringing, because I didn't tell him I was going to do this. 12 13 So, let's pretend that these are the number of enforcement -- PHMSA enforcement cases 14 15 over years. So, and this is kind of a repeat of 16 something we saw in the media recently. So, made up numbers. Wait, wait, 17 18 wait, okay. This line is going down. Number of 19 enforcement cases are decreasing year by year. 20 What does that tell you? I don't know what it tells me. 21 22 it mean that if there is a decrease in

enforcement cases, does that mean pipeline 1 2 companies are more compliant? What would you say, Michele? 3 I'd say the same thing Todd MS. JOY: 4 said, you can't tell a lot from that chart. 5 MS. DAUGHERTY: Okay, does it mean 6 7 inspectors are less thorough? Over years, if I see a decreasing 8 9 number of enforcement cases, does it mean -- what 10 does that tell me? Does that tell me my inspectors are not finding what they should? 11 Does it mean that our inspections are taking 12 13 longer, so they're generating fewer cases? I don't know what that means. 14 I'm 15 going to flip it around. What does it mean if I 16 see an increasing trend? Can you judge the adequacy of an enforcement program based on 17 18 whether you're increasing or decreasing 19 enforcement cases? 20 I don't know that you can, because without knowing all the data, does that mean 21 22 companies -- if you see an increasing trend,

companies are less compliant? That's the obvious intuitive thing that people would say.

But what you may not know is if you see an increase in numbers, I will tell you that for both these charts would have been correct for us, in regards to II, because on inspection -- integrated inspections, our inspections can take eight to 12 weeks, over an eight month period, and for the longest time we said, "One enforcement action coming out of every inspection."

But that means we're waiting eight months, a year, a year and a half to get inspection letters to companies, when we found safety items, and that's unacceptable.

So, in the first chart, we were issuing fewer enforcement cases, and now, we're telling our people, "Wait a minute. Cut it off midstream. If you see a safety issue, go ahead and issue an enforcement case."

So, what does that do to our trend?

The numbers may go up, and there are various

states of this.

So, I'm dwelling on this a little bit, because I think that we have to be really careful with metrics, and when we choose metrics, we have to think about the unintended consequences, and how other people will see them and what we present them.

Is this chart meaningful? Now, I apologize, this is a little bit blurry. I had to take it in a picture shot. I couldn't adjust the scale.

So, what this is, just to read for folks, it says, "This is the number of incidents per thousand miles of gas transmission pipeline by decade of pipe installed." This is using an average of the annual incidents between 2002 and 2012.

So, what it says is, is if you look at the average incident rate on pipelines per thousand miles, this is who is having the most failures. Is that useful information?

I think it would be. I think you can

gather some information from it, but you can't determine everything from it.

So, let me put something else out there. This number out here looks like of high. It says 1.28 of the pipelines installed in the 2010's have a higher incident rate.

We have all seen the bathtub curve.

I think everyone around the table is -- is

anybody in the committee not familiar with the

bathtub curve?

Okay, the bathtub curve basically says if you were to plot out the incident rates on the life of a pipeline, you will see more events occurring at the very beginning, right after you put it in line, because they're working out the kinks. You're going to have more reports, more boo-boos, you know, the fender-bender kind of things.

That will settle down as operations get more steady state. Things calm down, and then as you get towards the -- I don't want to say the end of life of the pipeline, but you get

way down the line, you start to see that bathtub curve come back up.

What I would suggest is perhaps, this is that front edge of the bathtub curve. We can use this kind of information to target inspections, to educate ourselves, areas we need to look at.

We could also misuse this information, and presume that all pipelines that were installed in this time frame automatically have a higher risk, and that is not necessarily the case.

Again, I'm trying to emphasize the point. We've got to be careful with the metrics we choose and we've got to understand the context.

I'm going to also provide one other slightly different scenario, relating to metrics that kind of came out unexpectedly. This is from the PHMSA evaluation. We were looking at our enforcement metrics, and we noticed that we didn't have a whole lot of enforcement cases

related to construction. We have some, but we didn't have a lot of big ones.

So, we're going out and we're giving presentations, talking about the challenges we're having with construction of pipelines and the different things we're finding, and yet, I'm not seeing the corollary high rate of enforcement.

So, we're thinking what's going on here? Why is that occurring, and we talked to some of our folks and we found out something kind of interesting.

People, our field folks, were defaulting to warning letters and notice of amendments, rather than issuing the big cases, the NOPV's and the compliance orders and civil penalties, and you know why they were doing that? Because they could get them out quickly.

Because of our internal process, and the way we handle enforcement, if an inspector is onsite and they find a problem that is not a major problem, but to find a problem of a lesser note, they can quickly get a letter out to a

company, go on record, "You need to fix this 1 2 issue, " so we can -- they were -- we identified a process problem, by using the metrics to see 3 where we had an issue. Does that make sense? 4 Okay, so, we're working on a solution 5 for that particular issue. 6 7 Some times there are tidbits you can kind of detangle out of your metrics. You can 8 9 find clues of process challenges in your metrics, 10 that you might not otherwise find. This is one of my favorite charts. 11 I'm going to show two of them. 12 This one is one 13 of my favorites. I love it because I think it tells a really good story. 14 Notice that the time frame is 1988 to 15 16 2014, 2013, I don't know if it actually goes up Yes, it says 2014, yes. So, I like it. 17 far. I 18 love that trend. I think it tells a great story. 19 This one 'spills' also tells a 20 fantastic story. I love that trend line. started working for OPS in 1991. So, I like to 21 22 say I'm part of the -- you know, part of that,

kind of trend line there. But there is a problem with this, a challenge with this.

I'm going to show you two more charts and then I'm going to flip back here.

This is another one. You've seen it before. This is for all system types, the number of serious incidents, serious incidents, fatalities, multiple injuries, things like that.

Again, you see a really nice trend line here.

This one -- and then maybe I'll use this one to make my point. This one is also -- this is significant incidents, which would be very, very small reports, basically anything that's reportable. Maybe not the five-gallon, but very small incidents get reported in our category of significant, and so, we look at it and we say, "Well, it's pretty stable," and I think if you draw a trend line, it's actually going down, but let me ask you what happens if you look from 2006 forward.

If you were to only look at that time frame -- let me see. We'll come back here. This

one.

What happens here, if you look at 2006 forward, your scale, you've got to look at -overall the trend line is really good. That
doesn't mean we can rest on our laurels and
assume that we don't have more work to do.

We have more work to do. These are the kind of things, when you post metrics, you have to be aware of. People use different scales. We've seen this before. We will get up and say, "Our trend line is good." We'll see someone get up and say, "The trend line is not so good," because they'll look at a different scale, okay, and I'm just pointing these things out because you're going to see this a lot.

Now, this is -- we talk about transparency. We talk about how good it is, but we're all judged with metrics. Metrics can help us tell our story, but it can also help other people tell stories that we may not think are true or accurate, and having said that and having been bit recently, I'm a little bit sensitive in

this area.

But I do believe that -- that last item is very important. Sometimes clear sight requires distance. Sometimes we're too close to our metrics and we can see them for what they're telling us, so, sometimes it's good to get shaken up and have someone show you something that you don't see.

So, that was all an introduction into a very quick update on the six to 12 metrics that we were tasked -- Alan and I were tasked with developing for the -- working with groups to reflect the performance of the national pipeline infrastructure and the regulator.

That was our task. It's been what,

over a year now? Last meeting, I went through -
or Alan and I went through each one of these and

we showed you the metrics that we had arrived at.

We graphed them up, the tentative ones. I was

actually going to go into our PDM today and show

you what they actually look like, but that is not

going to happen. I can't connect from here.

But what I would say is, on the metrics that we have arrived at, we identified the metrics. We don't have a consensus in all cases, and we're doing some tweaking.

We definitely agree that context and verbal descriptions must be applied to all the metrics, for the reasons I just discussed.

Throwing up metrics on a website, without context, can be -- can be unfortunate.

The other thing that's important to realize is all the metrics that I'm going to show you here in a second will be available by OpID and safety program relationship.

Safety program relationships are where companies are connected, where for example, and sorry, Ron, I'll just Kinder Morgan as an example.

Kinder Morgan has a lot of companies that have annual reporting to PHMSA. Each one of those companies has a separate report, but in many cases, they're related in a certain program, such as integrity management program or their

drug and alcohol testing program or their operator qualification program.

so, we have a thing we're about to roll out in September, which will allow the public to look at our website and determine how companies are related through those safety program relationships. That's company submitted information, and companies, by the way, are encouraged to verify that the information is correct, because it's going to roll it out here in September, okay.

But anyway, the metrics that we've identified will be available by individual operator ID and through the safety program relationship. So, there's a lot of different ways you can slice and dice the different metrics I'm about to show.

The other very, very important item that I just discovered, some people thought that we were going to put the six to 12 new metrics up and all of our other metrics that are currently available, we're going away. That's not true.

Everything stays out there.

Everything you've looked at for years will still be there. The six to 12 are ones we just wanted to highlight as something that we all thought

were valid metrics, okay.

So, for gas distribution, and again I apologize, I'm not showing you the charts on this. I was planning to do this through PDM and I -- but these are the agreed to metrics from the guest distribution team. Alan, do you want to talk to these?

MR. MAYBERRY: No, but to Linda's earlier point, you know, no single metric really tells the whole picture. Certainly, that was evidenced by the slid on repairs related to integrity management.

So, the focus was giving a crosssection, and oh by the way, one area where were
had difficulty, but we're continuing to do work
was related to enforcement metrics, and we're
doing work internally and continuing to work on
that, to have something meaningful related to

enforcement. That was one that was difficult to 1 2 get really some good meaningful ones at the time. So, we'll continue to work on that, 3 but that's related to distribution, and those are 4 the ones that we ended up with, that covers the 5 gamut from incidents from, you know, vintage, 6 7 down at the bottom, decade of installation, that sort of thing, inventory of casta and wrought 8 9 iron, unprotected steel and that sort of thing. MS. DAUGHERTY: Okay, I've got gas 10 transmission next. 11 12 MR. MAYBERRY: Okay, and then gas 13 transmission. Similarly, starting with incidents and then of course, causal factors and focused on 14 15 that group -- do we have others -- we have 16 another slide on that? 17 MS. DAUGHERTY: Yes, one more on gas 18 transmission. 19 MR. MAYBERRY: Okay, right, so, yes, 20 on down through -- you know, through decades, the 21 vintage of the pipe. 22 So, trying to add context to it, as

far as normalizing the numbers, I mean, per thousand miles, in many cases actually, it didn't really change the trend line. It was still similar to just -- if you go by the raw number, but you know, anyway.

MS. DAUGHERTY: I would also mention that there were discrepancies between what the gas team came up and the liquid team, and we tried to do some harmonization, and for very valid reasons, identified some areas where we need to have some differences.

First example, specifically on the miles by decade installed for -- it's most important for the gas distribution, this down here.

There, on the gas distribution side, folks are working to replace some of the older pipe that has degraded, not all -- I want to be very, very clear. Bad pipe does not mean that it's old and old pipe does not mean that it's bad.

Those two are not equivalent

statements. We've got to be very clear, because a lot of people tend to think if it's old, it's bad, and that is not correct. It's more about the conditions and the threats they've been exposed to.

However, we do know that there is some older pipe out there, some very old pipe in the ground that would degrade over time, and so, some of those are being depicted and identified by this type of metric, you know, what type of pipe is out there?

Yes, there is still some, you know,

1850's vintage pipe that's still in use today. I

would suspect, unless that's in perfect

condition, that might be a candidate for eventual

replacement, you know, it's just depending on the

condition of the pipe.

On the liquid side, we did not include the miles by decade installed because you know -- and that -- we're still discussing it to some degree, but we did not see that it would have the same kind of value as it would for gas

distribution.

Also, there was discussion on the liquid side of the value of the repair, integrity management repairs. There was concern that that information, for the reasons I presented earlier, could be misinterpreted without a whole lot of description and context.

What you see here on this last slide is the metrics that are tentatively agreed to for the liquid folks. The serious incident trend, the fatality and the injury trends, those are absolute numbers. We talked about whether you put them in a rate, but the liquid side, it wouldn't make any sense because the numbers are so low.

The last year, there were zero fatalities, I believe on the liquid lines. No? Ron? Yes. I thought you were questioning me on that.

So, the other thing that we did, and
I have to thank Carl for helping focus on this
is, he identified that there needed to be a focus

on the integrity targets that operators could -we need to draw attention to those integrity
aspects, which operators could directly impact.
The type of things like integrity inspection.

So, we've separated those out as far as, we'll have two different types of trend lines per chart, and it will talk about the different types of integrity targets.

Then the last item here, this is something that we put on the liquid side, was the different types of tool runs that have been done on mileage on the pipeline side.

So, it will give people a different flavor of the type of tools that are being used to assess the hazardous liquid lines.

The other thing also we mentioned, we excluded CO2 from our performance metrics, and there is some debate on whether we should or not, keeping in mind that all this information is available in our online data. These are just ones that we're highlighting. Every metric doesn't have equal weight and we just figured

these would help reflect overall performance 1 2 better than some. I think -- has everyone seen my 3 correlation slide? 4 Okay, this one. Okay, this is one of 5 my favorite slides. If you guys have not gone to 6 7 this website, just remember that correlation is not causation. This down there, this is the --8 9 for those of you that can't see, this is a correlated graph showing the divorce rate in 10 Maine, as it correlates with the per capita 11 consumption of margarine in the U.S., and it 12 13 shows a very definite correlation here, from 2000 to 2009. 14 15 However, I would say that there 16 probably isn't a relationship there. That's what Jeff said, how do we know it's not? 17 18 Well, maybe we should look at the per 19 capita consumption of margarine in Maine compared 20 to the divorce rate. Just for fun, this spurious 21 22 correlations is a lot of fun. They have a lot of

very interesting things, and with that, do you 1 2 have any questions for Alan? Linda, you had better 3 MR. TAHAMTANI: charts. So, any questions for Linda? 4 Pevarski? 5 Just one question. MR. PEVARSKI: 6 7 When you're looking at the metrics and you're talking about some -- the transparency and the 8 9 ability to misconstrue metrics, are you looking 10 at doing any trending analysis or any kind of 11 root cause analysis to go along with that? I think that will be 12 MS. DAUGHERTY: 13 one of the jobs of the new teams that we're I mentioned earlier that -- and 14 standing up. 15 part of the change in field ops, I'm asking Wayne 16 Lemoi to work on trending for inspections, and then I've got the accident investigation team 17 18 that's going to really look at that. Those folks are going to work with our 19 20 data folks to do trending for just these types of issues, trying to tease out what we can learn 21 22 from the data, how -- what lessons are we

learning from this? It's data, but what does it 1 2 tell us? MR. PEVARSKI: Correct, and well, the 3 trending and the root cause, will that be part of 4 5 the transparency? MS. DAUGHERTY: I think that's a good 6 7 I hadn't thought about taking it that far, idea. but I think that's a good idea. 8 9 Actually, I would say that MR. WIESE: 10 we had -- we had been thinking about that. 11 So, part of the point of putting 12 together this team, you know, with people from 13 around the horn, was that not just to figure out which charts should you put out there, but to 14 have some discussion about -- I mean, I think 15 16 it's Linda's point, and I think maybe we're --17 the answer is yes. 18 The next step after you agree on 19 what's a meaningful metric is then to agree, 20 basically, what does that chart actually say? Should you or should you not use less margarine? 21

You know, that's basically -- obviously, yes,

stop it. Go back to butter. It was always 1 2 better. MR. TAHAMTANI: All right, butter is 3 always better. Ron? 4 MR. McCLAIN: Okay, Ron McClain with 5 the liquid side. 6 7 I am pleased you're looking at six to 12, you know, I would hate to have 30 or 40 of 8 9 50, because -- just because it could be thought 10 of, doesn't mean it's a good metric. But I think six to 12 is maybe in the 11 right grouping, but what is your process to 12 13 finalize these, because you know, are they pretty set or are you going to gather more input, and 14 15 you know, what stories do they really tell? What 16 is your next step, I guess? I think that's a very 17 MS. DAUGHERTY: 18 good question. We're -- on the -- well, I can't 19 speak for Alan on the gas team. 20 But on the liquid team, we're pretty I had a recent discussion with a team 21 much set.

member that I think that they may have more input

yet for us. You know, where I think maybe we'll make some adjustments.

But I think that we're pretty far down the road. I think we're pretty good, considering we're not going to lose anything, as what's already there.

To finalize them, we've already got the gas teams metrics already programed into Oracle. Those are going up on the PDM. That's what I was going to demonstrate today, and the liquid metrics are currently being programed.

So, we're pretty set there, unless somebody throws out a show-stopper or if the committee identifies something, they said, "Hey, did you think about x or y," then I think we would be receptive to that.

MR. MAYBERRY: Yes, Ron, this is our initial cut. For the gas team, we haven't disbanded the team. We agreed that we would -- you know, we would -- we haven't met in a while, but we've been working on a few other things.

But we agreed that we would reconvened

periodically to address other issues, other data related issues, but then also, that would include this, do we need to tweak these. We'll see how they're doing.

I guess I would also add that, you know, what you're looking at here are static charts. Our vision really is to develop more dynamic charts, where you could drill down from a higher level, down to a lower level.

One of the issues we had was getting down to that number that we have now. There were so many others that people kind of gravitated towards too, but we had to have a cut off somewhere.

But we were looking, and a lot of times, the discussion was, "Well, that won't be a top tier metric. We'll put that toward the next tier down," and that would be one you could drill down to, for instance.

MS. DAUGHERTY: And there was also a lot of discussion about what was valid and what was not.

For example, I think we had a healthy debate on, you know, what about impacts? We had one discussion on the liquid side about, if you have releases in the facilities, maybe you should just limit the metric to inside a facility, and then somebody said, "Well, if it runs -- if it goes offsite, that would also affect the environment and the public." So, you can't lose those.

So, those type of discussions were quite robust. Settling down to this list I think was challenging for everybody and it's not going to be perfect. Next year, we may come back and say, "Oh, ghee, we should use this metric. We should add it," or maybe this one isn't of value.

MR. McCLAIN: Well, it just seems -Ron McClain, again.

It seems fewer is better to start. You can always add a metric. Sometimes once you've had it out there, it's really hard to back up from it, and in your discussion about facilities,

I mean, some pipelines have almost no facilities 1 2 to them. I mean, they're long, two pump stations, and some are very complicated facilities. 3 So, anyway, I think fewer is better to 4 5 start, and then add as you go. MR. TAHAMTANI: Thank you. Chuck? 6 7 All right, how about Michele? MS. JOY: Michele Joy. Liquids 8 9 committee. Just a point of clarification. 10 Serious means anything reportable to 11 DOT? 12 MS. DAUGHERTY: I have got an answer 13 for you. I anticipated -- I anticipated -- it was actually on the next slide. 14 15 Okay, so, while he's pulling it up, I 16 actually have the definitions up here. It's the very next slide, but try it again. There you go. 17 18 We also had a discussion on the liquid 19 team about creating a different type of category 20 with a different definition, and we had a lot of good debate and finally realized that that would 21

be very confusing to everybody. It would just be

another term that would be confusing. 1 2 MS. JOY: So, looking at your metrics, I saw serious, which now, I understand to be 3 fairly serious. 4 MS. DAUGHERTY: Yes. 5 MS. JOY: But I did not see 6 7 significant, which has been the point of debate, particularly around the dollar value. 8 9 MS. DAUGHERTY: That was the debate, of whether we would have a category in which we 10 11 exclude the dollar figure. 12 MS. JOY: Okay. 13 MS. DAUGHERTY: There was a request by one of the stakeholder members, that we create a 14 15 category, a new type of a definition where we 16 excluded property costs, that we would only look at the other factors in, I guess significant. I 17 18 can't remember if it was significant or -- I 19 think that's what it was, and just exclude the 20 property damage. We decided not to go that route, 21

because it would be confusing.

MR. DENTON: Todd Denton, liquids. So, I'm curious, and you might have touched on it and I missed it, but how much discussion you guys had around say, leading indicator statistics like line strikes without a consequence, and it may be a data collection issue, right?

Automatic shutdowns on -- you know, between -- of MOP or between MOP and 110 percent, things like that.

MS. DAUGHERTY: Our original discussion in the meeting was that we'd come up with any metrics that we thought would be useful, and then we would identify whether we had the data available to it.

But the reality is, is you know, we needed to come up with six to 12, and these are the ones that we were able to come up with and support.

I think step two, which we had talked about in the group, and I don't know if it would be the same group, are getting to those type of metrics, because there is too much out there, I

think. We have to collect the information, but there is a lot of information we could use to help guide safety efforts, if we had better understanding in some of the -- that data.

MR. DENTON: And you know, I think a lot of us are collecting that, but again, it would be -- it would be a serious effort, right, to gather that from everyone.

MR. WIESE: I've asked for permission to help swing at that one, if I can.

I think Linda answered for what we can do right now in the real short term. But I'd like to come back. Maybe we can talk later as a committee, about sort of a voluntary reporting system, you know, that's aggregated data on things like near-miss.

So, I think this is very much part of the SMS discussion. You know, how do we share information about near-misses, so that people can see things that are going on and say, "You know, hey, is that even possible here," you know, ask the question.

While I don't have a particular history here, you know, I see that happening now, that you know, we all know that -- the experience of the airline industry, for example, and we'd be happy to bring people in who run those systems and talk about how they evolve.

But I think it's a natural evolution.

Tomorrow, Brian Salerno is back here from BSEE.

Staci King is there representing BSEE right now,
but he could certainly tell you what they're

doing. They've moved into that arena about sort
of the near-miss reporting, you know, some other
leading indicators.

But I think that's a really good topic for future discussion. Thank you.

MR. TAHAMTANI: Craig?

MR. PIERSON: Craig Pierson, liquids.

This is a good time to tee-up a discussion that

can also come up tomorrow, with the significant

releases. These are 'or' conditions. These are

not 'and' conditions. So, each one is satisfied

and it triggers an incident, needs to reported.

So, if you look at the second line, you can have a very small release. It could be measured in ounces, that you could have a valve release and it triggers a \$50,000 valve repair. If you can't fix a valve, you have to repair it, and it's just not significant, and we ask that -- and it also triggers a report, within one hour, and you're trying to judge in one hour, do I have to repair that valve or not, and can I -- you know, do I have to replace it?

So, there is some awkwardness in that, that figures into the discussion tomorrow.

The other comment that I've got, as I looked at the metrics that you were contemplating, it looked like there was some focus on harm to people and the environment, as opposed to some incidents that don't have harm to people and the environment, and if I captured that right, I think we commend that.

I think that we don't -- we want to maintain the safety of the public and environment in our focus, and not get distracted with things

that don't touch that as directly.

MS. DAUGHERTY: Well, we also had, on the -- he took my control away again. Maybe this is a signal, we need to wrap up, but thanks,

Cameron. Now, we know who is really in charge,
all right.

But when you look at this item right here, the integrity targets, I think also the focus on what we can control, I think is very, very important. You know, I think that's -- you know, the -- one of the issues that we struggled with is how do you segregate what is really important versus all the information? How do you focus in on what is important?

We could put all sorts of information up here, but how you boil it down, like Ron said, down to six to 12, that will say, this will tell you something. You know, the first line will tell you, are people -- you know, up here, are people getting hurt or injured by pipeline operation?

You know, that's clear. That's

absolute. Can hit that, you know. Out on the right-of-way, where you're affecting people, you know, this is rate. Again, you know, barrels spilled. So, you got your liquid impact to the environment.

Here, you're talking about, are operators targeting the risks? Are they managing the risks? It's not so much the act of God kind of things. It's not the tornado that takes out the pump station or compressor station. So, did you have something?

MR. MAYBERRY: I just want to really
-- well, unless there were -- as far as to
address the -- I guess one of the reasons we had
-- we're looking for a lead -- we were looking at
leading indicators, really to Todd's point, and
that's why we did look at like HCA leaks, which
could be a precursor to another event, or HCA
repairs.

We really wanted to drive some predictive or some leading indicators, as opposed to just the lagging ones that were after an

So, that was our effort there. accident. 1 2 You know, we'll try to continue, as we're able to collect other information, we would 3 certainly try to enhance that. 4 Similarly on -- well, that's all 5 right. 6 7 MS. DAUGHERTY: I think your battery is dying. 8 9 Now, we did pick up MR. MAYBERRY: 10 some on the gas side too, related to the 11 significance. You could argue that these are leading 12 13 indicators, as well, and certainly, there are -well, I mean, they're definitely lagging, but 14 15 they were ones that did not involve harm to 16 people, but they did result in property damage. 17 MS. DAUGHERTY: How are you getting 18 1,000 tickets? 19 MR. MAYBERRY: We collect that 20 information. Excavation damage trend lines. know, certainly the leading cause of harm to 21 22 people with -- you know, so, we're tracking that,

You

as well on the distribution side. Some other 1 2 examples there. Thank you, Alan and 3 MR. TAHAMTANI: Any other questions? Craig, you still 4 5 got your card up. I'm sorry, Chuck? MR. LESNIAK: This is real quick. 6 7 know, the agency that I work for, we collect an enormous amount of data, as well and one of the 8 9 things we started doing is, we started putting our raw data out there, available for the public, 10 11 and we started getting interesting analysis and feedback from the public, based on that, some of 12 13 it valid, some of it not. Have you all thought about doing that 14 15 in the future and putting -- just posting the raw 16 data? MS. DAUGHERTY: We have a lot of raw 17 18 data out there, and you know, it's one of those 19 things that's very scary, but it's actually kind 20 of exciting, because you get to some of that cloud sourcing type concepts, where you get some 21 22 really smart people, you know, and I can tell

you, Carl does a lot of our analysis for us. 1 2 MR. MAYBERRY: I think Carl helped us with the bathtub curve. 3 MR. TAHAMTANI: All right, if no other 4 questions, I want to turn the meeting over to 5 Jeff, for some closing remarks. 6 7 MR. WIESE: Yes, that would be great. Well, first of all, thank you all for your time 8 9 I do want to remind, before we adjourn, 10 just a couple things. 11 One is that tomorrow, we will begin 12 promptly at 9:00 a.m. So, and I'll be even 13 prompt myself at 9:00 a.m. tomorrow. So, appreciate it if you would, as well. 14 15 I want to thank you for coming in 16 There is a lot of opportunity for the today. committee, and I happen to meet with Andy and 17 18 Chad and a few other folks, the other day, and we 19 were talking about the committee, and I think I'd 20 like to find some time tomorrow, to talk about that conversation with the other members. 21

So, help me, you know, not forget

22

this, but I would also say we've added some real strength to the committee recently. I'm going to pick on Paula for a second, by telling you that DOE does some fantastic stuff with data and making charts, graphs and what-not available. The EIA is really, you know, hands down. You know, we're not -- they're -- the EIA is probably bigger than all of OPS.

You know, so, it's really hard for us to compete with that, but it does offer a model for us to think about. They have really good analysts there, and we need to think about that.

My closing comments really have to do with the yin and yang of data collection. So, you know, if you bear with me, the philosophical part of this, after what I've gone through over the past couple of years, I can tell you that we used to collect all kinds of data. We used to collect data on hydro-test failures, right, to Todd's point.

But I still think that would be good information, you know, and it would help us

figure out what pipe was failing, you know, what kind of pressures was it failing at, was that a lot or was it a little?

There are a lot of things you can answer with it, but over time, the yin and yang of data at the agency is, whether they're Federal or State, there is countervailing pressure for them to stop collecting so much information, stop creating a burden, you know, on that, and so, it's a fair point, right.

I think agencies can collect too much data. They don't even use it, and you know, what's the point of that?

But it is -- to tell you that we rely on this data for a lot of things, and it's not just metrics. We're going to put on our webpage, people can look at it. It's the cost benefit analysis and these rule makings, and you know, I would just tell you that if you ask, pick one operator who has a really -- you have a bad accident.

If you take a look at what's on our

website about that accident, you know that that's not the true cost of that accident. There is third-party litigation out there, the cost of which probably dwarfs everything that's on our incident report, and I'm not picking on anyone by saying that. I'm just saying that that seems to me, to be the true cost of that incident, that had something as a root cause of it.

But it can't be used. We've tried. You know, if we -- we went through SEC filings, you know, and tried to pull data out of there that we could use and it's not allowable in our framework.

So, just telling you that some of the mandates we get, based on the data that we have available are very difficult to prove, very difficult, and if we had the true cost, we could probably justify it, but we don't, but I wanted to grant you that we collect stuff that we probably don't need to collect, and there is probably other stuff missing, that really should be collected.

I think the industry has a strong role 1 2 here to play, in collecting and organizing itself, you know. Near-miss data, I don't know 3 if we're going to get it -- if we're ever going 4 to get approval to collect it. Even if you agree 5 with this, getting the justification to collect 6 7 it, I don't know. You know, I'd be willing to try. But you know, I think the industry can 8 9 collect a lot of that data that is below the 10 reportable level, do some analysis and help 11 itself by figuring out where do we need to be 12 going to intervene, before things go wrong, 13 right. 14 So, sorry, not to -- that -- not a 15 16

Just a thought. So, any rate, thank you again, everyone. I'll turn it back to you and we can close out and head home.

MR. TAHAMTANI: Thank you, Jeff, and we are -- we stand adjourned. We'll see each other at 9:00 a.m. promptly tomorrow morning.

(Whereupon, the above-entitled matter went off the record at 5:00 p.m.)

17

18

19

20

21

22

A \$45,000,27,24
\$15,000 37:21 \$50,000 214:4
a.m 219:12,13 223:20
AA's 87:4
abilities 161:16 ability 19:15 60:2 95:15
203:9
able 95:16 99:13 139:8
140:9 144:7 168:20 211:17 217:3
above-entitled 106:4
223:21 absolute 200:12 216:1
absolutely 51:10 68:4,9
93:3
academic 118:9,11 accelerate 89:4 90:5
accelerated 99:13
access 145:14 170:13
accident 24:10 75:7 80:11 120:19,20
149:22 150:1 161:14
163:16 203:17 217:1 221:21 222:1,2
accidents 33:19 74:17
78:7 81:10
accomplish 36:22 60:15 138:11
accord 54:8
account 126:18
accountability 18:7 accountable 120:14
accumulation 70:9
accuracy 127:20
accurate 192:21 achieve 19:15 60:8
62:10 80:9 117:6
achieved 39:21 57:19 achievement 38:13
achieving 39:13 59:8
acknowledge 12:3
13:13 25:6 act 9:4 20:9 216:8
action 37:16 54:15
55:18 135:15 168:20
185:10 actions 20:9 53:19
54:22 137:17
active 73:17
actively 58:15 93:14 134:2 143:15
activities 26:6 56:17
101:22 120:5 122:22 149:19
activity 20:15
actual 70:12,14,15
137:20

adapting 17:5 add 145:17 153:2 157:20 197:22 207:5 208:15,20 209:5 added 161:11 220:1 adding 28:12 38:1 addition 112:17 127:18 additional 15:20 48:16 74:10,12 87:22 150:13 Additionally 20:6 129:6 address 20:7,13 59:1 86:16 87:6,7 146:3 148:5 164:4 207:1 216:14 addressed 20:10 147:9 148:17 149:3.18 163:17,21 167:10 addresses 145:7 addressing 144:20 adequacy 184:17 adequate 18:13 adequately 144:20 147:1 adieu 6:2 adjourn 3:18 219:9 adjourned 223:19 adjust 186:10 adjustments 43:13 206:2 administration 1:2 98:11 158:12 administrative 145:18 Administrator 2:13,14 3:5 4:16 5:5 7:11,12 11:22 12:2,11 22:6 25:2,7 26:20 28:3 49:4,9 50:9 51:10,14 51:21 68:15 69:12,15 69:21 88:1 90:9 93:9 98:1,13 100:3 105:4 108:5 109:6,7 170:4 adopt 77:22 119:22 151:8 adoption 65:4 advance 33:16,20 54:20 73:18 74:5,21 78:12 110:6 125:14 advanced 74:3,8,9 183:2 advancing 73:21 advantage 114:19 advent 130:9 advice 5:21 9:5 advise 9:16 advisors 18:9 **Advisory** 1:5,7 5:6 9:3

61:9 105:14 advocacy 43:7 advocates 36:14 43:3 89:14,21 **Affairs** 13:9 affect 182:19 208:7 **affirms** 135:5 afternoon 4:3 12:9 35:4 131:20 154:20 **AG** 87:12 **AGA** 42:7,12 43:15 44:4 46:4,21 48:2 49:3 51:2 92:1 117:12 **AGA's** 50:18 agencies 32:16 122:18 166:17 221:11 agency 15:4,8,22 16:18 59:20 108:12 147:4 170:22 218:7 221:6 agenda 3:4,6,8,10,13 3:15 4:18 8:21 11:20 11:21 20:17 22:2 25:8 25:13 28:19 106:10 125:1 129:21 **agendas** 19:13 aggregated 212:15 **aggressive** 4:18 19:13 89:7 96:13 aggressively 19:4 20:4 58:15 133:18,19 134:13 **aging** 12:3 ago 5:8,10 27:20 32:7 38:12 52:17 58:8 76:15 159:1 **agree** 51:16 98:20 101:22 108:16 110:18 181:14 194:5 204:18 204:19 223:5 agreed 168:3 196:9 200:9 206:19,22 agreement 29:22 agreements 145:2 ahead 16:8 17:19 20:1 96:21 98:15 101:13 112:2 131:8 172:4 185:19 **aimed** 66:17 **airline** 213:4 Airport 1:19 Alan 2:18 7:15 12:17 25:11 106:12 117:2 120:4 121:18 131:8 134:16 153:13 161:7 163:15 177:10 193:11 193:17 196:10 203:2 205:19 218:3 Alan's 161:11 alarming 181:21

alcohol 195:1 align 16:3 86:22 aligned 59:7 78:20 83:2 alignment 58:21 alliance 33:22 82:16 104:14 allow 44:1 146:8 195:4 allowable 222:12 allows 74:13 88:12 **amazed** 27:22 amenable 98:2 amendments 133:8 189:14 America 52:7 **American** 18:11 35:10 35:22 42:11 140:20 **American's** 14:18.19 amount 13:1 55:2 140:12 168:10 218:8 analysis 16:10 48:5 63:15 70:20 72:1 98:9 99:19 135:1 143:22 203:10,11 218:11 219:1 221:18 223:10 analysts 220:12 analytical 70:22 71:22 analyze 72:4 137:12 analyzing 65:18 Andrew 2:3 49:17 **Andy** 8:6 52:3,4,5 58:4 58:21 59:14 61:1 81:14 95:1 96:9 107:13 163:12,18 165:22 166:1 219:17 announced 118:7 announcing 127:10 **annual** 28:15,16 41:10 48:19 62:1 186:16 194:19 annually 43:6 anomaly 71:3 answer 32:20 42:4 69:10,16 70:6 79:8 80:2,3 152:22 153:19 158:10 163:9 204:17 209:12 221:5 answered 70:17 163:13 212:11 answering 70:7 anticipated 209:13,13 anybody 28:20 30:2 32:20 77:19 111:2 187:9 anymore 74:16 86:7 anyway 11:7 109:15 148:5 162:12 195:12 198:5 209:4 **AOPL** 62:1,7 **APGA** 35:2,12 36:1,13

11:8 18:3,17 19:6,11

19:19 21:19 58:19

37:16 38:2.12 39:19 40:2 41:17 141:1 **APGA's** 38:7 **API** 55:12 61:6,10 62:1 62:7 166:12 167:8 173:7 apologies 4:19 131:19 apologize 106:21 140:11 159:17 186:9 196:7 apologized 101:5 appearance 84:4 applications 83:16 130:7,12 applied 194:6 applies 97:9 apply 54:7 appointed 11:22 appreciate 12:22 37:21 43:20 81:4 100:4,8 101:14 105:5 106:20 108:4 123:2,11 132:19 176:6,9 219:14 approach 75:18 76:7 appropriate 82:10,10 146:9 168:4 170:5,12 appropriately 137:12 146:3 appropriations 15:15 approval 135:13 168:22 223:5 approved 167:7,7,9 Approximately 38:12 **aguifers** 166:13 arbitrate 25:16 area 17:18 46:7 48:4 63:2 64:11,18,20,21 67:13 129:20 193:1 196:18 areas 32:3 38:17 39:12 45:3 46:11 50:5,6,12 62:14 66:11 67:3 91:9 138:4,5 162:16 188:6 198:10 arena 116:11 118:18 123:22 213:11 argue 217:12 Arkansas 29:17 Arlington 1:20 **Armstrong** 2:7 6:10,10 **Army** 67:12 arrived 193:18 194:2 arrows 30:20 Artealia 13:7 as-built 45:17 **Ashburn** 150:5 aside 9:19 asked 5:2 27:10 30:6

36:8 121:1 165:20 212:9 asking 50:1 85:9 114:13 140:20 203:15 **ASME** 141:5 aspect 24:11 75:9 aspects 51:1 201:3 asserted 32:8 assess 16:2 18:5 201:15 **assessed** 55:3,5 assessing 16:9 assessment 138:21 164:17 182:18 assessments 48:14 126:2 138:3 151:7 assets 65:9 125:14 assist 17:16 47:16 assistance 47:7,12 **Associate** 2:14 4:16 associated 107:11 association 30:2 33:19 34:11 35:11,12,22 42:11 52:7 61:9 72:19 73:14 88:22 140:20 associations 74:20 assume 22:4 106:13 145:19 192:6 **assuming** 114:13 **assure** 14:19 123:20 147:11 attachments 54:18 attention 30:3 201:2 attorneys 160:10 161:8 attracting 118:17 audible 24:20 audience 9:3,19 25:22 32:21 73:1 audit 124:16,18 128:19 150:12 151:19 165:16 auditors 162:20 audits 38:22 160:21 August 1:12 173:11 Aunt 182:15 **Austin** 7:19 authorities 14:17 authority 23:22 25:16 31:22 32:2,9,13,18 73:8 166:9 authorization 27:15 147:16,17 158:2 authorize 88:9 Automatic 211:7 automatically 188:10 availability 144:18 available 10:7 29:7 30:14 63:18 68:19,21

95:6 135:8 145:4,8

172:7,9,20,21,22

194:12 195:13.22 201:20 211:14 218:10 220:5 222:16 average 77:11 182:14 186:16,19 **avoid** 96:7 award 40:3 113:22 128:3 aware 44:10 172:19 180:17 192:9 awesome 169:22 174:7 awkwardness 214:11

В

B 2:9 back 5:19 13:7 38:3 62:19 67:16 69:11 74:1 83:17 85:8 97:11 106:2,8 108:20 132:11 143:7 144:13 150:5,19 152:1 155:16 159:1 162:11 183:3 188:2 191:4,22 205:1 208:13,21 212:13 213:8 223:16 background 162:1 176:21 bad 6:6 22:22 24:12,12 74:17 178:15 198:19 198:21 199:3 221:20 balance 19:5 85:17 91:18 139:12 balances 90:1 **Baldwin** 2:15 7:9,9 **ball** 82:11 124:3 132:14 132:17 167:17 balloting 66:14 Ballroom 1:18 bandwidth 54:10 bar 21:20 **bare** 86:4 **barely** 90:11 **barrels** 216:3 **bars** 154:19 **base** 86:2 based 38:1 51:3 72:14 87:7 143:17 184:17 218:12 222:15 **basic** 179:21 **basically** 44:13 45:2 50:6 86:1 89:15 135:6 135:10 138:17 145:17 180:16 187:11 191:13 204:20,22 basis 56:17 134:5 bathtub 187:7,10,11 188:1,4 219:3

battle 83:10 91:10 bear 137:18 177:15 220:15 becoming 16:18 **beginning** 75:22 78:3 107:13 187:14 begun 88:18 158:12 behalf 35:10 42:11 52:6 72:18 80:5 96:22 **behave** 76:11 behaviors 55:14 **belief** 28:13 believe 42:8 55:13 60:1 73:15 74:16 80:10 82:3,7 87:18 105:17 141:13 144:19 145:1 159:4 193:2 200:17 believer 90:20 **believes** 36:15 59:19 74:16 145:9 belong 179:13 benchmark 168:4 benefit 68:13 109:22 134:21 135:1,7,9,19 136:6 143:21 144:3 164:14 221:17 benefitted 60:2 **Bert** 40:1 best 21:19 44:22 45:4 45:12 46:3,6,9 48:17 50:2,7,10,10,12 51:3 51:8 64:6 70:8 78:12 84:21 92:4,5 111:6 135:8 139:16 154:8 166:20 bet 49:13 84:11 better 4:6 16:12,13 18:6 38:7 49:2 57:1 62:15 63:9,11,14 64:6 67:7 81:14,15 94:7 107:22 108:6 112:14 117:4 121:17 126:5,6,16,18 132:10 158:5 161:18 164:16 171:15 176:1 178:21 202:2 203:3 205:2,4 208:19 209:4 212:3 beyond 39:19 44:5 54:8 71:17 85:11 91:3 113:5,12 124:19 126:5 138:5,6 148:8 152:15 big 81:6 120:16,17 122:20,20 159:15 163:2 189:2,14 **bigger** 76:13 134:12 220:8

battery 217:7

biggest 82:17 114:9

117:7

bill 99:4.11.20 104:13 Bruno 52:16 150:2 capture 136:5 Chad 2:6 4:12 6:21 158:14.15 164:7 **captured** 214:18 57:22.22 58:2 61:2 bit 10:12 11:6 16:20 81:13 92:13,14 94:9 **Bryce** 132:19 **carbon** 136:4 49:10 57:1 82:7 88:15 **BSEE** 104:12 213:8,9 card 11:12 24:19 33:8 96:18 97:3 159:18,19 95:2 105:8 109:13 Budding 38:5 80:22 90:16 218:5 160:13 219:18 **Budget** 135:12 113:15 120:15 122:4 care 29:20 81:19 112:18 **Chad's** 103:12 Chair 1:21 2:2 72:22 124:10 131:17 132:13 budgeting 158:3 124:20 137:18 146:18 147:10 **build** 176:18 careful 133:2 186:3 Chairman 24:1 148:16 149:11 152:6 **building** 56:16 66:14 **challenge** 45:18 59:1 188:14 152:21 159:21 160:6 **buildings** 142:8,10,11 **Carl** 2:11 7:20 27:1,2,5 95:11,20 96:9 114:18 173:12 176:5 177:17 **bump** 114:15 161:12 33:5,9 35:1 37:20 136:15 144:2 191:2 186:2,9 192:22,22 bunch 24:22 28:21 113:14,16 157:2 **challenges** 15:6 18:19 **Blame** 175:21 121:15 175:21 178:5 200:21 47:2 59:7 92:19 97:18 blessed 91:7 114:10 134:18 135:16 **burden** 221:9 219:1,2 **blue** 40:21 business 24:5,6 26:1 Carolina 7:2 35:9,16 177:14 189:4 190:9 challenging 53:7 **blurry** 186:9 74:1 100:18 120:9 41:1 board 21:21 43:6 52:20 124:20 carrying 151:6 208:12 56:11 58:19 82:14 **busy** 22:1 43:12 57:2 **Cars** 77:9 chance 13:11 35:6 103:18 94:18 case 35:14 82:2 84:8 37:12 105:10 butt 137:16 **Bob** 104:4 109:13 95:5,14 96:3 110:9 change 14:15 18:21 **boil** 215:16 **butter** 205:1,3 185:20 188:12 51:7 65:7,21 91:13 **bonus** 129:18 **button** 6:13 10:2 cases 85:8 86:22 99:5 120:16 155:6 174:15 **boo-boos** 187:17 183:14,19 184:1,9,13 198:3 203:15 book 8:22 184:19 185:17 188:22 changed 5:9 51:2 booklet 61:21 c 2:7,8 120:17,17 189:14 194:4,21 130:19 boosting 61:17 66:9 **CAAP** 114:2 118:10 198:2 **changes** 14:20 15:5 **boot** 129:11,12 cast 86:4 39:7 43:17 67:10 128:5 **boots** 160:16 calendar 20:4 137:8 casta 197:8 80:11 119:15 130:11 border 178:10 calendars 137:8 catalyzing 53:6 134:16 136:6,13 **born** 19:7 California 31:4,5 32:6,8 catch-up 4:20 142:19 143:12 179:14 boss 132:17 47:16 catching 6:6 182:10 category 191:16 209:19 changing 14:8 67:9 **botch** 48:8 call 3:3 26:15 27:18 **bottom** 197:7 57:5 122:3 124:20 210:10,15 characters 9:11 charge 30:8 215:5 bouncing 182:6 135:18 142:17 153:9 caught 171:6 bow 58:3 causal 197:14 charges 136:1 162:13 180:19 box 60:17 75:18 76:6 called 5:6 85:22 135:13 causation 202:8 CHARLES 2:9 **branch** 142:7 cause 52:18 203:11 chart 42:2 180:5,11 144:17 **brand** 162:19 calling 6:3 120:18 204:4 217:21 222:8 181:1 182:8 184:5 breadth 26:2 causing 78:6 185:16 186:8 201:7 calls 31:20 break 96:19,20,20 calm 187:20 cavern 166:21 204:20 100:1 105:9 124:9 caverns 166:13,22 charts 185:5 190:11 Cam 110:4 191:3 196:7 203:4 153:15 161:18 Cam's 132:12 168:5 **breaks** 157:11 celebrate 123:4 **Cameron** 2:20 7:4 204:14 207:7,8 220:5 **breath** 170:17 celebrated 123:1 **cheap** 77:18 10:15 12:18 134:1 Brian 104:12 213:8 146:6 215:5 cell 11:10 check 75:18 76:6 **brief** 172:6 center 40:2 41:2 checking 60:17 camp 129:12,12 **briefing** 3:5,6,8,11,16 Campbell 2:3 8:15,15 **CEO** 40:1 checks 90:1 106:11 42:9,10 49:8,13 50:16 **CEPA** 30:1,6 178:6,8 **Cheniere** 6:21 58:3 bring 5:18 14:5 15:21 51:13,16 68:2,5 90:17 certain 32:14 51:1 92:15 27:7 108:20 115:21 180:18 182:16 194:21 Cheryl 2:3,21 7:8 8:15 Canada 30:2,5,7,10 118:8 123:4 139:8 Canadian 30:1 31:1 certainly 34:6 43:21 8:20 10:16 11:18 47:12 68:11 71:6 82:6 12:19 42:8,9 49:5 213:5 candidate 199:15 bringing 162:1,8,13,19 90:6 92:9 98:10,14 52:2 100:14 121:7 capabilities 16:15 157:5 119:5,7 122:7 124:15 broadcasting 169:11 61:18 66:9 capability 161:10 chiefs 72:21 **bronze** 39:14 126:11 129:22 130:3 capacity 69:7 146:17 164:7 176:11 chime 31:17 95:1 **Brookings** 6:19 brought 40:9 196:14 213:10 217:4 **choice** 57:9,9 capita 202:11,19 **brown** 180:13 217:13,21 **choose** 9:14 186:4 captive 95:9 Brownstein 104:15 **CGA's** 39:9 188:15

chose 25:17 **chosen** 179:3 Christie 9:17 Chuck 7:18 169:17,18 172:15,18 175:22 176:3 181:10.13 209:6 218:5 **cite** 38:3 **citing** 32:16 citizen 74:3 **citizens** 35:14,15 **City** 1:18 6:10 7:1,18 35:9 86:8 122:15 128:10 civil 189:15 clarification 156:13 209:9 clarified 52:22 **clarify** 166:20 clarifying 153:17 **clarity** 156:15,19,19 167:14 class 94:7 129:1 149:9 **classes** 129:5 clean 25:17 28:12 119:1 clear 193:3 198:19 199:1 215:22 **cleared** 152:11 clearing 109:16 clearly 22:19 59:19 72:12 103:4 close 104:10 118:19 136:15 164:12,13 167:10 193:4 223:17 closed 150:1,16 151:14 151:21 152:3 167:6 closely 73:13 83:2 **closer** 170:10 closes 173:19 closing 21:6 100:2 105:3 124:17 219:6 220:13 cloud 218:21 **clout** 90:10 clues 190:9 **clunky** 176:6 **CO2** 37:7 149:12,13 201:17 code 85:11 90:19 codifying 84:21 collaborate 58:20 103:10 110:19 111:1 112:14 118:21 collaborating 43:1 81:5 collaboration 82:3 110:21 111:1,3,18,22 **collect** 212:1 217:3,19 218:7 220:18,19 221:11 222:19,20

223:5.6.9 collected 222:22 collecting 212:6 221:8 223:2 collection 16:10 39:11 45:16 127:13 148:22 211:6 220:14 collections 149:20 **collective** 50:16,18 103:10 collectively 117:9,15 118:21 123:18 151:17 collects 45:21 Colonial 8:11 color 159:21 160:1,7 Colorado 32:12 42:20 Columbia 93:4 combat 84:5 combination 159:9 combine 131:20 come 23:2 31:6,15 40:7 44:13 49:19 59:5 60:16 73:10 78:16 83:2 86:13,14,18 89:2 94:6 99:12 103:3 106:17 115:2 117:17 126:15 129:15 137:13 141:17,18 143:10 152:9 177:4 188:2 191:22 208:13 211:11 211:16,17 212:13 213:19 comes 30:4 32:2 56:15 108:17 173:22 coming 4:14 5:14 28:8 53:11,13 56:4 58:6 65:22 80:15 97:15 101:15 105:2 106:8 114:1 116:21 125:3 125:11 129:5,13 140:8 142:4 150:2 169:21 179:20 185:10 219:15 commend 214:19 comment 5:17 9:7.15 22:12 23:9 37:16 83:7 108:19 112:16 132:22 142:12,20 143:8 144:21 145:1,12 170:13 171:21 172:17 173:5,7,19 175:2,2,9 176:3 214:13 comments 38:3 49:3 83:5 91:5 92:16 97:3

98:4,11,16 105:3

126:8 143:5 165:1

110:18 119:9 123:12

167:9 170:14 172:20

173:3,17,21 176:5,14

176:17 220:13 **Commerce** 159:2.5 **commercial** 142:8,10 commission 7:14 8:1 9:3 87:2 88:5,12 94:8 98:19 commissioners 73:14 94.5 commissions 22:20 73:8 87:11 88:8 92:5 commit 58:7 106:22 171:15 175:22 commitment 18:14 44:6 52:14 53:22 56:6 56:7 62:8 82:8 103:21 109:1 136:13 commitments 55:8 56:8 136:8 137:14 committed 15:4 19:10 21:8,9,16 43:1 53:1 55:8,11 56:13,14 75:15 76:20 80:8 108:12,13 109:16 113:18 114:7 committee 1:5,7 3:3 5:2 5:6 11:8,12 19:20 21:19 22:9 23:19 26:14 27:18 42:1 57:19,20 58:22 61:9 61:10 62:7 81:5 100:6 100:7,11,19 105:8,14 108:21 110:9 112:11 115:20,22 116:7 119:17 122:6 137:20 139:9,13 159:5,20 169:19 170:7,12,18 170:21 171:11 174:16 187:9 206:14 209:9 212:14 219:17,19 220:2 committees 1:17 13:16 18:4,18,20 19:3,6,11 19:12 46:11,15 committing 51:19 commodity 99:11 common 33:22 56:12 56:16 60:8 80:10 82:16 104:13 135:3 communication 43:22 84:12 community 31:11 **companies** 42:13,14 44:4,13 45:9 46:20 48:4 49:19 51:11 62:9 77:21 86:1 89:7 114:22 122:17 123:6 163:4 182:16 184:2 184:22 185:1,14 194:15,18,20 195:6,8

company 49:22 51:20 61:8 77:13 81:19 87:1 89:22 163:7 190:1 195:7 compared 41:6 70:14 202:19 comparison 151:22 **compete** 162:6 220:10 **competing** 95:17 96:16 **competitive** 95:7,13,18 96:17 compiling 65:16 complete 4:7 152:19 completed 148:12 completely 86:6 complex 155:17 **compliance** 18:7 38:8 39:19 40:6 43:18 46:13 74:1,15 76:16 85:7 140:21 189:15 compliant 184:2 185:1 complicate 157:19 complicated 209:3 comply 141:21 158:4 complying 145:9 compressor 216:10 Comstock 101:3 concepts 119:19 120:1 120:6 163:6 218:21 concern 76:5 155:11 200:4 concerned 36:3,6 concerning 39:5 concerns 54:12 147:8 condensing 37:8 condition 180:10,13,17 199:15,17 conditions 180:19 182:1,3 199:4 213:20 213:21 conducive 130:12 conducting 49:7 conducts 38:22 conduit 48:9 **conference** 28:16,17 88:19 confident 82:9 **confirmed** 143:4,5 154:3 155:9 confusing 209:22 210:1 210:22 Congress 15:15 27:16 80:13 114:11 149:4 Congressional 3:11 147:15 connect 193:22 connected 148:15 194:15 connectedness 146:15

conscripted 10:21 consensus 101:8 194:3 **consequence** 138:4,5,6 211:5 consequences 186:5 consider 50:8 considerable 18:14 considering 206:4 consistent 91:1 93:2 consistently 102:6 constantly 39:20 construction 45:16 66:6,7 141:18 189:1,5 consultation 19:9 consumer 89:13 91:6 consumers 73:7 consumes 43:3 consuming 38:6 consumption 36:16 37:10 202:12,19 contacted 31:6 contemplating 214:15 **contentious** 96:4 167:2 CONTENTS 3:1 context 179:1,7,18,21 182:8 183:7 188:16 194:5,9 197:22 200:7 continue 14:11 17:9 20:7 21:20 43:4 60:22 75:17 87:7 96:13 97:21 151:11 197:3 217:2 continued 13:15 continues 18:21 22:15 43:22 45:18 75:17 96:8 161:20 **continuing** 20:12 44:5 135:17 196:19,21 continuity 167:1 continuous 15:4 82:5 continuously 54:2 Contra 31:4 34:8 contractor 45:15 77:12 contractors 71:14 contrary 108:12 **contribute** 116:11,13 117:17 control 27:17 28:6 139:17 165:8 215:3,9 conversation 16:11 18:1 42:22 53:7,15 56:18 57:15 91:14,20 92:8,10 156:4,22 177:7 219:21 conversations 158:11 169:8 175:13 cooperative 84:12 coordinator 121:4 copy 8:22

core 83:15 corollary 189:7 **Corp** 67:12 corporate 122:16 Corporation 7:14 correct 51:13 58:13 106:18 185:5 195:10 199:3 204:3 correlated 202:10 correlates 202:11 correlation 143:19 202:4.7.13 correlations 202:22 corroding 77:8 corrosion 138:21 cost 36:6,20 37:1 93:7 93:11.16 95:4 97:12 99:12 109:22 133:14 134:21 135:1,7,9 136:3 142:17 143:21 144:3 164:14 221:17 222:2,3,7,17 cost-effective 41:19 Costa 31:4 34:8 **costly** 36:19 costs 86:3 93:1 97:19 136:4 210:16 Council 48:9 88:20 **Counsel** 134:4 Counsel's 7:6,10 12:20 **count** 118:4 **counted** 100:22 counterparts 23:19 58:17 counterproductive 179:14 countervailing 101:11 221:7 counties 32:12 35:16 country 14:13 32:5 47:14 79:1 county 6:20 31:4,8 32:15 34:8 couple 11:9 44:3,7 100:2 102:1,21 108:9 119:16 129:4,20 144:9,13 166:8 167:11 172:14 178:12 178:12 179:21 183:8 219:10 220:17 course 12:7 46:2 50:4 72:3 81:4 123:9 137:22 138:8,14 139:11 144:16 147:13 150:3 155:8 197:14 court 10:3,4 11:18

112:15

160:12

cover 8:20 122:2

covering 49:12 122:1 **covers** 122:14 197:5 crack 63:11,12 64:14 68:5 70:7 71:4 82:19 **cracks** 63:15 Craig 2:10 8:2 69:16 70:7 121:9 153:16 156:20 213:16,17 218:4 crammed 28:1 create 9:6 64:10 210:14 created 35:17 38:13 150:13 creating 66:2 120:18 161:14 209:19 221:9 **credibility** 83:13 84:6 credit 84:14 116:14 crew 65:21 crime 90:12 122:1 cringe 92:2 **cringing** 183:11 criteria 38:21 138:7 180:19 **critical** 18:9 19:15 118:13 179:18 cross 196:17 cross-section 166:15 crossed 5:8 crossings 67:6,8,14 159:13,14 crucially 155:20 Crystal 1:18 **cue** 131:16 cultural 91:11 92:11 **culture** 24:11 44:20 49:15 54:1 55:14 61:16 64:22 65:9,10 65:14 75:5,9 78:13 79:21 81:10,22 91:2 102:20 105:17 117:6 120:7 Cummings 13:6 curiosity 68:16 curious 94:19 153:5 160:6 211:2 current 3:7 72:22 75:4 112:7 130:13,17 148:17 currently 52:9 55:4 66:13 104:18 149:4 150:9 195:21 206:11 **curriculum** 128:18,19 128:20 129:12 curve 41:22 119:18,19 132:14,17 142:9 187:7,10,11 188:2,4 219:3

covered 11:19 128:1

129:19 153:14

cusp 119:14 customer 99:3 customers 36:2,4,4,7 36:16 37:3 40:18 91:18 95:9,10 96:6 99:4,11 cut 156:10 185:18 206:18 207:13 cyber 47:22 48:13,13 48:16 cycle 182:13,16,19,20 cycling 182:20

D 2:10 **D.C** 115:5.7 Dakota 6:20 **Dallas** 9:18 damage 23:6 33:16,17 33:20 34:2,9,18 47:3 78:4 82:13 103:15,22 104:6,8 109:11 113:4 113:7 122:22 133:6 137:1 139:19 210:20 217:16,20 damages 135:21 dangerous 177:21 dark 40:2 data 16:10,14 30:5 39:11 41:10 45:22 62:14,15 63:3,8 66:2 68:8 69:18,19 70:10 72:2,4,5 81:15 102:10 102:14 126:9 127:9 135:18 178:19,21,22 179:6,10,20 184:21 201:20 203:20,22 204:1 207:1 211:6,14 212:4,15 218:8,10,16 218:18 220:4,14,18 220:19 221:6,12,15 222:11,15 223:3,9 database 65:16 66:2 69:8 date 128:17 139:22 141:12,22 153:6 **Daugherty** 2:16 119:8 119:11 161:3 163:11 177:11 181:9,16 184:6 197:10,17 198:6 203:12 204:6 205:17 207:20 209:12 210:5,9,13 211:10 215:2 217:7,17 218:17 **Davis** 1:19 day 12:8 52:17 104:19

127:6,8,8,12,13 148:1

123:2 125:21,22

170:17 175:9 177:9 180:10,13 219:18 days 20:19 27:18 29:13 104:20 129:20 130:19 180:21.21 de-certification 145:16 de-certifying 145:18 deal 23:8 92:16 96:21 127:2 141:1,13 144:17 149:1,8 dealing 28:15 65:21 87:21 133:10 138:19 141:5 144:15 151:17 deals 23:8 86:12 138:2 138:15,22 142:22 dealt 93:4 133:8,13 142:9.22 144:22 dear 45:15 109:10 149:10 debate 156:16 201:18 208:2 209:21 210:7,9 debates 5:11 decade 76:14 186:15 197:7 198:13 199:19 decades 197:20 **December** 137:19 decided 76:16 210:21 decides 27:19 decisions 39:5 54:13 decrease 183:22 decreasing 183:19 184:8,18 dedicated 42:17 dedication 18:16 deed 15:8 deep 15:13 defaulting 189:13 defense 104:15 116:6 define 54:15 82:1 defining 55:14 definite 202:13 **definitely** 69:6 194:5 217:14 definition 209:20 210:15 definitions 209:16 degrade 199:8 degraded 198:18 degree 199:21 **degreed** 117:21 delay 146:7 174:14 deliberate 57:5 deliberative 147:5 delicate 85:17 deliver 4:21 175:16 delivered 111:15 delivery 73:6,6 demanding 13:17 **demands** 18:12

demonstrate 206:10 demonstration 66:4 **Denton** 2:7 8:13,13 71:19,19 159:12 181:4,7,7 211:1,1 department 1:1 6:11 7:16 36:11 70:4 89:3 118:4 134:4 departure 75:8 depending 199:16 **depends** 117:3 depicted 199:9 deployment 66:15 deriving 50:10 description 200:7 descriptions 194:6 design 30:15,19 40:7 designated 161:5 designed 128:21 146:7 **desire** 155:5 despite 108:11 114:12 detail 111:10 177:4 detailed 47:1 **details** 155:8 detangle 190:8 **detection** 63:11,15 64:14 66:12 68:6 70:8 71:4 82:20 126:9 138:5 143:16 **determine** 43:7 187:2 195:5 determines 97:14 182:17 develop 64:2 143:21 166:12 207:7 **developed** 65:6 72:2 166:15 developing 63:17 66:3 66:5,11,22 118:17 128:18 129:11 130:14 130:15 135:9 149:14 164:4 193:12 development 16:14 38:18 55:12 64:14,20 69:4 72:15 83:19 84:15 117:11 122:19 128:7 178:3 devil 155:8 **DFR** 37:17 diagnosis 64:15 dial 172:5 dialogue 43:20 125:12 134:7 dice 195:16 dictate 174:2 dictates 135:6

difference 94:3 113:7

136:11,12

differences 198:11 different 29:9 46:10.19 49:21 50:12 51:9 57:8 62:9,18 63:3 93:5 94:1 97:7 117:20 118:9 121:15 154:7 157:11,11 166:17 174:2 181:20 182:10 182:13 183:2 188:18 189:6 192:9,13 195:15,16 201:6,7,11 201:13 209:19.20 difficult 43:10 162:5 197:1 222:16,17 difficulties 156:22 difficulty 196:19 digest 5:18 171:21 175:2,7 diligently 60:1 **DIMP** 76:1,1,2 83:20 84:9 86:12,12 87:8 142:7 direct 37:15 direction 58:13 60:7,14 105:21 179:2,11 directions 61:17 65:1 directly 201:3 215:1 director 13:6,8 27:6,21 121:3 183:10 **Directors** 43:6 52:20 82:15 **DIRT** 39:9 disadvantage 170:20 disbanded 206:19 discourse 19:9 discovered 195:19 **discovery** 143:4,5 154:3 155:9 discrepancies 198:7 discuss 108:19 127:15 137:13 discussed 42:2 194:7 discussing 19:22 20:18 151:12 199:20 discussion 46:22 101:10 139:9 142:14 142:20 143:14 154:6 200:2 204:15 205:21 207:16,21 208:3,22 209:18 211:3,11 212:18 213:15,18 214:12 **discussions** 5:4 57:11 139:10 167:2 208:10 disreputable 9:11 disrupt 9:13

distinguished 13:20 distracted 214:22 distributed 35:6 distribution 38:16 41:10,11,22 42:14 83:21 89:12 196:6,10 197:4 198:14,16 200:1 218:1 distributions 41:12 districts 35:17 ditch 79:12 diverse 26:8 42:16 59:5 93:2 122:9 diversity 19:8 divided 121:21 division 86:21 120:19 161:15 183:11 divorce 202:10,20 document 75:2 141:8 documentation 45:17 125:8 documents 145:14 172:7 **DOE** 36:12 37:14,17,19 38:4 71:7 220:4 doing 4:19 10:19 11:5 16:5,12 25:21 29:14 31:3 33:14,20 34:8 44:4 45:4 48:2 50:5 50:18 51:4 63:10 64:10 67:2 68:14 70:20 71:1,4,13 74:2 74:4,7 77:1 79:19,20 80:14,16 90:21 99:15 101:20 102:14 103:9 104:6 108:3 117:14 119:12 122:11 123:22 125:4,19 147:2 157:8 160:21 189:16 194:4 196:21 203:10 207:4 213:11 218:9,14 dollar 210:8,11 **Dominguez** 2:13 5:4 7:11,12 12:2,12 22:6 25:2 26:20 28:3 49:4 49:9 50:9 51:10,14,21 68:15 69:12,15,21 88:1 98:13 100:3 105:4 133:17 138:9 159:6 170:4 **Don** 104:20 door 9:15 doors 89:21 **DOT** 40:13 98:2 138:1 209:11 downstream 48:6 downturn 114:20 **DR** 7:16 70:3,11,13,16 70:19

disrupted 9:11

distance 193:4

distilled 176:14

draft 71:15 Drake 2:3 8:6,6 52:3,5.5 166:1,1 169:13 draw 156:3 191:18 201:2 drawing 50:15 drill 5:18 47:18 148:4 207:8,18 drills 47:8 drive 15:9 37:2 62:5 179:11,12,13 216:20 driven 107:18,18 178:19 drives 36:20 driving 17:2 182:5 drug 27:19 31:20 195:1 drv 156:11 dwarfs 222:4 dwelling 186:2 **Dyck** 183:10 dying 217:8 dynamic 207:8

earlier 22:12 125:2 135:5 196:13 200:5 203:14 early 130:14 170:15 174:5 easy 93:18 156:7 echo 97:2 economic 85:5 economy 15:5 114:20 edge 116:20 188:4 edit 149:4 educate 95:21 120:5 188:6 **educated** 101:10 education 91:2 122:4 181:18 educational 91:11 **effective** 16:7 19:18 44:1 139:22 140:9 141:12,22 effectively 14:18 84:11 84:19 96:4 139:17 141:2,14 147:2 efficiency 16:6 36:10 36:13,14 179:15 efficient 19:18 36:18 37:2 44:1 93:1,7,11 93:15 95:6 96:1,1,15 efficiently 129:10 effort 21:3 63:6 113:6 113:18 126:11.22 178:6 212:7 217:1 efforts 12:22 17:21 20:16 47:17 148:17 178:3,9 212:3

EIA 220:6.7 eight 18:22 185:8,8,12 either 75:12 88:5 143:11 **electric** 36:17 37:5,6 47:11 electricity 37:6 electronically 157:9 element 50:14 **elements** 158:14 **Eleven** 148:16 email 145:6 157:10 **emergency** 43:2 61:17 66:9,15,16 104:16 155:22 emission 116:7 **Emma** 182:15 emphasize 105:13 188:13 employed 118:15 167:18 **employee** 38:18 42:18 49:21 128:6 **employees** 15:21 40:18 44:15,17 47:14 51:19 71:20 77:12,13 employing 117:5 **employs** 15:11 **encourage** 25:7 39:18 64:1 88:2 93:19 98:10 encouraged 34:10 195:9 encouraging 74:19 87:11,13 169:20 ended 143:8 197:5 ends 142:12,21 173:5 energy 6:22 7:17 8:7,16 13:1 14:7,13 15:6 30:1 36:10,11,14,15 37:10 42:10,13 54:10 58:3 70:4 91:19 92:15 115:16 159:2 166:2 enforcement 14:17 17:6 26:6 79:22 82:22 145:20 161:5.9 183:11,14,14,19 184:1,9,17,19 185:10 185:17,20 188:21,22 189:7,19 196:20 197:1 engage 5:3 21:19 26:1 54:9 60:11,12 88:19 89:9 100:6 engaged 21:15 48:21 55:11 58:11,11 78:10 82:3 100:6 engagements 115:15

engages 97:7

engineer 40:6 41:15

67:12 engineering 15:11 46:12 122:15,16 **engineers** 162:4,15 **enhance** 64:8,9 217:4 enhanced 21:13 61:14 62:12 77:17 enhancement 42:18 enhances 15:10 enormous 218:8 ensure 14:18 19:7,17 43:18 58:12 124:1,1 147:7 ensuring 125:9 entering 29:22 enterprise 117:19 118:22 enthusiasm 82:11 entire 62:8 entirely 51:9 **entities** 35:18 155:21 entity 94:21 105:20 entry 24:5 60:18 110:14 environment 95:8,13 208:8 214:16,18,21 216:5 environmental 32:9 104:15 116:5 135:22 equal 201:22 equally 21:9 equivalent 198:22 **especially** 37:3 122:21 124:9 130:1 141:17 144:2 essence 17:4 essential 100:18 essentially 125:21 evaluation 188:20 event 9:17 216:18 events 187:13 **eventual** 199:15 eventually 108:20 **everybody** 6:13 35:4 50:21 112:3 119:9 120:11 172:20.22 177:2 208:12 209:22 **everyone's** 112:18 evidenced 196:15 evident 180:22 evolution 56:14 83:18 102:11.18 213:7 evolve 17:9 50:21 51:7 103:7 213:6 **evolved** 100:16 **exact** 108:16 exactly 175:5 example 59:11 72:1 88:20 89:11 111:9

194:15.17 198:12 208:1 213:4 examples 29:9 32:4,11 179:5,22 183:9 218:2 **excavation** 33:17 133:6 137:1 139:19 217:20 excavators 43:3 excellence 38:16 55:16 55:16 **excellent** 8:17 147:3 176:19 exception 138:8 excess 133:11 136:21 142:3,5 148:19 150:6 **excited** 4:13 119:13 **exciting** 4:21 74:6,19 114:1 119:10 120:10 160:5 218:20 **exclude** 210:11,19 excluded 201:17 210:16 executing 71:5 execution 60:20 executive 13:6 27:6,21 51:20 135:1,2,3,4,5 executives 45:2 76:17 **exemptions** 82:21,22 **exercise** 70:22 116:1 167:15 exist 17:4 75:4 **expand** 16:19 142:5,7 expanded 15:16 **expanding** 14:9 15:16 61:16 64:21 114:6 138:4 Expansion 138:20 **expect** 50:21 157:18 173:11 expectation 90:20 expectations 51:2 **expensive** 37:4 38:6 experience 14:5,11 50:17 97:12 162:16 162:16 213:3 experienced 50:22 experiences 47:13 **expertise** 13:21 15:13 explain 49:10 **export** 130:1,2,22 **exposed** 199:5 expressing 76:5 extension 140:21 extensive 15:12 externally 121:18 **extremely** 133:17,19 eyes 32:7

112:13 117:12,13

Washington DC

F

F 0.0 F 0
F 2:3,5,8
fabric 56:20
face 18:19 89:17 175:16
faced 80:2
faces 13:4
facet 116:8
facilitates 45:22
facilitating 12:21
facilities 130:10,21,22
131:1 208:4,22 209:1
209:3
facility 128:10,12 208:5
facing 47:2 134:18
fact 15:18 42:19 62:22
114:12 123:1 168:1
factor 17:11
factors 197:14 210:17
failed 77:13
failing 221:1,2
failure 52:15,16 150:5
failures 107:19,20
186:21 220:19
fair 168:10 175:9
221:10
fairly 26:8 28:11 101:21
122:9 164:3 177:3
210:4
fairness 101:17
fall 127:1 141:16
falls 86:9
familiar 63:19 116:2
180:15 187:9
family 104:16
fancy 27:7
fantastic 190:20 220:4
FAQ's 141:19
far 47:15 94:12,15
99:11 114:17 123:20
125:7 149:10 160:14
180:9 190:17 198:1
201:5 204:7 206:3
216:13
farther 157:19
fascinating 116:3 132:4
II I ascinatino 116.3 132.4
132:5
132:5 fast 171:19
132:5 fast 171:19 faster 86:3,17
132:5 fast 171:19
132:5 fast 171:19 faster 86:3,17
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8 200:17
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8
132:5 fast 171:19 faster 86:3,17 fatalities 135:22 191:8

feedback 14:1 19:18 88:15 218:12 feel 45:13 170:19 fell 80:22 **Felt** 2:8 8:11,11 fender-bender 187:17 **FERC** 94:14,20 95:21 97:4,7,11 130:4,6 fewer 184:13 185:17 208:19 209:4 field 78:2 96:12,16 120:16 122:1,2 129:8 159:5,10,21 160:9 161:2,6 167:1 189:12 203:15 **fifth** 49:1 fight 84:20 figure 28:19 29:12 63:7 83:3 107:15,22 111:5 113:10 115:6 116:10 116:19 136:11 162:10 175:10 204:13 210:11 221:1 figured 132:18 201:22 **figures** 214:12 figuring 96:11 223:11 file 98:11 **filings** 222:10 fill 137:8 162:11 **final** 37:15 43:14,18 104:8 109:11 113:4 133:4,6,7 139:20 140:15 149:6,6 150:9 152:11 finalize 205:13 206:7 finalized 144:13 150:18 finally 66:5 209:21 find 17:22 25:7 62:19 82:7,17 85:18 116:2 118:8 157:4 176:13 176:16 189:20,21 190:9,10 219:20 finding 63:5 182:2 184:11 189:6 finish 33:5 111:13 152:12 finished 111:13 149:8 150:12 168:1 171:21 fire 6:11 23:6 26:18 28:4 firm 90:20 first 11:21 12:5 24:2 27:1 33:8 37:14 40:22 47:19 61:14 65:3 66:18 73:16 76:2 77:5 81:3 90:18 100:4,10 102:5 106:13 131:15 150:20 180:4 185:16

fit 120:3 125:9 fits 40:19 five 10:9 26:10 27:8,12 52:17 58:8 86:6 94:2 97:11,13,15 149:18 160:10 163:18 165:5 175:5 five-gallon 191:14 fix 23:15,15 190:1 214:5 **fizzled** 177:14 flaq 174:8 flashlight 103:13 **flavor** 201:14 flaw 62:21 Fleck 2:4 6:15,15 44:10 85:3,4 157:17,21 flies 89:16 flip 184:15 191:4 floor 24:4 90:19 110:15 flow 133:11 136:21 142:3,5 148:19 150:7 flurry 140:3 flush 103:11 **flushed** 102:8 focus 46:11 47:1 60:21 62:3 65:1 66:20 67:17 99:3,7 113:5,11 117:7 120:21 122:20,20 124:15 147:1 160:3 161:15 196:17 200:21 200:22 214:16,22 215:9,14 focused 20:1 59:8 60:19 61:13 62:13 65:9 117:9 132:2 147:12 159:12 162:21 177:2 197:14 focusing 99:2 folks 10:16 26:11 30:5 45:19 52:13 53:16 88:16 92:11 120:6 160:9,21 162:10 166:15,16,16,17 168:2 186:13 189:10 189:12 198:17 200:10 203:19,20 219:18 **follow** 68:16 92:15 135:7,11 165:12 174:12 followed 53:20 102:9 **follows** 125:16 force 17:3 **forcing** 36:16 forefront 38:15 foremost 12:5 forget 219:22 forgetting 103:2 forgive 103:2 111:6 155:14

form 72:16 87:19 formal 168:15 formalized 66:3 **formally** 11:7 168:18 formula 135:19 forte 169:15 forum 115:14 forward 4:10 12:6,13 14:2 16:1,21 18:3,10 18:20 19:12,14 20:7 21:12,22 45:10 48:18 50:8 54:14 57:10,16 59:12 60:22 74:21 75:10 80:7 82:11 88:11 91:13 102:18 105:7,11,12,15 108:1 108:21 110:20 111:6 112:12 116:9 124:4 125:7,11 129:16 131:3,4 154:9 158:17 158:22 169:3 191:20 192:3 fought 109:4 found 63:2 86:15 162:4 185:14 189:10 foundational 17:11 **founded** 53:19 **four** 38:17 54:19 61:13 62:4,5 104:11 139:12 149:2 160:12 165:4 fourth 61:17 66:8 frame 137:20 164:2 188:10 190:15 191:22 framework 102:7 110:3 110:6 222:13 frankly 50:20 91:19 92:4 101:6 freed 152:9 frequently 47:10 Friday 127:11 friend 110:13 friends 24:8 36:5 front 9:17 163:8 167:15 188:4 frustrated 132:22 fuel 37:10 57:8 full 61:21 62:8 64:1 120:12 175:12 full-time 26:1 fully 19:10 56:21 136:5 fun 202:21,22 function 55:15 81:17 functioning 163:3 fund 104:15 116:6 fundamental 55:13 83:15 84:22 92:19 fundamentally 56:19 funded 114:16 funding 92:17

198:12 215:18 219:8

getting 57:15 63:3 grad 118:15 funds 128:3 79:3.4.12 80:6 84:6 furnace 36:10 37:7,8 73:12 87:20 108:14 85:6 92:2 98:6 102:18 graduate 118:15 furnaces 36:12,18 37:2 109:1 128:19 131:19 106:11,14 107:6,8,16 grandfathered 139:3 grant 34:12 70:3 118:16 further 6:1 20:12 36:20 132:14 133:19 135:13 108:8,8 109:12 65:12 127:15 166:6 139:12 140:13 144:11 110:21 113:5 116:8,9 160:10 222:19 graph 202:10 156:21 174:6 207:10 120:12.19 124:13 176:22 future 15:2 42:3 59:12 211:21 215:20 217:17 125:3 127:22 131:2 **graphed** 193:19 90:8 97:21 103:4 218:11 223:6 134:11 136:17,19,20 graphic 41:9 149:18 213:15 218:15 ghee 208:14 137:5 139:20,21 graphs 220:5 Gilliard 13:7 141:13 142:2,19 grateful 124:7 G give 25:20 41:2 57:22 144:3,4 145:12 148:7 gravitated 207:12 **gain** 16:5 68:7 86:1 129:14.18 151:11 154:5 156:2 gravity 138:7 Gale 2:17 7:3,3 132:12 136:17 139:21 146:20 157:10,20 160:21 gray 32:3 132:18 153:21 154:2 160:1 161:18 173:12 161:1,6,7,9,13,21 great 16:3 24:17,21 154:5,11 156:12 173:19 183:8 201:13 162:13 163:1 172:4 45:3 46:13 48:22 50:5 164:21 165:3.7 given 13:17 23:22 176:2 177:8,12,16,22 59:16,17 73:8 90:18 172:17 174:10,21 110:2 111:15 140:13 179:17 180:8 182:19 177:6,13 190:18 Gale's 124:5 gives 132:9 168:5 183:8,12,18 184:15 219:7 187:16 188:17 189:3 galore 112:19 giving 132:12 189:3 greater 16:5 196:17 189:8 190:12 191:3,4 greatest 60:2 game 89:18 123:2 gamut 197:6 glad 26:14 32:20 42:4 191:19 192:15 193:20 greatly 12:22 176:15 gander 119:21 87:14 103:8 126:8 193:22 194:11 195:10 Grid 6:16 85:4 157:22 131:6 148:4 152:22 195:20,22 203:18,19 ground 33:22 56:12,16 **Gant** 2:4 7:16,16 70:3 glasses 12:4 205:14 206:5,9,10 82:16 104:14 125:15 70:11,13,16,19 **glue** 78:14 208:12 212:20 220:2 160:16 199:8 115:17 **go** 8:21 11:20 24:1,2 221:16 223:4,4,12 GAO 3:12 20:13 83:17 group 13:20 26:7 31:5 25:14 29:3 30:12 44:5 gold 39:17,22 42:16,17 49:12 56:13 147:18 151:20 gap 136:16 67:16,20 76:22 83:17 good 4:3,11 11:4 12:9 56:15 58:1 59:6 101:7 85:1,10 87:3 88:11,21 13:1 15:20 23:10,11 104:22 107:11 120:21 **gaps** 75:3 gas 1:5 11:7 19:11 20:2 90:1 96:19,21 98:15 24:8 25:18,20 26:7 122:14,15 145:9 35:11,13,19,20,22 100:12 106:13 108:1 30:15 33:21 35:3,4 147:4 161:4,11 166:7 108:21 110:16,18,20 46:8 48:12 56:11 57:9 178:7 197:15 211:20 36:6,12,16 39:6,8 115:6 120:12 127:16 57:9,10 59:16,18 61:4 211:21 40:4,8 41:5,7 42:11 131:4,8,10,14 143:2 65:17,19 74:15 77:15 grouping 205:12 47:3 48:7 52:7,8,12 147:20 152:21 153:4 78:3 79:17 93:9 96:6 groups 5:20 20:15 52:16 76:21 77:12,21 161:6 169:3 170:14 102:7 104:22 111:9 83:20 86:1 87:1 93:5 46:22 49:21 56:13 171:4 172:4 173:3,10 112:13 119:21,21 57:6 88:17 91:6 99:10 112:6 125:16 133:20 134:8 138:14 174:19 176:15 177:22 122:10 125:12 135:7 121:22 123:7 165:9 179:21 180:20 182:16 138:22 146:18 147:22 178:5 193:12 138:20 140:20 143:20 148:18 159:19 164:8 185:19,22 190:1 149:11 153:2,6 grow 14:14 16:6 100:7 193:20 198:4 203:11 154:22 155:3 156:22 128:13 164:14 186:14 196:6 205:1 209:5,17 158:9,10 162:17 growing 14:8 63:12 197:10,12,17 198:8 210:21 223:12 166:3 167:1 177:4 130:3 198:14,16 199:22 goal 21:9 58:9,16 59:8 178:14 179:5 190:14 guess 35:4 107:20 205:19 206:8,18 217:10 60:8,15 66:8 80:10 192:4,11,13,17 193:6 129:7 160:8 179:16 84:13 137:10 173:14 197:2 204:6,8 205:10 205:16 207:5 210:17 **gaseous** 149:13 173:16,16 174:3 205:18 206:4 209:21 216:14 gather 57:6 121:11 187:1 205:14 212:8 **goals** 56:9 61:13 62:5 213:14,18 220:11,21 guest 196:10 gathering 121:7 127:9 62:10 117:6 137:16 goose 119:21 **guidance** 62:16 67:5 God 104:8 216:8 126:19 166:7 138:8,20 gosh 181:22 goes 74:1 79:21 174:13 gotten 49:1 117:15 guide 212:3 gearing 31:16 190:16 208:7 **Government** 2:2,4,10 guiding 53:14 general 134:4 147:18 18:22 23:3,15 31:21 going 4:21 5:11 8:21 **guys** 53:12 94:14 182:19 generating 184:13 9:8,13,21 13:18 15:21 35:18 74:4 155:21 154:20 162:9 167:20 23:9 24:12 26:7 27:8 Governments 32:8,18 173:20 175:14 202:6 generation 37:5 117:16 119:1 121:12,13 29:4,13 44:18 45:3,7 88:21 211:3 48:8 50:6 51:7,9 53:2 Governor's 88:22 gentlemen 61:2 Н 60:22 66:22 67:16 **GPAC** 1:5 2:3,3,4,4,5,5 **Gerard** 22:14 68:3 76:12,12 77:6 2:6,6

			23
H 2:6	hear 4:14 11:21 21:18	hire 115:7 129:6 162:10	204:7,8
half 78:18 114:16	25:11,12,20 26:12	hired 162:4	ideas 12:15 14:4 21:18
125:22 127:6,8	28:7 56:8 74:6,20	hiring 115:4 128:13	25:18 90:7 172:15
185:13	90:18 98:22 101:18	160:2	identification 45:22
Hall 104:5 109:14	102:15 103:8 104:5	historically 135:20	61:14 62:13 63:11
139:20	108:2,8 109:12 114:2	history 72:14 178:13	64:5,17 178:5
hand 29:3,3 30:12,12	115:13 121:6 126:8	213:2	identified 46:3 190:2
100:21	128:1 162:9	hit 77:9 132:20 148:2	194:2 195:13 198:10
handed 110:1	heard 16:17 37:17	216:1	199:9 200:22
handle 40:6 189:19	78:13,14 123:18	hold 30:17 120:13	identifies 206:14
handling 72:9	129:22 146:18 159:21	holding 159:5 171:20	identify 38:14 50:4
handout 37:11	178:5	holds 56:20	141:16 211:13
handouts 35:5 53:11,13	hearing 5:19 27:19 91:1	holes 75:3	IG 124:16 147:19
hands 220:6	103:9 105:7 111:8	home 31:5 34:10	ignorant 171:12
handy 93:20	124:8 159:5,10,10	223:17	II 185:6
hang 148:7	hearings 28:8	homes 36:21	III 2:9
happen 47:10 71:10	heart 45:16 81:21	honest 116:15	ILA 70:9
193:22 219:17	hearts 109:11	honestly 98:7 102:20	illustrate 125:4
happened 67:8 74:17	heat 37:5	114:10 168:15,17	IM 127:3,19 138:4,20
150:21	heating 36:17 37:4	175:3	180:3
happening 26:3 28:22	heavily 89:3	honor 54:4	imagination 177:17
136:12 156:5 166:5	heavy 124:15	honored 13:14	immediate 91:12
167:22 170:8 213:2	hello 13:11 105:9,10	hope 21:2 30:17 42:1	180:14,19 182:1,2
happens 22:22 82:2	help 10:22 12:4 32:17	43:21 100:5 140:11	immediately 180:20
191:19 192:2	33:15,20 48:14 54:12	141:22 144:5,7 150:9	IMP 81:18 102:6,7
happy 22:6 56:8 79:8	54:13 58:12 73:11	156:3 164:12	impact 158:2 164:13,1
80:2 121:6 163:22	78:21 80:3 103:11	hoped 141:15	201:3 216:4
167:4 213:5	113:12 121:16 123:3	hopefully 75:2 87:21	impacts 208:2
hard 53:10 54:20 59:21	141:19,20,21 156:10	98:1 105:8 121:16	implement 47:6 75:12
75:1 82:1 109:4,21	156:15 166:20,22	134:10 137:9,19	104:9 120:1 129:2
134:10,16 162:6	170:22 171:1 174:5	hoping 31:14 129:7	implementation 76:2
172:14 208:21 220:9	176:7,15 192:18,19	136:16 137:3 138:9	112:19 113:22 115:1
Harlem 23:14	202:1 212:3,10	138:11 139:6 141:9	120:13
harm 214:16,17 217:15	219:22 220:22 223:10	141:10 172:12 174:3	implemented 150:18
217:21		horn 204:13	
	helped 219:2		implementing 44:19
harmonization 198:9	helpful 10:17 158:6	hose 26:18 28:4	163:4
Harper 132:20	168:18 169:2 171:8	hour 143:3 155:10	implications 155:13
hat 14:4	174:20 175:7	214:7,8	implying 83:11
hate 205:8	helping 38:8 164:15	house 123:10 159:2	importance 105:13
haven 130:20	200:21	housekeeping 11:9	important 14:1,6 18:1
hazard 182:16	helps 92:3	Houston 56:2	34:18 45:20 56:20
hazardous 1:2 17:2	hey 46:6 86:15 172:3	huge 41:5	57:9 95:3 103:14
20:3,20 61:11 125:10	206:14 212:21	humility 54:3	105:18 126:11 140:1
133:20 134:8 138:1	Hi 35:8 61:7	humming 154:19	155:21 193:3 194:10
143:20 148:18 149:15	high 17:16 67:20 86:5	hunt 174:19	195:18 198:14 215:1
151:15,18 180:2	138:3,5,6 148:2 187:4	Hurricane 47:14,17	215:13,14
181:5,11 201:15	189:7	hurt 23:13 215:20	impossible 36:21 115
Hazards 11:8	higher 37:1 39:16 60:19	hydro 72:10	162:5
HAZMAT 15:7,14 18:1	187:6 188:11 207:9	hydro-static 72:12	impress 177:13
HCA 216:17,18	highest 33:18 78:4,9	hydro-test 72:3 220:19	improve 12:16 18:9
HCA's 54:8 55:5,6,9	106:16	hydrostatic 64:6 70:21	39:20 43:4 45:6 54:2
180:10,11,14,14	highlight 67:3 196:4	hydrostatically 55:7	121:14 126:17 128:1
he'll 90:12	highlighted 40:20	62:18	135:17,18 145:13
head 28:1 99:12,19	highlighting 122:10	hydrotesting 112:8	improved 18:7 61:15
134:5 179:1 223:17	201:21		64:13
heading 60:14	Highway 1:19	<u> </u>	improvement 15:5
headquarters 161:12	Hill 2:5 6:19,19	ID 195:14	38:19 82:5
heads 111:5 healthy 208:1	hint 169:14 hinting 161:22	idea 41:3 60:4 158:5 163:2 171:14 173:21	improvements 44:1 114:5

п
improving 44:6 62:3 125:15 135:18 183:4 inadequate 139:4 incentivize 17:16 incident 52:21 62:20 66:1 133:13 143:1 186:19 187:6,12 200:10 213:22 222:5 222:7 incidents 53:3 62:20 63:13 65:18 136:9 186:13,16 191:7,7,12 191:15 197:6,13 214:17 include 45:14 199:18 207:2 includes 38:20 including 17:12 18:11 19:19 20:19 47:8
19:19 20:19 47:8 73:12 102:22 109:10
116:5 166:16 167:4
incorporating 65:13 increase 14:12 36:15
37:9 55:2 95:12,16 185:4
increased 15:15 increases 95:10
increasing 184:16,18
184:22 increasingly 31:20
162:4
incredible 91:10 incredibly 21:17 45:8
independence 14:13 index 97:14
indexation 97:10 98:9
indicator 211:4 indicators 213:13
216:16,21 217:13
individual 113:19 195:13
individually 63:6 117:9 individuals 13:21 77:3 78:1
indulge 132:6 industries 17:8 industry 2:3,3,4,6,6,7,8 2:8,10 14:7,7 16:8
17:19 21:14 23:1,5,19 24:8 30:18 33:16 43:11 45:22 46:19 47:11 53:4 58:14
47:11 53:4 58:14 61:12,22 62:6,8,16 63:7,21 65:6,8 67:5 67:16 68:20 69:2 73:4 73:11,19 74:3,7 75:11 76:22 77:12,16 78:11 78:22 80:9,10,18 82:8 83:1 86:14 87:5 88:6
00.1 00.14 07.0 00.0

88:10 91:3,12 92:3
95:2,21 97:1,6,9,13
97:20 98:6,7 105:19
111:20,21 117:13
119:22 134:8,9
141:20 166:18 175:14
213:4 223:1,8
industry's 43:4 61:16
64:22
inefficiency 95:14
inform 126:16 164:15
informal 4:4
information 26:19 28:1
29:7 30:9 46:8,14
48:1,3,5,12 68:17
105:6 107:1 121:8,12 121:13 127:13,21
137:11,12 140:6,7
148:22 149:20 153:3
153·7 160· <i>4</i> 170·0
171:1,2 179:6,7
186:21 187:1 188:5,8
195:8,9 200:5 201:19
212:1,2,19 215:13,15
217:3,20 220:22
221:8
informed 178:21 179:9
179:10
infrastructure 14:20 54:11 116:16 181:3,6
181:12 193:14
infusion 16:4
INGA 52:3,6 56:11
57:12 58:5 59:19
60:22 117:14 136:8
141:4
INGA's 60:11
inherited 100:11 102:2
102:4
initial 72:10 206:18
initially 37:4
initiate 168:22
initiated 71:2 initiating 71:7 168:20
initiative 64:4,12,13
67:4 125:17
initiatives 3:7 20:18
38:11 61:20 62:4,6
66:20,22 81:13 123:5
injured 215:20
injuries 135:22 191:8
injury 38:1 200:11
inklings 28:7
inline 151:7
innovation 15:10 16:19
17:1,18 22:18 74:5 innovations 14:10 16:9
17:22
innovative 116:21

input 14:3 19:14 64:2 71:17 72:7 205:14,22
inside 40:19 166:18
208:5 insight 53:19 178:16
insights 57:7 58:1
inspect 86:10 129:3 inspecting 40:15 163:5
inspecting 40.15 163.5 inspection 26:5 39:2
61:15 64:13 76:16
113:2 141:18 145:20 161:5 185:6,11,14
201:4
inspections 112:20 151:7 162:22 182:14
184:12 185:7,7 188:6
203:16 inspector 79:15 147:18
161:8 162:17 189:19
inspectors 72:21
128:11,15,21 129:9 129:13 141:20 160:17
160:18 161:13,21
184:7,11 installation 197:7
installed 186:15 187:5
188:10 198:13 199:19 installing 37:1 40:15
instance 164:6,10,11
207:19
instances 36:21 institute 55:19 56:1
institutions 118:10,12
insult 38:1 integrated 112:20
113:2 185:7
integration 62:14 63:4 81:15 102:10,15
126:10
integrity 20:20 38:18,20
44:21 49:16 52:15 54:7 83:16 102:3
103:4 112:3 149:9
150:12 151:16,18 165:15 166:21 180:16
194:22 196:16 200:3
201:1,2,4,8 215:8 intend 56:21 68:9 104:9
intended 166:19
intense 49:20 intent 43:16
intentionally 147:6
intentions 179:5
Inter-Governmental 13:8
interaction 48:10
interactive 126:18 127:4
interest 18:16 19:8 31:9

32:22 174:9 interested 28:20 31:12 31:13 77:19 88:15 158:21 178:7 **interesting** 30:22 45:18 54:22 92:10 100:20 118:16 160:6 180:7 189:11 203:1 218:11 interim 13:6 internal 38:22 143:12 189:18 internally 119:13 120:2 121:18 144:7 196:21 **International** 13:9 Interstate 52:7 interstates 95:11 intervene 223:12 interveners 99:6 intrastate 42:14 145:19 **introduce** 10:2 13:3 27:3 158:13 introduced 22:13 introduction 193:9 introductions 3:3 6:4 **intuitive** 176:16 185:2 inventory 197:8 invest 95:12 179:12 investigate 39:7 investigation 120:19 161:15 163:17 203:17 investigations 83:8 investigators 120:20 investigatory 161:16 investing 16:9 96:13 investment 64:19 95:12 investments 92:17 93:15 95:22 98:5 **invite** 48:20 **invited** 116:6 inviting 12:10 involve 123:14 217:15 involved 10:13 22:21 39:4 44:11 86:21 109:9 113:16 involvement 123:3 involves 123:15,16 lowa 104:21 iron 86:5 197:9 **ISAC** 48:7 **ISAC's** 48:9,11 issue 29:21 68:10,11 78:7 83:7 91:11 92:17 123:8 141:18 142:9 144:4 154:3 155:15 166:7 177:3 185:19 185:20 190:2,4,6 211:6 issued 36:11 37:14 61:22 143:7

issues 4:13 5:7 28:14 31:11 34:3,16,21 38:9 40:7 59:12 63:12 64:10 76:13 80:1 82:21 86:20,22 112:2 112:5 113:21 114:11 115:15 123:17 125:13 133:11,14 138:3,19 139:3 141:17 142:22 143:9,9 203:21 207:1 207:2,10 215:11 issuing 185:17 189:14 item 3:2,4,6,8,10,15 11:21 26:22 106:10 120:14,15 131:11 148:10,10 150:16 177:9.9 193:3 195:18 201:9 215:7 items 11:9 185:15 **IVP** 125:10,16 138:22

J 2:3,6 **January** 137:5,19 139:22 140:22 144:14 173:15,21 **Jeff** 2:14 4:16 11:2,14 12:17 22:15 23:7 25:4 26:21 37:13 40:9 48:20 76:3 77:7 78:13 88:13 90:20 91:5 93:3 94:10 99:6,21 106:12 106:13 120:4 122:9 124:14 128:1 133:6 137:3 138:22 157:20 161:22 170:1,3 174:2 202:17 219:6 223:18 Jeff's 86:9 Jefferson 1:19 Jim 2:19 7:6 **job** 23:10 27:22 50:5 59:22 62:15 65:17,19 74:4 79:11,17 117:5 117:20 121:17 122:10 147:3 171:15 175:9 176:1 **jobs** 13:17 203:13 **John** 2:10,17 7:3,22 10:15 12:18 98:17 124:5,10 131:11,14 172:15 join 21:3 111:3 115:20 116:6 joint 1:9 11:7 **jointly** 12:15 Jon 90:3 110:4 164:19 171:13 **Joy** 2:8 8:10,10 61:6,7,7 70:1 71:11 72:6 96:22 96:22 184:4 209:8,8 210:2,6,12 judge 38:17 184:16 214:8 judged 192:18 judgment 158:19 July 140:3 142:16 143:8 173:5 jump 26:13 jurisdiction 86:9 jurisdictional 166:9 justification 223:6

K

justify 222:18

Kalisch 40:1 keep 11:10 33:12 41:17 50:5 56:21 85:15 91:20 93:20 94:18 107:3 153:5 165:18 keeping 201:19 keeps 78:14 Keithner 72:1 Ken 114:2 128:1 132:4 key 17:13 29:10 55:17 60:8 91:9 102:9 164:10,18 kick 168:15 kicked 109:9 kids 117:20 118:8 kind 4:18 9:12 26:2 27:9,10,11,14 28:10 29:3,7 30:20 31:1 34:19 54:17 63:3 65:12 81:4 93:22 99:18 108:4 110:15 112:6 121:20,22 126:3 131:5 132:8 137:15,18 138:13 149:20 153:10 154:18 156:9 176:21 177:2 177:14 180:21 183:15 187:17 188:5,19 189:10 190:8 191:1 192:8 199:22 203:10 207:12 216:8 218:19 221:2 Kinder 8:4 31:9 194:16 194:18 kinds 220:18 king 30:6 213:9 **kinks** 187:16 **Kipp** 104:4,13 109:13 knew 107:12 165:20 knock 111:5 know 4:5,21 5:17 6:1

9:10 10:4,5,15 11:5

12:4,19 14:9 19:3,16

21:3.8 22:1.9 23:2.4.7 26:2,18 28:7,21 29:4 30:10 33:9,17 37:13 37:20 44:8,10 48:16 50:2,21 52:14 53:12 53:17 54:21 57:2,3,18 57:21 58:5,14,21 59:15,20,22 60:6,10 60:16,19 63:1 66:1 68:2 69:10,13 71:18 72:9,13 75:3,14 76:6 77:4,16 79:8 81:12,14 81:19 82:1,5,11,12,14 82:19,21 85:14,15,19 87:10 88:21 89:2,12 89:16,17,19,20,22 90:3,4,7 91:5,22,22 92:22 93:4,12,20,21 94:12 95:8,21 96:14 96:15 100:4,12,15,16 101:11 102:2,10,22 103:1,2,14 104:8 105:2 106:15,17 107:5,10 108:11,11 108:13,15,20 109:8 110:1,5,5,11,16,17 111:17 112:2,5,11,21 112:21,22 113:7,10 113:12,14 114:5,9 115:4,17 116:12,14 117:3,9,12,16,18,21 117:21,22 118:12,16 119:2 120:1 121:2,7,8 121:20 122:13 123:1 123:11,12,17,20 124:7,9,19,21,21 125:1,7,12,20 126:1,7 126:9,11,13,13,13,22 127:1,15,18,20 128:2 128:8,9,16 129:15,18 129:22 130:19,21,22 132:8,16,19,21,22 134:10 135:16,20,21 136:2,7,7,10 137:5,7 137:15 138:2,16 139:1,2,9 140:3,5 143:11 145:2 146:18 146:22 147:1,5,7,8,10 147:12,21 148:5,10 151:3,22 152:9 154:15,20 155:2,20 155:21 156:5,7,9 157:20 158:10,13,18 158:20,21 159:2 161:8,19 162:3 164:1 164:13 166:11.11 167:13,20 168:6,16 168:22 169:1,4,5,20 169:22 170:11,18

171:4.7.16.18.22 172:2,2,3,13,18 173:7 173:10 174:16,18 175:3,4,13,13,15,18 176:4,7,12,15 177:18 177:19.20 178:14.18 178:19 179:4,5 181:22 182:15 183:21 184:14,20 185:3 187:17 189:16 190:16 190:22 196:13 197:6 197:20 198:5 199:6 199:10,12,16,19 202:17 204:12,22 205:8,13,15 206:1,20 207:6 208:2 211:7,15 211:20 212:5,15,18 212:20,21 213:2,3,3 213:12 214:10 215:5 215:10,11,18,19,22 216:1,3,3 217:2,21,22 218:7,18,22 219:22 220:6,7,9,15,22 221:1 221:9,12,18 222:1,10 222:11 223:3,3,7,7,8 **knowing** 10:19 77:7 184:21 knowledge 15:13 18:13 50:17,18 168:9 181:18 knowledgeably 172:11 known 81:11 107:5 115:17 knows 78:6 90:20 Kristin 2:15 7:9 12:19 **Kuprewicz** 2:9 8:8,8 83:6,6 176:18

L 2:4 laboring 110:5 laborious 152:21 lack 82:22 107:2 171:17 **Ladders** 118:7 lag 173:6 lagging 216:22 217:14 laid 58:9 114:21 landscape 14:19 language 155:7 **Lanny** 2:7 6:6,10 large 14:11 41:3,21 81:5 130:21 largely 10:9 43:15 107:6 larger 115:15 122:8 142:10,10 largest 41:6 161:20 laser 146:22

68:4,9,22 69:14,16,20

ı		1	1	1
	lastly 47:7 59:13 124:13	96:16 104:4 106:16	61:21 82:7 88:15	181:17 187:4
	127:22 149:15	177:3 207:9,9 223:10	90:10 105:8 109:13	lose 83:13 84:6 121:12
	lately 23:11 47:13	levels 65:11	113:14 120:17 122:4	206:5 208:8
	122:21 134:16	leverage 16:13	124:10 131:17,21	loss 83:13
	latest 41:9	liberty 175:12	132:13 137:18 152:21	lost 99:18 101:1
	laurels 192:5	life 102:21 116:9 187:13	155:16 159:20 160:1	lot 6:4 10:13,16 14:15
	law 86:11 145:10	187:22	173:12 177:17 186:2	26:6 28:12,18 34:5
	laws 78:12 85:22 87:10	light 93:6,14 103:17	186:9 192:22 221:3	40:13 45:19,21 46:8
	87:13 88:9,12	107:19 113:9 116:18	live 65:22 170:16	46:11,13,18 47:9 48:1
	lay 53:14	123:4,7,16 177:3	lives 13:18	48:1,12,14 50:1,11
	lead 17:22 216:15	liked 103:12	LNG 112:6 129:21	57:5,11 59:15,17,21
	leader 81:6	limit 208:5	130:2,10,20 132:3	62:9 63:1 64:10 68:6
	leadership 3:9 73:2	limited 86:20	local 31:3,17,20 32:8,12	68:7 71:22 72:3 79:9
	74:22 124:6	Linda 2:16 4:13 12:18	32:17 42:12,13	85:7,12 91:19 92:19
	leading 14:12 16:10	25:12 102:22 106:13	location 149:9	94:12 98:20 99:12,19
	46:1 71:21 211:4	117:2 119:6,11	long 5:10 32:7 49:20	101:10 102:18 103:21
	213:13 216:16,21	121:19,22 122:1,7	76:11 101:12 107:5	104:3,5 107:8 110:10
	217:12,21	177:10 203:3,4	107:10 113:17 115:17	110:18,22 113:15
	leads 40:17	212:11 218:4	122:5 142:4 167:3	114:4 115:9,10,13,21
	leak 66:12 138:5	Linda's 196:12 204:16	174:1 178:18 209:2	116:4,13,17 117:19
	leaking 77:10	line 73:3 138:7 148:10	long-standing 43:4	122:10 124:21 130:5
	leaks 216:17	148:10 163:8 180:7	45:14 52:14	130:19 132:1 134:20
	learn 54:2,4 107:21	183:18 187:15 188:1	long-term 15:2,22	146:11,14 155:18
	121:10 126:14 203:21	190:20 191:1,9,18	longer 184:13	159:3,12 161:12
	learned 51:3 56:2	192:4,11,12 198:3	longest 185:9	166:15 169:7 170:2
	109:21 120:22 121:5	211:5 214:1 215:18	look 9:12 12:6 14:2	170:16,19 174:5
	121:17 178:13	lines 41:14 62:17,18	15:7 17:20 21:22 24:4	175:4,8 176:5 177:19
	learning 12:14 32:4	68:7,11 138:7,8 142:7	24:10 31:6 35:6 37:11	178:2 181:8,15 184:5
	47:19 56:15 65:18,20	158:5 180:12 200:17	62:19 63:4 67:17	188:22 189:2 192:15
	66:4 119:18,19	201:6,15 217:20	75:10 76:18 79:12	194:18 195:15 199:2
	125:12 164:14 178:7	lining 28:20	83:17 86:12 98:14	200:6 202:22,22
	204:1	links 71:6	99:10,17 105:6,11	207:15,21 209:20
	learnings 65:17 66:3	liquefaction 132:3	112:12 115:4 117:18	212:2,6 218:17 219:1
	69:9	liquid 1:7 8:9 11:8	121:5 131:2,3 145:11	219:16 221:3,4,15
	leave 32:19	19:11 20:3,20 32:15	154:9 163:3 164:3,16	223:9
	led 57:22 159:4	61:11 62:1 68:11	171:4 173:2,3,20	lots 31:8 62:17 63:22
	Lee 114:2	83:20 117:13 125:10	175:1 176:7 178:11	63:22
	left 41:1,21	125:19 133:20 134:8	181:1 182:7 186:18	louder 54:22
	legacy 139:5	138:1 143:20 148:19	188:7 191:16,20,21	Louisiana 67:13
	legal 37:16	151:15,18 180:2	192:2,3,13 193:21	love 88:21 190:13,18,20
	legislation 88:7,10 legislators 88:11,20	181:5,11 182:16 198:8 199:18 200:3	195:5 202:18 203:18	love-in 84:12 low 85:15 200:15
	Lemoi 121:1 203:16	200:10,13,17 201:10	210:16 214:1 215:7 216:17 221:17,22	low-income 37:3
	Lesniak 2:9 7:18,18	201:15 205:6,20	looked 52:22 135:20	lower 207:9
	169:18,18 174:4,11	206:11 208:3 209:18	152:1 167:2 196:2	LPAC 1:7 2:2,7,7,8,8,9
	181:10,13,13 218:6	216:4	214:14,15	2:9,10,10,11
	lesser 189:21	liquids 149:15 153:16	looking 4:10 12:13	lucky 40:5
	lessons 56:2 120:22	156:20 169:18 181:7	17:10 20:1 23:14	lunch 22:10 147:22
	121:5,10,17 203:22	181:14 209:8 211:1	45:10 50:1 63:5 66:7	1411011 22:10 117:22
	let's 22:2 75:20 79:9	213:17	67:4 71:11 77:7 78:18	M
	80:20 110:16 111:1	liquified 112:6	79:16 83:9 102:13	M 2:11
	113:10,11,12 151:13	list 29:19 49:7 208:11	125:11 126:16 128:11	main 27:12 28:14 29:1
	180:5 183:13	listen 91:7 118:10	128:14 129:11,16	31:9 61:13 62:4 66:8
	letter 85:11 140:17	listening 12:14 101:15	130:10 136:2,3 137:2	66:11,20 86:2 179:16
	141:12 145:10 189:22	litigation 96:5,5 101:13	137:20 151:3,10	Maine 29:18 202:11,19
	letters 88:5 185:14	222:3	160:13 188:20 203:7	mains 40:15,16
	189:13	little 10:11 11:6 16:20	203:9 205:7 207:6,15	mainstream 128:4
	level 5:3 18:13 39:14,15	28:6 30:15 35:21	210:2 216:15,15	maintain 214:21
	39:17,22 60:19 96:12	40:21 49:10 56:22	looks 61:22 97:11	
1		l	l	l

		1	ı	ı
	maintenance 45:17	marginal 101:13	mediocre 29:18	205:10 207:17 208:5
	major 64:12 78:6,7	Marie 2:13 5:4 7:11	meet 12:6 46:15,16	208:14,20
	80:11 119:15 121:21	9:17 12:12 48:20	172:11 174:3 219:17	metrics 3:16 20:15 29:3
	122:11 123:7 189:21	125:2	meeting 1:9,21 2:2 9:4	30:9 113:13,17
	majority 41:12	Mark 104:14	9:13,18,21 10:7 12:6	118:14 177:10,18
	making 10:3 19:16	marketplace 95:18	29:11 33:6 55:21	178:3,4,11,14 179:3
	20:14 43:12 60:18	96:17	71:16 76:17 125:10	179:19 186:4,4
	70:16 77:20 85:13	Marriott 1:18	125:18 127:15 132:21	188:14,18,21 190:3,8
	94:21 98:3 100:1,4	Marshall 150:2	134:2 137:13 152:16	190:9 192:8,18,18
	108:10,14,17 110:10	marvelous 27:22	156:17 157:12 172:3	193:5,10,18 194:2,3,7
	110:12 113:18 114:5	Massoud 1:20 2:2 4:5	173:15 193:16 211:11	194:8,11 195:12,16
	123:10 124:6,11	7:13 10:20,21 25:15	219:5	195:20,21 196:5,9,20
	130:14,15 133:12	81:1 85:3 103:1	meetings 9:10 10:14	200:9 201:17 203:7,9
	134:20 135:14 136:8	107:13 110:13 111:7	12:21 55:20,21 89:14	206:8,11 210:2
	136:12,13 137:17	123:11	100:5,13 134:3	211:12,22 214:14
	140:14 143:16,18	Massoud's 60:17	137:21 170:21 171:20	221:16
	145:16 146:16 148:16	materials 1:2 17:2 65:5	meets 180:18	Michele 2:8 8:10 61:6,7
	149:14 150:8 151:9	matter 13:22 106:4	member 2:2,3,3,4,4,5,5	67:22 68:1 70:4 81:13
	151:11 164:6,22	223:21	2:6,6,7,7,8,8,9,9,10	96:22 102:16 121:10
	165:3,9 166:6 168:20	mature 103:11	2:10,11 11:12,15	126:7 184:3 209:7,8
	170:6 220:5	maximize 17:7	33:22 44:4,13 45:9	Michigan 8:1 98:18
	makings 101:14 124:22	Mayberry 2:18 7:15,15	46:20 48:7,15 49:18	99:14 150:3
	133:21 134:6 148:20 149:17 221:18	121:19 131:9,13	49:22 111:14 175:18 181:17 205:22	microphone 10:1 mid-sized 130:9
	manage 16:15 72:16	146:5,9,13 160:8,17 160:19,22 164:1	members 9:5,22 12:7	midstream 4:13 57:21
	85:19	165:2,6,11,18 176:11	13:4,12 18:22 19:2	59:2 112:12 113:21
	managed 101:7	176:13 196:12 197:12	22:9 23:18 25:22	185:19
	management 21:13	197:19 206:17 216:12	26:14 35:21 36:1 38:8	mightily 110:5
	39:4 44:16 47:4 54:8	217:9,19 219:2	38:15 39:19 40:4,8	Mike 101:3
	55:12,19 65:2,14 66:6	McCLAIN 8:4,4 80:22	43:12,17 52:10 55:18	mile 40:20
	66:13 67:13 81:16,19	81:3 205:5,5 208:17	101:17 103:18 104:11	mileage 52:12 55:5
	83:16 102:3,19 103:5	208:18	105:7 108:4,13	201:12
	105:16,17 128:22	McClain's 74:22	112:21 137:6 140:6	miles 41:1 186:14,20
	135:12 149:9 150:12	mean 9:6 35:13 50:11	155:18 157:10 170:12	198:2,13 199:19
	151:16,18 163:6,8	68:5 77:10 79:5 81:17	171:11 172:4,19	milestones 174:14
	165:16 166:21 180:16	83:1 88:4 94:15 111:7	174:17 175:12 210:14	Miller 73:1 80:3
	194:22 196:16 200:4	132:2 147:14 164:5	219:21	mind 131:8,9 154:18
	managers 72:21	165:1 167:21 168:14	membership 18:20	201:19
	managing 167:19 216:7	175:3 181:22 183:22	68:20 141:3	minimum 36:13 90:19
	mandate 143:2 149:12	184:1,6,9,12,15,21	mention 9:20 47:7,21	minor 9:1
	149:13	192:5 198:1,19,20	124:13 140:2 173:13	minted 12:11
	mandates 3:12 20:8,9	204:15 205:10 209:1	178:2 198:6	minute 4:20 10:22
	28:13 108:9 109:16	209:2 217:14 meaning 113:5	mentioned 20:11 22:18 58:21 59:14 62:4	109:2 171:5 185:18 minutes 26:10 27:8
	109:19 124:11,21 125:5 134:22 143:17	meaning 113.5	121:9 124:14 125:2	79:5 106:2 108:9
	146:14,15,17,20	196:22 197:2 204:19	133:7,18 134:17	mis 179:8,9
	147:12,14,15 148:9	means 9:4 184:14	137:3 139:19 161:7	mis-inform 179:4
	148:13 152:4,14	185:12 209:10	174:2 201:16 203:14	mis-portrayed 177:21
	153:8,12 157:20	meant 46:19 111:11	MEOP 141:6	miscellaneous 133:8
	222:15	measurable 29:2 30:9	mere 39:19	140:14
	manner 130:7	measured 214:3	message 23:17 118:2	misconstrue 203:9
	manuals 44:18	meaty 132:1	met 1:17 13:5 206:20	misinterpreted 200:6
	manufacturers 72:8,13	mechanism 87:20 95:4	metaphor 103:12	mislead 179:4
	MAOP 139:5	95:15 96:15 97:6	meter 77:6,7	misleads 179:8
	mapping 47:3 127:21	168:15	methane 116:7	missed 160:3 211:3
	Marathon 8:2	mechanisms 88:13	methodical 19:17	missing 222:21
	marched 4:7	93:8,11,16	methods 97:8	mission 15:10 19:16
	margarine 202:12,19	media 57:4 60:4 130:1	metric 180:1 196:13	22:19 73:5
	204:21	183:16	199:10 201:21 204:19	misuse 188:8
II				

misused 177:21 140:18 141:11 169:7 163:1 195:20 203:13 185:4.22 198:1 mock 47:8.18 169:8 210:15 200:12.14 newer 122:6 mode 11:11 **NARUC** 73:13,16 80:4,5 numerous 5:3 43:14 model 95:19 96:4 89:2 90:3 91:13 **newest** 13:12 **nutshell** 131:5 152:13 220:10 158:21 newly 11:22 12:11 0 modeled 51:5 **Nashville** 40:22.22 news 23:7 57:4 77:15 modeling 21:1 125:22 **NASUCA** 89:11 119:10 O 2:10 nation's 14:7 126:5,7 **nice** 191:9 o'clock 10:9,11 23:7 models 47:3 126:6,17 **national** 1:19 6:16 **nicely** 127:2 objective 21:16 126:17,20 127:5 27:15 33:13 35:12 nine 10:10 46:22 objectives 117:6 moderated 89:20 47:8 48:8,9 72:22 149:22 163:15 observation 83:15 modernization 116:16 85:4 88:19,21 115:16 **Ninety** 39:14 **obvious** 18:19 83:12 modification 9:1 121:4 157:21 193:13 Ninety-two 36:18 185:1 module 76:20 77:5 non 37:7 88:17 nationals 123:2 obviously 61:19 64:16 **modules** 76:21 nationwide 66:15 non-petroleum 149:15 66:19 146:16 148:20 moment 53:1 97:17 **natural** 48:7 52:7,8 non-profit 36:1 204:22 115:18 102:11 112:6 213:7 non-significant 135:14 occurring 14:15 187:14 **NOPV's** 189:15 money 34:12 84:2 **nature** 5:12 67:15 98:5 189:9 85:10 87:5 near 36:21 45:15 normalizing 198:1 October 140:22 141:13 Montana 159:6 109:10 149:10 normally 11:13 140:4 offer 110:21 220:10 month 27:20 28:2 56:5 **near-miss** 212:16 North 7:2 35:9,15 41:1 office 1:3 3:8 7:7,10 159:1 185:8 213:12 223:3 notable 47:15 12:20 106:12 121:20 months 18:21 133:3 near-misses 212:19 note 26:13 29:10 44:3.7 135:12 173:14 173:18,20 185:13 necessarily 95:9 99:4 164:21 177:13 189:22 offices 115:5 122:2 **MOP** 211:8,8 108:16 188:11 **notes** 46:18 71:11 162:2 Morgan 8:5 31:9 194:16 necessary 43:13 148:2 officials 43:2 194:18 168:17 notice 127:12,14 141:8 offsite 208:7 morning 10:10 35:4 need 16:7 17:19 21:12 163:15 174:5,18 **oh** 181:22 196:18 163:18 223:20 21:14 34:5 41:18 189:13 190:15 208:14 morphed 92:8 62:14 74:11 80:19 **noticed** 106:9 188:21 OIG 3:12 20:13 151:14 **motion** 54:16 87:5 89:3,9 90:21 notification 127:12 152:4 Mount 7:2 35:9,15 91:15,17,21 103:6 153:18 155:10 156:2 oil 61:9,12 97:1,5,9 39:21 40:3,20 41:2,4 107:21 110:19 113:11 notified 170:7 **OIRA** 134:5 move 14:2 18:10 21:12 115:4 116:10 118:1 **noting** 44:22 okay 8:17 51:14 69:15 24:22 43:10 48:18 119:22 121:9 124:3 November 28:17 69:20,21 70:11,16 50:8 59:11 75:21 126:6 127:16 129:14 173:18 75:20 90:17 101:6 76:10 82:11 91:13 130:16 146:3 151:8 **NPMS** 127:9 134:16 108:17 131:13 134:15 92:3 94:6 100:5 103:7 155:5 172:10 178:9 **NPRM** 133:15 139:13 154:1 156:11 160:20 105:15 110:6 113:12 188:6 190:1 198:11 143:7 153:18 174:10 175:22 177:15 120:20 121:3 124:3 201:2 207:3 215:4 **NPRM's** 19:22 20:2 181:9,16 183:18 126:5 144:5,8 171:19 220:12 222:20 223:11 133:10 184:6 187:11 190:5 needed 59:2 70:21 **NTSB** 3:12 20:13 75:12 177:8 192:14 195:11 196:5 moved 5:9 128:12 74:13 75:14 89:9 83:18 127:2,18 197:10,12,19 202:5,5 213:11 130:11 200:22 211:16 143:18 147:17,18 205:5 209:15 210:12 moving 16:1,21 18:3,20 needs 30:12 54:12 56:7 149:22 150:7,11,15 **Oklahoma** 122:15 19:12,14 60:14 74:20 57:8 64:18 88:11 151:12 152:4 163:16 128:10 94:7 105:12,19,19 89:17,22 90:1,6 91:2 163:21 165:1,13 old 73:12 76:1 86:3 125:7 144:11 148:5 102:8,8 213:22 nuclear 51:5 87:6,20 138:22 **MPMS** 148:21 neighbors 36:5 number 36:9 41:11 198:20,20 199:2,7 multi-family 142:8 never 37:14 83:22 84:1 43:11 72:7 73:3,9,11 older 150:5 198:17 74:9.20 77:20 87:9.10 multiple 191:8 109:1 199:7 mutual 47:7,11 **new** 5:5 6:4 13:4 14:3 97:18 100:22 103:19 oldest 150:4 115:10 120:5 122:8 14:10,14 15:6,19,21 **OMB** 138:2,16 165:1 Ν 19:2,17 28:17 61:16 146:19 158:22 164:7 onboard 85:6 99:2 63:4,17 64:18,22 66:7 183:14,18 184:9 name 4:16 5:9 35:8 112:3 129:13,16 186:13 187:4 191:6 52:5 79:14 117:22 66:11 86:13 94:5 once 5:5 24:16 208:20 107:7 109:5 121:3 198:4 207:11 **NAPSR** 29:10 72:18,19 oncoming 55:21 128:18 129:13 131:11 numbers 31:7 93:20 **one-hour** 143:3 72:22 73:16 78:20 98:8 182:2,5 183:9,17 141:21 144:15 162:19 80:4 91:13 104:20

onerous 37:20 40:12 ones 40:13 56:4 97:9 148:5 164:5 171:12 189:2 193:19 196:3 197:2,5 201:21 211:17 216:22 217:15 ongoing 20:14 55:21 56:6,7 97:19 98:6 online 201:20 onsite 189:20 open 20:8,13 26:11 43:20 54:5 63:21 89:21 131:6,12 148:14,14 149:2 165:5 open-ended 164:3 open/acceptable 165:14 open/unacceptable 150:22 opened 32:7 79:5 **operate** 41:13 operated 93:5 operates 30:2 68:12 operation 21:11 49:19 122:1 215:21 operational 38:13 43:13 55:16 operations 14:21 38:16 46:12 187:19 operator 44:20 51:1 68:6 82:4 123:15 133:12 136:21 142:17 148:19 164:22 165:8 165:8 195:2,14 221:20 operator's 44:14 operators 41:20,21 42:15 47:2 51:4 52:9 71:14 75:19 95:7 113:20 126:16 129:1 141:2 201:1,3 216:7 **OpID** 194:12 opinions 57:7 opportunities 18:8 115:2 117:20 opportunity 5:2 9:7 16:3 24:17 25:9,10,20 37:15 45:6 47:5 54:4 58:20 59:14 118:7,21 132:10 136:4 166:4 167:13 168:5 219:16 opposed 214:17 216:21 opposite 85:14 ops 120:16 131:20 190:21 203:15 220:8 optimizing 17:6 options 151:10 176:7 **OQ** 76:14,14 77:14,17

77:22 **Oracle** 206:9 order 3:3 6:3 29:19 111:5 113:6 135:3,4,5 172:10 orders 135:2 189:15 organization 16:4 55:15 56:9 120:8 organizational 114:11 organizations 69:6 117:4 organizing 12:21 223:2 original 211:10 **Orleans** 28:18 ought 92:5,6 171:10 ounces 214:3 **outcome** 167:5 outline 171:8 176:10 outlined 54:17 outreach 66:16 67:1 122:19,21 outs 4:11 outside 71:14 91:12 151:10 over-compensate 176:20 overall 44:2,6 114:5 179:20 182:8 192:4 202:1 overlaying 63:3 oversight 45:15 59:3 102:4 167:17 owned 35:14,15,16 36:2 owner's 31:5 34:10

4:1 p.m 1:20 4:2 106:2,5,6 106:9 223:22 **pace** 140:4 **packet** 157:5 page 3:2 87:3 155:7 pain 100:11,13 176:6 painful 84:17 **pains** 130:3 pan 54:14 paper 30:19 69:18 paragraphs 175:5 paramount 14:21 part 12:20 76:21 77:20 98:6 103:5,6 108:18 116:18 120:8 130:15 147:10 168:19 190:22 190:22 203:15 204:4 204:11 212:17 220:16 participants 63:22

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

participate 39:9,10 51:15,17,17 99:6 participated 49:14 participating 48:4 168:2 participation 21:5 54:14 62:9 64:1 69:2 69:3 81:15 123:21 particular 46:7 64:15 102:16 118:6 126:19 150:3 174:9 190:6 213:1 particularly 65:20 66:17 90:8 103:12 104:7 115:5 210:8 parties 83:13 84:20 partner 90:4,11 112:14 118:5 partnered 89:6 partnering 118:9,11 partners 17:13,17 78:21 105:20 112:22 114:4 121:22 partnership 60:4 83:14 123:14 partnerships 18:6 parts 32:14 103:6 146:12 Pasadena 6:11 pass 77:4 87:13 88:11 135:1 passed 76:14 77:14 78:2 95:10,16 96:20 102:21 138:1 **passion** 103:15 passionate 21:15 **Pates** 2:19 7:6,6 path 57:9,16 111:6 113:3 119:1 patterns 67:9 Paula 2:4 7:16 70:3 115:17,21 220:3 pause 52:18 146:10 pay 37:21 99:8,13 134:11 paying 99:4 **pays** 30:3 **PDM** 193:20 196:8 206:9 peach 130:20 peak 32:21 182:21 peeling 155:16 peer 44:7 49:8,9,12 51:6 peer-to-peer 92:1 peers 46:3,5 penalties 189:16 **pending** 164:19

people 9:8,13,16,19 10:13 13:11 16:4 23:2 23:12,14 24:22 25:18 25:21,21 26:7 28:21 30:10,13 34:4,17 40:14 44:9.19 47:5.9 47:13,15 50:17 59:7 59:21 62:17 65:9,22 68:13 78:17 79:13,18 81:11 83:21,22 84:14 89:15 91:7,12 92:2 94:5 101:9,10,15,20 102:12,22 105:1 106:16 107:12 108:3 111:2 113:12,15 114:18,21 115:4 116:5 117:4.5 122:8 124:21 128:14 136:7 151:6 154:16,19 156:4,10 160:2 162:15 163:1 165:21 170:16 172:21 179:5 179:9 181:18 182:12 185:2,18 186:6 189:12 192:9,20 195:19 199:2 201:13 204:12 207:12 212:19 213:5 214:16,18 215:19,20 216:2 217:16,22 218:22 221:17 people's 32:7 percent 15:17 36:13,18 37:2 39:6,13,15 52:11 55:4,6,9 77:11,13 138:18 211:8 percentage 63:13 perfect 84:18 102:7 157:13 176:22 199:14 208:13 performance 3:16 17:17 53:3 62:2 113:13,17,19 118:14 168:4 177:9 193:13 201:17 202:1 period 5:17 9:15 91:16 103:10 142:12,21 143:8 167:3 173:5,19 185:8 periodically 165:13 172:1 207:1 permission 119:5 212:9 permitting 32:13 person 46:16 104:18 182:14 personal 13:18 personally 101:2 175:1 perspective 14:1 21:17

penny 89:15,16 99:7,8

176:19

petition 140:19.20 141:1.4 168:16 169:11 petitioned 169:4 petitions 140:16 141:11 141:14 143:11 Pevarski 2:5 6:17,17 203:5,6 204:3 PG&E 23:13 76:19 80:11 163:16 **PG&E's** 52:15 **phase** 149:13 Philadelphia 23:13 **Phillips** 8:13 71:19 philosophical 220:15 philosophy 49:11 60:11 **PHMSA** 1:2 2:13.14 3:5 4:17 7:3,5,7,8,10,12 7:15 12:12 13:4 14:16 15:1,4,8,11,15 16:8 16:21 17:3,20,21 18:4 20:1,12 21:20 22:14 22:20 23:9 24:7 27:21 28:2,13 41:13,17 43:15,21 57:2,4 58:11 58:17 59:17 60:12 73:4,22 74:13,16 75:12 78:21 79:15 80:9 84:14 87:11 114:14 144:7,8 166:17 178:4,18 183:14 188:20 194:19 PHMSA's 19:14 41:9 71:16 73:20 104:7 Phoenix 29:11 phone 11:14 46:16 **phones** 11:10 physical 47:22 pick 25:17 217:9 220:3 221:19 picking 77:17 222:5 picture 40:1 163:2 186:10 196:14 **piece** 71:22 162:22 **Pierson** 2:10 8:2,2 69:17 70:9,12,14,18 153:16,16 154:1,4,9 154:12,22 155:4 156:20,20 213:17,17 pig 62:17 63:3 102:12 102:13 piggability 138:6 pike 169:22 **pilot** 66:14 piloting 44:12 128:20 **pipe** 39:10 72:7,10 89:5 133:16 136:22 139:3 139:4,4,5,5 143:9 144:21 186:15 197:21

198:18,19,20 199:7,7 199:10,13,17 221:1 pipeline 1:2,3,5,7 2:14 3:8 4:17 7:20 8:3,10 8:12,14 11:8 12:16 14:20 15:6,14,18 18:1 20:8 21:10,14 22:21 27:1,7,15 29:5 31:10 31:22 32:2 33:15 38:10,20,22 42:18,21 43:9 44:2,6 45:16 46:12 47:2,4 49:17,17 51:1 52:16,16 61:8,10 61:12 62:1,7 66:16 72:20 97:6,9 106:12 107:9 114:15 121:21 123:8.21 125:8 142:18 157:18 158:1 162:15,22 180:18 181:2,6,11,11 184:1 186:14 187:13,22 193:13 201:12 215:20 Pipeline's 30:1 pipelines 30:7,8,11 31:2,7,8 32:14,15 33:18 61:10 68:12 73:12 79:1 87:21 149:12 170:17 180:2 186:19 187:5 188:9 189:5 209:1 **pipes** 86:3 pitching 114:20 place 85:18 96:6 101:8 127:2 places 26:8 45:5 114:20 plan 54:16 55:18 58:9 62:2 86:12 141:10 145:22 147:20 157:8 planning 32:10 139:15 158:3 196:8 plants 130:20 **plastic** 39:10 133:15 136:22 143:9 144:21 plate 99:16 132:9 168:10,12,13 **plates** 144:10 **play** 5:16 30:6 121:16 223:2 players 6:5 28:10 167:4 playing 96:12,16 116:11 167:1 please 11:10,12 24:18 27:4 37:11 106:2 **pleased** 5:1 39:21 102:15 205:7 **pleasure** 12:5,9

plus 50:18 129:8 point 20:22 24:13,19 36:9 60:17 98:22 106:11 110:14 113:1 129:19 140:15 156:12 157:7 179:16 181:16 188:14 191:11 196:13 204:11,16 209:9 210:7 216:16 220:20 221:10,13 pointed 60:7 pointer 180:6,6 pointing 192:14 points 67:21 78:8 101:11 policies 3:7 67:1 policy 5:3,9,12 14:2 19:11 39:7 67:10 115:15,16 122:3 130:10 164:4 poor 171:12 poorly 82:21 179:3 popular 108:11 139:1 population 12:4 **portfolio** 122:9,13 portion 38:6 **poses** 15:6 **position** 15:22 16:12 53:9 114:16 121:3 151:2 positioned 16:13 positioning 15:1 positions 15:19 73:18 73:21 159:22 **positive** 59:9 84:13 165:4 possible 21:10 57:17 85:16 139:18 156:1 170:15 212:21 **possibly** 149:19 post 118:15 157:14 192:8 posting 218:15 potential 17:22 **potion** 78:16 Potomac 1:17 power 37:6 111:18,22 **powerful** 93:8,17 practical 41:19 57:17 practice 11:5 46:4,6 51:3,8 63:17,20 65:4 66:12 166:20 practices 44:22 45:4,12 46:1,9 48:17 50:2,7 50:10,11,13 64:3 65:15 69:1 70:8 78:12 92:4,6 167:18 PRCI 69:5 71:4

precipitate 166:6 precursor 216:18 predictable 96:14 predictive 16:15 216:21 preference 153:20 premises 55:18 preparation 106:21 177:1 prepare 43:17 117:16 138:7 prepared 158:7 159:16 preparing 171:16 present 2:1,12 40:3,5 59:3 180:4 186:7 presentation 4:20 26:10 111:15 132:13 139:21 142:2 154:18 157:4,9 177:12 presentations 10:6 93:10,22 136:20 189:4 presented 200:5 presenting 86:21 President 40:1 presiding 1:21 press 6:13 23:11 59:16 59:17 108:11 pressure 93:13 141:5 171:19 221:7 pressures 174:1 221:2 **presume** 188:9 pretend 183:13 pretty 42:16 49:20 73:4 93:18 111:14 134:19 174:17 191:17 205:13 205:20 206:3,4,12 prevention 33:16,20 34:2,9,18 47:3 78:4 82:13 103:15,22 104:6,9 109:12 113:4 113:7 122:22 previous 157:5 **price** 24:5,6 77:18 primarily 151:16 primary 97:8 principles 52:19 53:15 54:16,21 84:22 138:4 prior 66:14 97:13 141:12 priorities 19:15 20:19 23:21 27:11,13 29:2 43:7 60:6,13 68:19 73:3 108:3 137:16 **priority** 36:9 40:17 43:9 43:11 78:5,9 80:6 probable 39:1 probably 8:20 10:20 25:10 52:10 100:14 121:20 122:8 137:20

pre-disposed 158:16

plenty 94:17

plot 187:12

plug 34:1

138:17 143:4 144:14 154:8.14 155:2 171:7 183:11 202:16 220:7 222:4,18,20,21 **problem** 22:21 23:12 59:1 189:20,21,21 190:3 191:1 problematic 139:3 **problems** 76:12 78:19 167:16 procedural 43:13 procedures 44:14 49:15 75:9 **proceed** 169:4 **proceeding** 95:5 96:3 98:12 proceedings 85:14 process 19:17 47:20 63:16 67:12 77:22 81:7 84:17 96:2 97:16 105:14 108:18 109:9 112:4 135:11 145:18 147:6 152:12 167:8 169:1,3 170:6 174:13 189:18 190:3,9 205:12 processed 130:7 **processes** 16:3 17:7 18:5 44:15 65:13 73:10 75:4 81:20 135:7,9,18 processing 144:10 product 57:14 72:15 73:6.7 production 14:12 products 14:14 professionals 15:12 72:20 program 12:22 27:16 38:14 39:1,10 44:8,11 45:8,12,21 46:9 47:8 66:4,12 77:2,18 92:1 98:4 113:22 114:2,15 118:11 122:3,19 125:5 128:4,5,13 134:20 145:19 184:17 194:13,14,21,22 195:1,2,7,14 programed 206:8,11 programmatic 163:2 programs 44:21 47:6 66:15,17 94:1 99:13 124:14 129:2 151:19 160:11 163:3 progress 130:5 152:6,7 152:7 165:10 progressive 105:21 project 20:20 31:3 39:11 71:1

promote 34:11 promoted 65:5 promotion 34:13 **prompt** 106:8 155:6 219:13 **promptly** 219:12 223:20 **propel** 55:16 56:17,22 property 135:21 210:16 210:20 217:16 proposal 73:20 142:14 142:22 proposals 89:7 154:7 **propose** 108:19 **proposed** 5:16 20:10 31:15 42:2 43:14 57:13 142:18 150:10 152:10 156:16 proposing 37:19 proprietary 37:22 38:2 69:13 protocol 129:12 protocols 166:21 proud 76:19 78:1 124:18 128:5 147:3 proudly 78:2 **prove** 222:16 **proves** 120:11 provide 11:17,18 25:9 88:12 128:15 156:15 156:19,19 159:20 171:9 178:16 188:17 provided 37:11 131:21 171:11 providers 42:15 provides 167:12 **providing** 30:4 34:17 48:4 62:16 128:2 145:14 178:22 prudential 30:18 public 2:5,5,7,9,9,11 8:1,9 9:6,15 11:15 13:9 14:2 17:9 18:11 19:1 29:4,20 35:10,13 35:13,19,20,22 37:16 38:3 41:5,7 42:18,21 43:2 60:3 63:21 69:1 69:2 83:7,9 84:6 98:18 112:15 113:19 123:16 125:10,18 127:14 136:4 156:8 170:13,14,20 172:20 173:2 175:12,15,18 181:17 182:15 195:5 208:8 214:21 218:10 218:12

140:5 published 19:22 133:4 133:4,7,10,15 140:15 141:7 142:16 **publishing** 20:2 69:18 141:10 pull 50:12 85:15 222:11 pulled 52:20 134:2 **pulling** 10:14 49:11 209:15 pump 209:2 216:10 purpose 25:9 39:18 **pursue** 88:6 113:3 pursuing 19:4 58:15 push 20:7 85:7 push-back 85:13 **pushes** 80:13 **pushing** 75:13,15 put 9:19 11:13 24:18 33:7 34:7 54:16 58:3 63:8 79:10 94:14 98:3 121:16 123:13 124:2 148:21 158:16,22 169:14 187:3,15 195:20 200:13 201:10 204:14 207:17 215:15 221:16 putting 26:17 71:15 204:11 218:9,15

Q **Q&A** 25:14 132:10 146:12 **QER** 116:1 Quackenbush 2:10 7:22,22 98:17,18 qualification 136:22 142:17 148:20 151:6 164:22 195:2 qualifications 44:20 122:14 133:12 qualifies 39:15 quality 66:6 93:22 quarter 47:19 154:15 question 17:15 22:11 33:5,21 49:5 69:10 70:6,6,13,17 76:9,10 94:10 99:1 148:4 153:19 155:4 157:4 157:16 158:9 163:9 163:13 165:21 180:4 183:5 203:6 205:18 212:22 questioning 200:18 questions 22:4,9 24:15 24:16,18 32:20 33:2,4

34:22 42:4,6 50:1

70:20 72:17 79:2,8

52:2 61:2,3 68:1 70:2

80:2.4.21 103:16 119:6 131:6.12 146:8 153:1,14 163:14 165:22 177:7 203:2,4 218:4 219:5 auick 6:3 26:13 49:5 70:19 131:21 136:18 140:4,8 144:5 156:12 157:3 164:21 172:6 176:21 193:10 218:6 quickest 156:1 quickly 129:15 137:8 189:17,22 quiet 11:11 quite 13:20 53:6,7 84:10 100:20 114:17 116:2 133:22 148:16 167:2 208:11

R **R&D** 113:22 128:1,3,4 raining 79:14 raise 11:12 21:20 100:21 rally 167:14 ran 102:12 rank 93:22 rapidly 14:8 rate 4:15 26:9,16,19 33:5 73:10 85:8,13 86:5,15 87:12,19 88:13 90:13 94:20 95:5,10,14,16 96:3 99:5,20 106:19 118:19 186:19 187:6 189:7 200:13 202:10 202:20 216:3 223:15 rates 73:9 85:15 86:2,2 95:18 97:10 99:5 103:14 187:12 ratio 161:8 rationalize 53:2 raw 198:4 218:10,15,17 re-authorization 27:16 28:12 73:15 148:13 157:18 159:9 re-committed 58:8 re-vamp 31:1 react 73:19 reactive 73:19 read 109:3 186:12 read-out 45:1 ready 100:12 128:19 137:13 141:8 158:4 Reagan 1:18 real 12:9 59:1,1 65:1

publically 35:14 68:21

publish 133:5 139:20

172:9

103:15 111:17,21

113:6 119:10 156:12

167:21 170:19 180:7

212:12 218:6 220:1
reality 32:1 211:15
realize 104:1 108:15
194:11
realized 178:20 209:21
realizes 30:3
really 4:11,13 5:7 13:14
13:15,20 17:21 21:2 22:22 29:4 31:14 45:3
45:7 52:18,21 53:8,14
53:22 54:1,20 59:21
60:8,21 61:12 62:3,13
63:14 64:5,21 65:7,8 65:12,17,19 66:10
67:6 71:18 81:18 89:7
91:15 101:17 102:15
103:13 104:22 105:15
105:17 110:14 111:9
112:11 114:1 121:21
122:10 123:14 124:3
125.4 12 13 16 126.3
125:4,12,13,16 126:3 126:18 128:12,13,22
130:12,19 131:18
147:1,20,21 148:11
149:6 151:3 152:10
152:13 153:4 155:3
156:16 158:9,10
156:16 158:9,10 172:6 173:13 175:2
178:16 186:3 190:14
191:9 192:4 196:13
197:2 198:3 203:18
205:15 207:7 208:21
213:14 215:5,12
216.12,16,20 218.22
220:6,9,11,13 221:20
222:21
reason 17:4 91:22
reasonable 41:19 73:8
reasons 53:18 194:7
198:10 200:5 216:14 reassure 109:15
reassure 109.15
receive 106:11
received 23:10 140:16
140:19,22 141:4
143:17 144:21 165:1
receptive 169:10
171:14 206:16
recognition 38:14
119:20
recognize 11:13,16
38:15 40:10 59:14
60:3 68:10 72:22
recognized 39:14,16
62:21
recommend 153:4,21
recommendation
127:19 137:4 150:7
152:17 164:2
Ī

```
recommendations 3:13
  14:6 19:7 20:14 34:14
  72:9 108:10 109:17
  109:20 112:18 124:12
  124:17,22 127:3
  143:18 146:14.16
  147:13,17 148:9
  150:4,14,16 151:14
  151:20 152:5,14
  153:8 163:16,20
  165:5
recommended 63:17
  63:20 64:3 65:4 66:12
  68:22
reconsideration 140:17
reconvened 206:22
record 27:4 28:11 33:12
  43:5 79:10 86:10
  106:5 139:4 156:8
  168:19 190:1 223:22
recorded 9:21
records 45:18 139:4
recover 86:2
recovery 73:10 87:19
  92:22 93:7,11,16 95:4
  96:15 116:21 133:14
  142:18
recruit 19:2 114:18
recruited 115:19
recruiting 15:19 159:22
recruitment 117:10
recs 149:22 151:17
  153:11
red 6:13 10:1
redoubling 17:21
reduction 116:8
refer 145:15
reference 152:16
referred 135:2
refineries 31:8
reflect 5:10 19:18 52:18
  193:13 202:1
reflected 97:19 98:8
  164:8
regarding 97:3 144:18
regardless 109:2
regards 166:7 185:6
regime 74:18
region 121:2 122:2
  161:20 162:2
regional 48:13 115:5
regions 161:18
Register 127:11 141:8
registering 145:6
regular 134:5
regularly 23:8 46:15
```

```
regulates 41:20
regulation 54:9 84:18
  84:22 97:3,8 130:13
regulations 14:3 17:6
  123:13 124:1.2
  143:13 145:17 146:2
regulator 82:4,9 83:2
  123:13,15 193:14
regulators 16:7 17:19
  29:11 30:18 85:6
  111:19.20
regulatory 3:13 14:17
  20:16 46:10 59:2
  105:19 136:18 145:19
  149:19 164:17 166:17
reinvestment 116:17
related 64:16 126:9
  127:20 129:21 142:22
  149:14,22 150:1
  151:13,15 163:6
  164:8 165:7 189:1
  194:21 195:6 196:15
  196:20,22 197:4
  207:2 217:10
relates 114:10
relating 112:5 188:18
relationship 17:12
  194:13 195:15 202:16
relationships 17:12
  194:14 195:7
relative 123:8
relatively 91:8
relaxing 24:15
release 214:2,4
released 43:15 77:6
releases 37:7 208:4
  213:20
relegate 81:18
relevant 124:1 128:16
  129:20,21 130:17
  176:17
reliability 45:20
reliable 73:6
rely 18:10 175:2 221:14
remain 21:15 148:14,14
remaining 20:7 90:2
  149:2 164:5
remains 14:21 164:19
remarks 100:2 118:20
  219:6
remember 40:14 48:22
  95:3 100:21 101:2
  150:20 173:4 202:7
  210:18
remembers 42:1
remind 9:2,22 10:8
  219:9
reminder 6:12
```

reminding 41:17 removal 89:4 reorganization 120:16 repair 180:20 182:1,2 200:3 214:4,5,9 repairs 180:10.11.13.14 196:15 200:4 216:19 repealed 37:18 repeat 98:21 183:15 replace 86:3 198:17 214:10 replacement 89:4 199:16 replacing 86:4 report 4:11 34:7 41:10 59:10 62:2 71:15 127:3.20 150:12.18 150:19 180:3,3 194:20 214:7 222:5 reportable 191:14 209:10 223:10 reported 191:15 213:22 reporter 10:4 11:19 119:11 reporting 4:12 10:3 133:13 143:1,3 155:6 194:19 212:14 213:12 reports 83:17 149:3,5 149:16 187:16 191:13 repository 176:4 represent 17:8 18:10 61:11 representation 19:6 representative 170:20 representatives 49:22 representing 13:22 18:22 52:6 61:8 83:7 213:9 represents 42:12 52:8 52:10 104:20 request 210:13 **requests** 143:12 require 36:12,19 40:13 151:9 requirement 141:21 requirements 133:13 138:6 145:5 requires 88:10 193:4 research 16:14 64:19 69:4,6 70:8 71:1,7 118:12 reserve 158:18 reservoirs 166:14 residences 142:6,8 resinate 56:10,10 resistant 37:6 resolve 167:16 resolved 39:3 150:8 resolving 147:1,2,12

81:20

41:12

regulated 17:8 23:5

п			213
70000000 46:40	120,10 151,11 156,11		20:4 5 42:40 24 42:2
resource 46:19	138:18 154:11 156:11	rule 19:16 20:14 36:10	39:1,5 42:19,21 43:3
resources 16:5 38:7	156:17 157:1,2	36:15 37:9,14,15,20	43:5,9 44:2,6,20
84:1 124:2 158:3	160:22 163:19 165:2	38:1,5 58:14 75:16	46:12 47:4 48:19,20
179:12	165:17 167:22 169:17	76:7 98:3 101:14	49:15 53:22 55:16
respect 62:12 64:14	174:21 177:6,8 180:1	104:8,9 108:10,14,16	56:13 61:13,16 62:1,3
69:8,9 80:4 97:5,20	180:8 187:14 197:19	109:11 110:10,12	64:9,22 65:1,9,10,14
98:4	205:3,12 209:7 211:6	113:4 123:9 124:6,10	65:14 66:8 74:2,8
respective 122:17	212:7,12 213:9	124:22 130:14,15	75:4,9 78:13 81:10,22
123:6,7	214:19 215:6,7 217:6	133:5,5,6,7,11,20	86:22 89:18 91:2
respond 141:9	219:4 220:19 221:10	134:6,13,15,20	92:17 93:15 97:20
responders 43:2 66:18	223:13	135:14 136:21,22,22	98:4 99:13 102:19,20
156:1	right-of-way 216:2	137:17,22 138:1,10	105:16,16 106:12
responding 28:9	ripe 169:5	138:13,16 139:6,20	114:15 120:6 121:4
response 24:20 32:10	risen 29:18	140:5,14,17 142:1,4	121:21 123:8,22
61:18 63:15 66:9,16	risk 16:16 21:1 33:18	142:16 143:16,18,20	124:3 125:15 128:21
99:1 141:11 151:1	49:17 100:1 125:22	143:21 144:1,6,6,8,12	142:18 158:1 160:10
responses 165:4	126:2,5,16,17 127:4	144:16,21 145:16	179:15 185:15,19
responsibilities 145:20	188:11	146:16 148:16,18,18	194:13,14 195:6,14
responsibility 14:16	riskier 89:4	148:19,19,20 149:14	212:3 214:21
responsive 15:9 127:17		149:17 150:8,10	Salerno 104:12 213:8
rest 12:7 24:15 26:11	risks 86:13,15 87:7 216:7,8	151:9,11 154:6	salt 166:13,20
75:11 80:13 111:8			
	river 67:5,8,14 159:12	156:18 164:6,9,11,15	Sam 104:5 109:13 139:20
192:5	159:14	164:22 165:3 166:6	
restoration 47:16 136:1	rivers 67:14	168:20,22 170:6,8	sampling 101:19
result 37:10 217:16	road 206:4	173:19 180:16 221:18	San 52:16 150:2 164:7
resulted 150:6	Robert 2:5 6:19 73:1	rules 5:16 19:17 20:3	Sandy 47:14,17
resulting 43:14	80:3 103:1 111:7	20:10 26:4 31:13,15	sat 53:10
results 78:3 150:13	Robin 71:9	31:16,17,18 40:12	satisfactory 76:9
resumed 106:5	robust 19:8 101:22	41:18 42:2 43:15,16	satisfied 213:21
review 29:16,16 32:9	208:11	43:18,19,21 44:5	SATTERTHWAITE 2:20
39:13 44:8,14 50:18	robustly 130:18	57:13 58:6 60:15	7:4
51:6,20 92:1 97:16	Rocky 7:2 35:9,15	74:10,12 75:8,13	Satterwaite 7:5
109:9 149:4	39:21 40:3,20 41:2,4	80:13,15,16,19 102:3	SAVE 85:22 86:19
reviewed 51:18	role 18:9,17 73:17	102:5 112:7,17 133:1	saw 20:17 71:9 140:3
reviews 34:15 49:7,8,10	112:7 121:4 123:21	133:4,17 134:12	183:16 210:3
76:3	223:1	136:10,14 137:21	saying 24:3 46:6 79:18
revised 127:13	roll 195:4,10	138:17 139:13 140:4	92:5 104:11 107:6
rewrite 76:20	Ron 8:4 31:10 74:22	140:8 143:22 144:9	118:20 175:17 222:6
Rich 7:1 35:2,2,8 42:5,6	75:14 78:14 81:2 83:4	152:8,10,11 169:21	222:6
RICHARD 2:5,6,9	103:1,20 111:7 183:9	174:6,8	says 45:2 75:19 110:13
richer 125:6	194:16 200:18 205:4	run 10:9 101:12 102:13	138:10 180:16 186:13
Richmond 86:8	205:5 206:17 208:18	182:17,22 183:1	186:18 187:5,11
Rick 6:17 8:8 83:6	215:16	213:5	190:17
103:21	room 6:5 28:21 44:9	running 182:12	scale 130:9,21 131:1
rid 73:12 87:20	50:22 83:19 84:16	runs 201:11 208:6	132:3 186:11 192:3
rider 86:19,19	85:8 92:2 94:21 99:12	rupture 143:16	192:13
right 15:17 22:10 24:9	99:19 102:22 113:15	rush 130:2	scales 192:10
27:5,13 28:15 31:4	154:15 158:20 159:7	. 2011 100.2	scared 119:13
35:1 40:21 47:13 50:1	165:8 170:16 172:22		scary 218:19
	181:19	safe 21:10 73:6 79:1	scenario 188:18
11 51.857.31760.7		Jaic 41.10 / J.U / J.1	
51:8 57:3,12 60:7 69:14 72:15 74:2		cafaty 1.2 2 2.14 2.0	schodulo 167·91
69:14 72:15 74:2	root 203:11 204:4 222:8	safety 1:2,3 2:14 3:8	scheduled 20:21 21:1
69:14 72:15 74:2 76:18 77:1 78:17	root 203:11 204:4 222:8 roster 104:19	4:17 7:21 12:16 14:20	scheduled 20:21 21:1
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1	scheduled 20:21 21:1 45:9
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2	scheduled 20:21 21:1 45:9 science 15:12
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18 86:1 87:14 90:21	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15 roundtables 46:2	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2 18:6 19:16 20:8,10	scheduled 20:21 21:1 45:9 science 15:12 score 39:16
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18 86:1 87:14 90:21 91:18 92:10 93:4	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15 roundtables 46:2 route 210:21	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2 18:6 19:16 20:8,10 21:8,13,16,20 22:18	scheduled 20:21 21:1 45:9 science 15:12 score 39:16 scramble 171:5
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18 86:1 87:14 90:21 91:18 92:10 93:4 96:21 98:15 103:6	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15 roundtables 46:2 route 210:21 row 36:21	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2 18:6 19:16 20:8,10 21:8,13,16,20 22:18 22:21 24:11 27:2,7,15	scheduled 20:21 21:1 45:9 science 15:12 score 39:16 scramble 171:5 screen 180:9
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18 86:1 87:14 90:21 91:18 92:10 93:4 96:21 98:15 103:6 106:7 108:18 112:15	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15 roundtables 46:2 route 210:21 row 36:21 RP 74:22 75:12 81:6	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2 18:6 19:16 20:8,10 21:8,13,16,20 22:18 22:21 24:11 27:2,7,15 29:5 31:22 32:2 33:15	scheduled 20:21 21:1 45:9 science 15:12 score 39:16 scramble 171:5 screen 180:9 SDO's 145:3
69:14 72:15 74:2 76:18 77:1 78:17 79:19,20 80:14,16,17 80:18 81:2,9 85:10,18 86:1 87:14 90:21 91:18 92:10 93:4 96:21 98:15 103:6	root 203:11 204:4 222:8 roster 104:19 round 6:3 76:2 109:18 rounds 99:15 roundtables 46:2 route 210:21 row 36:21	4:17 7:21 12:16 14:20 15:10 16:9,11,18 17:1 17:1,7,13,17,22 18:2 18:6 19:16 20:8,10 21:8,13,16,20 22:18 22:21 24:11 27:2,7,15	scheduled 20:21 21:1 45:9 science 15:12 score 39:16 scramble 171:5 screen 180:9

			244
seats 106:3	September 21:1 125:21	190:12 191:3 193:7	slice 195:16
SEC 222:10	127:7 141:12 142:13	193:20 194:11 195:17	slid 196:15
second 26:22 61:15	142:21 159:6 195:4		slide 40:9 148:8 197:16
63:10 64:12 71:3	195:11	show-stopper 206:13 showed 193:18	200:8 202:4 209:14
			200.6 202.4 209.14
127:8 171:14 173:16	sequel 126:3	showing 41:10 119:1	
194:12 214:1 220:3	series 25:15	196:7 202:10	slides 27:8 202:6
secondary 173:16	serious 33:19 191:7,7	shown 9:15 84:8	slightly 188:18
seconds 90:13	200:10 209:10 210:3	shows 41:9 202:13	slowness 147:11
secret 146:19	210:4 212:7	shutdowns 211:7	small 41:3 130:9 131:1
Secretary 89:1 90:9	seriously 79:7	shutting 90:12	132:3 191:13,15
93:12 109:7,8 118:6	seriousness 180:18	shy 24:22	214:2
section 34:9 144:17	sermon 223:15	sick 111:7	smaller 130:9 141:2
149:12 196:18	serve 18:17 82:14	side 17:10 92:20,21	smallest 23:6
sector 13:22 15:18	served 58:19	96:11 99:20 122:1,3,9	smart 59:21 218:22
sectors 15:7,14 19:1	service 8:1 13:16,19	123:10 125:19 134:21	SMS 50:14 55:22
security 46:13 47:22	21:7 40:19 41:13	138:14 175:12 198:16	103:11 107:21 111:9
48:13,14,16	42:15 98:18 125:9	199:18 200:3,13	115:9 120:6 163:4,5
see 9:11 17:20 24:17	142:7	201:10,12 205:6	212:18
30:16 31:14 37:22	services 6:11 14:14	208:3 217:10 218:1	sneaking 111:2
54:17 57:13,14 74:12	session 4:4 100:2	sides 111:21	SOAR 38:14 39:18,22
75:18,22 78:3 82:1	101:16	sight 193:3	social 136:3
83:14 101:21 103:3	set 14:2 26:8 49:20 77:7	signal 215:4	socializing 120:7
105:13 120:11 126:14	77:7 93:2 101:22	signature 62:20,21	solicit 5:20 9:5
127:16 145:12 151:13	134:14 137:9 162:20	signed 28:22	solid 102:8
173:4,11 176:17	172:1,4 177:11	significance 217:11	solution 84:21 190:5
180:5 184:8,16,22	205:14,21 206:12	significant 38:6 55:2	solve 59:6,7 144:4
185:4,19 186:6	sets 135:11 162:2,18	63:13 85:13 112:2	solved 59:2
187:13 188:1 190:3	setting 95:17 179:8	114:14 135:14 170:6	somebody 46:5 89:22
191:9,22 192:11,15	settle 187:19	174:13,14,15,17	173:7 175:6 206:13
193:5,8 199:21 200:8	settlement 77:21	191:12,16 210:7,17	208:6
202:9 207:3 210:6	Settling 208:11	210:18 213:19 214:6	soon 4:6 5:15 57:13
212:20 213:2 223:19	seven 151:20 160:9	silver 39:15	114:1 128:3 134:11
seeing 67:11 130:8	shading 40:21	similar 138:15,19 198:4	137:8
189:7	shaken 193:6	similarly 125:18 179:3	sooner 107:1
seen 18:22 47:12 53:16	shape 54:13	197:13 217:5	sorry 10:3,21 25:4
55:2 58:17 74:11	share 28:13 47:6 53:18	simple 9:16 77:10	70:18,19 136:19
87:10 94:2,4,6 187:7	68:3,10,17 69:7 119:9	155:15 157:17	160:11 165:1 175:15
191:5 192:10 202:3	121:13 155:5,11	simplistic 126:5	194:16 218:5 223:14
segregate 215:12	178:9 212:18	simply 77:6 86:10	sort 5:10 10:21 69:9
select 49:18	shared 46:9,14 69:5	sincerely 18:15	72:8 78:16 84:11 90:
selected 51:12	105:6	single 49:2 76:20,22	116:20 118:22 126:20
selection 138:21	sharing 48:3,12 65:19	196:13	127:5 131:19,19
self 51:11 180:21	76:3 121:17	single-family 142:6	166:6 197:8,9 212:14
self-assessing 17:5	She'll 115:22	sir 42:9 132:11	213:11
self-initiating 126:22	shed 123:4,16	sister 138:13	sorts 80:1 215:15
selling 77:18	Shell 8:10 61:8 63:1	sit 33:10 89:14	sound 169:12
Senate 159:4	67:11	sits 76:21	sounds 160:5
send 51:19 153:8	shine 103:17 107:19	sitting 55:4 115:19	source 37:4 153:6
177:13	113:9 116:18 123:7	116:20 181:19	sourcing 218:21
sending 51:18	shining 93:6,13 103:12	situation 85:9	South 6:20
senior 3:9 65:11	shoot 30:20	six 20:8 23:7 86:6 133:3	southern 121:2
sense 82:10 96:1 190:4	short 29:19 78:20	152:4 193:10 195:20	Southwest 161:19
200:14	212:12	196:3 205:7,11	space 56:22
sensitive 192:22	short-term 27:11	211:16 215:17	-
sent 47:13 88:4 127:21	shorter 96:20 100:1	sixth 49:1	speak 9:22 11:11,14,10 11:17 24:19 30:7
150:15 157:5 separate 103:5 120:21	shortly 52:21 139:11	size 41:11	49:21 54:22 72:18
congrato IIIXA 170171	144:8 171:20	sketch 171:7	80:5 135:19 136:16
	ab at 404:4 400 40		
194:20 separated 201:5	shot 101:4 186:10 show 59:4 93:10 131:20	skill 162:1,17,20 skilled 114:22	205:19 speaker 27:1 35:1 42:7

II	1	1	1
52:3 61:5,5	124:6 133:5 144:15	89:18 204:18 205:16	124:17
speakers 28:20	144:16,18,22 145:4,7	211:19	successes 57:18
speaking 10:5 35:10	166:12,14,19 167:6	stepped 176:4	107:19,20
42:10 52:6 73:15	168:1,4	stepping 56:21	Sue 44:10 85:3 157:15
spear-headed 62:6	standing 79:16 203:14	steps 48:16	157:21
63:20	start 6:7 15:3 57:15	stop 53:4 67:19 119:5	Sue's 158:7
special 36:19	106:14 137:7 144:5	205:1 221:8,8	suggest 90:22 188:3
specialists 160:10	155:16 177:4 188:1	storage 166:10,22	suggestions 12:15
162:14	208:19 209:5	167:17 169:9	suit 40:2
specially 35:17	started 6:3 22:2 31:17	stories 192:20 205:15	summarize 148:1
specific 14:4 148:5	44:12 58:9 66:21,21	story 30:11 100:9 111:9	summarizes 149:21
specifically 151:5	111:12 190:21 218:9	134:19 181:20 182:9	summary 69:18 170:13
198:12 specifics 108:16	218:9,11 starting 23:13 28:7	190:14,18,20 192:19 straight 28:11 120:3	173:17 summer 43:15
161:19	144:14 176:20 197:13	175:16	summit 48:19,21
Spectra 8:6 166:2	state 7:14 22:20 29:11	straightened 22:16	super 41:20 158:5
spectrum 61:21 64:2	29:16 31:17 33:16	strategic 62:2	support 34:6 41:16
speed 132:15 145:21	34:16 39:2,3 46:4	strawman 30:20	87:5 211:18
spend 34:5	74:10 75:10 76:16	streamline 75:2	supported 167:5
spending 34:4	79:15 83:10 88:6,19	street 133:21 134:7,12	supporting 93:15
spent 42:19 94:12	88:20 89:13 92:20	139:7 142:5	supportive 91:8 98:7
97:20 98:7 102:20	104:4,21 105:20	strength 220:2	supports 36:14 43:16
149:11	111:18 112:22 114:4	strengthen 118:2	suppose 23:1 29:10
spill 32:6,10	124:14 128:11 129:8	strengthened 18:6	135:11
spilled 216:4	140:21 145:16,19,21	strengthening 114:7	sure 10:16 13:10,17
spills 190:19	151:19 160:11 187:20	stretch 157:19	15:8,20 21:9 24:7
spinning 156:4	221:7	strikes 211:5	33:3,11,21 58:2,20
split 161:4	state-of-the-art 128:9	strive 39:19	60:7,16,18 70:5,16
spoke 81:13 spot 93:6,13 94:14	statement 11:18,19 53:20	strong 34:9 64:22 223:1 stronger 161:15	74:2,7 77:3 78:22 80:1 85:8 86:14 87:2
spreading 161:17			
	Statements 1991	Strongly 45°13	9073 9671 11173
	statements 199:1 states 23:20.21 24:7	strongly 45:13 structure 16:2 18:5	90:13 96:11 111:13 120:13 123:17 126:12
spurious 202:21	states 23:20,21 24:7	strongly 45:13 structure 16:2 18:5 55:14 86:16 87:12	120:13 96:11 111:13 120:13 123:17 126:12 128:16 130:6 131:13
		structure 16:2 18:5	120:13 123:17 126:12
spurious 202:21 square 40:20	states 23:20,21 24:7 29:17,19 34:17 35:21	structure 16:2 18:5 55:14 86:16 87:12	120:13 123:17 126:12 128:16 130:6 131:13
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10 stage 139:16 170:6	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10 stage 139:16 170:6 stages 130:15	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10 stage 139:16 170:6	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10 stage 139:16 170:6 stages 130:15 stakeholder 3:6 5:20	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13 40:6,10 41:15,16 71:16 76:21 91:6 staff's 138:18 staffing 19:10 stage 139:16 170:6 stages 130:15 stakeholder 3:6 5:20 25:15 26:22 59:6	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5 stays 196:1	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11 submits 173:7	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15 systems 35:20 38:17
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5 stays 196:1 steady 187:20	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11 submits 173:7 submitted 195:7	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15 systems 35:20 38:17 39:13 41:7,11,12 47:4
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5 stays 196:1 steady 187:20 steel 86:4 197:9	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11 submits 173:7 submitted 195:7 submitting 145:6	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15 systems 35:20 38:17 39:13 41:7,11,12 47:4 55:19 65:2,13 96:14
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5 stays 196:1 steady 187:20	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11 submits 173:7 submitted 195:7 submitting 145:6 subsequent 72:11	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15 systems 35:20 38:17 39:13 41:7,11,12 47:4
spurious 202:21 square 40:20 stable 191:17 Stacey 22:14 Staci 213:9 Stacy 13:6,7 staff 3:3 10:17 37:13	states 23:20,21 24:7 29:17,19 34:17 35:21 41:8 52:9 72:20 73:5 73:9,22 74:9,12,16 75:17 76:4,5 77:17,20 78:10,12 79:9 80:6 84:10,18 87:9,13,17 87:19,22 88:2,9 90:2 93:2,6,6,10,14,21 94:1,4,13,16,16,17 99:2 113:10 114:7 116:19 119:3 155:22 166:16,18 167:4 173:1 186:1 static 72:11 207:6 stating 15:3 station 216:10,10 stations 209:2 statistics 211:4 status 148:8 150:15 stay 16:7 17:19 24:6 59:8 100:5 stays 196:1 steady 187:20 steel 86:4 197:9 steep 119:19	structure 16:2 18:5 55:14 86:16 87:12 112:11 114:6 structured 15:9 25:8,13 26:9 101:16 structures 116:22 struggle 144:1 struggled 215:11 struggling 136:9,14 stuck 107:14 students 118:15 studies 20:15 study 37:22 38:2 stuff 4:22 34:11 68:6 77:10 87:6 108:5 109:1 114:1 132:1 139:16 140:12 158:4 169:5 171:19 172:6 220:4 222:19,21 Stursma 104:20 sub-part 57:20 subject 131:11 submits 173:7 submitted 195:7 submitting 145:6	120:13 123:17 126:12 128:16 130:6 131:13 131:17 156:6 172:10 172:19 175:13 surprise 43:8 surprising 134:1 survey 76:4 Susan 2:4 6:15 85:2 suspect 30:21 167:10 199:14 swing 88:14 158:8 159:16 168:8 171:13 212:10 switch 36:17 switching 37:10 synonymous 16:18,22 system 21:10,13 30:16 30:20 31:2 38:13,17 38:19,20 39:5 45:20 50:14 55:3,4,5,12 66:6 105:16 191:6 212:15 systems 35:20 38:17 39:13 41:7,11,12 47:4 55:19 65:2,13 96:14

II			
table 3:1 17:15 57:6	189:4 203:8 216:6	tentatively 200:9	44:3,19 45:3 48:17
62:10 94:6 107:3	219:19	tenth 28:16	59:16,18 62:19 63:5,6
152:17,17 166:8	tangibility 57:16	term 210:1 212:12	67:11,15 68:17 73:3
181:19 187:8	target 188:5	terms 63:12 65:10	73:11 74:6 82:12,20
tag 71:8	targeting 216:7	68:18 72:10 80:6	83:1,3 97:22 99:14
tag-along 34:19	targets 201:1,8 215:8	84:14 144:2 145:6	102:1 103:13 107:18
Tahamtani 1:21 2:2	task 76:22 193:15	terrific 44:11	107:22 108:3 109:10
	tasked 193:11,11	territory 40:19	107.22 108.3 109.10
7:13,13 11:1 22:3,8 22:17 24:21 25:4	· ·	Terry 53:12	115:12 116:12,13
26:21 33:1,4,9 34:22	teach 107:21 teal 70:15	test 62:18 72:11 77:4	117:7,10,14 119:12
42:5 52:1 61:1 67:22	team 13:4,12 71:12,21	78:2	121:16 122:11 125:3
70:2 72:17 79:7 81:2	81:18 91:19 111:14	testament 111:17,21	126:10,12 127:4
83:4 85:2,21 87:18	196:10 198:8,8		-
88:3 90:15 92:13 94:9	203:17 204:12 205:19	tested 55:7,9 139:5 141:5,6	135:10,21 136:2 140:2 141:15 145:13
		1	
96:18 98:15 99:21	205:20,21 206:18,19	testifying 159:7,8	147:14 158:21,22
106:7 131:7,10,14	209:19	testimony 86:21 159:1	163:4 174:18 177:22
132:16 146:7,11	teams 203:13 206:8	testing 64:7,8 70:21	178:12,12 187:18,20
153:13 157:2,15	tease 203:21	72:11,12,16 195:1	189:6 191:8 192:8,14
159:18 163:12 165:17	technical 5:6,7 15:13	tests 77:13	201:4 203:1 206:21
165:20 169:17 177:6	18:13 40:7 41:16	thank 6:15 8:17 10:12	211:9 212:16,20
203:3 205:3 209:6	46:10,18 71:16 112:2	10:18,21 11:2,3 12:2	214:22 216:9 218:9
213:16 218:3 219:4	117:21 162:22 174:11	12:10,17 13:2,15	218:19 219:10 221:4
223:18	technically 41:18	18:15 21:6 22:3 24:22	221:15 223:12
tail 41:21	114:22	25:2,5 26:17,20,21	think 5:8 6:1 8:19 9:20
take 4:8 10:11 13:1 22:4	techniques 135:8	35:3 40:16 42:5 49:17	10:8 23:18 28:10,16
33:1 37:11,16 59:13	technologies 14:10	51:22 52:1 61:1 67:22	30:7 32:6,19 44:8
63:8 79:2 96:19 98:14	61:15 64:18	69:21 83:4 85:2,3	45:4,5,7 48:22 49:16
101:4 114:19 120:12	technology 16:11 18:2	90:15,17 92:13,14	51:1,6 52:13,15,17
120:20 126:18 131:2	56:3,14 64:13 74:8	94:9 96:18 98:13	53:11 54:15,19 55:1,7
136:5 173:3 185:7	81:14 130:17	99:21 104:8 105:1,2,5	56:10,12,19 57:4,12
186:10 221:22	tee 146:6	105:22 106:1,7,19	58:5,7,16,19 59:4,9
takes 91:18 216:9	tee-up 213:18	108:7 153:13 154:12	59:10,14,19 60:16,21
talent 15:21 114:22			
	tell 22:17 75:6 76:15	156:11 157:15 163:10	64:17 71:9 72:14 81:9
118:17	77:5 91:10 102:5	165:17 200:21 209:6	81:21 83:1,9 85:17
118:17 talk 5:7,19 16:17 23:20	77:5 91:10 102:5 107:1 108:22 110:20	165:17 200:21 209:6 213:15 218:3 219:8	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 22:14 tells 30:10 78:17 181:2	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14 tells 30:10 78:17 181:2 181:5,10 183:6,21	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 22:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20 44:16,16 58:4 81:22	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9 tend 27:18 199:2	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7 184:4 185:2 194:10	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21 163:2,21 164:13,15
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20 44:16,16 58:4 81:22 89:12 92:7 94:13	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 222:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9 tend 27:18 199:2 tendency 176:19	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7 184:4 185:2 194:10 195:3 197:8,9 200:20	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21 163:2,21 164:13,15 167:3,12 168:1,14
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20 44:16,16 58:4 81:22 89:12 92:7 94:13 110:14 114:21 115:22	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 22:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9 tend 27:18 199:2 tendency 176:19 tends 99:7	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7 184:4 185:2 194:10 195:3 197:8,9 200:20 201:16	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21 163:2,21 164:13,15 167:3,12 168:1,14 169:6,7,10,13,20,22
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20 44:16,16 58:4 81:22 89:12 92:7 94:13 110:14 114:21 115:22 116:4 151:4 154:2,16	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 22:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9 tend 27:18 199:2 tendency 176:19 tends 99:7 tent 33:8	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7 184:4 185:2 194:10 195:3 197:8,9 200:20 201:16 things 8:20 24:2 26:3	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21 163:2,21 164:13,15 167:3,12 168:1,14 169:6,7,10,13,20,22 170:11 171:9,10
118:17 talk 5:7,19 16:17 23:20 24:2 27:10 36:8 44:15 55:22 58:5 77:1 81:7 82:6,19 83:12 87:3 88:11 92:18 98:22 101:18 102:16,18 106:15 110:10,16 113:2 115:8,9,14 116:7,19 124:10 132:4 153:17,18 154:20 155:12 163:19 175:19 178:6 192:16 192:17 196:11 201:7 212:13 213:6 219:20 talked 4:9 18:4 94:15 109:6,8 113:14 116:17 170:1,2 177:18 178:8 189:9 200:12 211:19 talking 31:10 42:20 44:16,16 58:4 81:22 89:12 92:7 94:13 110:14 114:21 115:22	77:5 91:10 102:5 107:1 108:22 110:20 112:1,9,17 115:1 118:3 168:11 171:17 174:22 180:12 181:1 181:3,15,20 182:8,9 182:10,13 183:5,12 183:20 184:5,10,10 185:4 192:19,20 204:2 205:15 213:10 215:17,19 218:22 220:17 221:14,19 telling 114:17 115:3 119:22 168:9 179:10 185:18 193:6 220:3 22:14 tells 30:10 78:17 181:2 181:5,10 183:6,21 190:14,18,19 196:14 temp-risk 47:3 tenants 102:9 tend 27:18 199:2 tendency 176:19 tends 99:7	165:17 200:21 209:6 213:15 218:3 219:8 219:15 223:15,18 thankful 104:7 109:5 thankfully 5:14 thanks 14:9 15:14 26:17,19 70:4 94:8 99:22 121:19 146:5 163:11 215:4 theme 146:17 theory 113:10 Therese 2:13 5:4 7:12 12:12 125:2 thing 30:22 31:19 47:21 63:10 71:3 74:2 78:17 80:14,16,17,18 85:10 87:14 90:21 105:18 112:16 117:1,8 126:20 127:5 140:15 147:22 156:7 165:12 173:4 175:5 182:7 184:4 185:2 194:10 195:3 197:8,9 200:20 201:16	81:21 83:1,9 85:17 87:16 88:3 89:1,8,9 89:17,19 90:4,5,8,22 91:11 92:3,4,11 93:8 93:16,17 94:2,22 95:22 100:7,9,17 101:7,9,12,21 102:6 102:10,17 103:3,13 103:22 107:4 108:13 109:6 110:3,21 111:2 111:4,8 112:13 113:9 113:14 114:7 115:21 116:1,12,18 117:3,8 117:12 118:4,10,20 119:4,17 121:8,14 126:7 128:1 130:5 132:9 140:8 141:19 143:4 145:21 147:21 154:14,17 155:20 156:21 158:9,11,12 158:16 159:3,8,15,21 163:2,21 164:13,15 167:3,12 168:1,14 169:6,7,10,13,20,22

II			
175:9,14 176:1	3,15 42:19 45:8 50:	19,21 top 29:18 34:3,2	21 43:8 true 30:11 84:8 107:6
178:4,20 179:4	· ·	•	
181:14,14 183:		*	
186:3,5,22,22 1			
190:13,18 191:			·
192:20 199:2 2			
203:12 204:6,8			
205:11,17,22 2		-	
206:4,15,15 20			30:22 37:14 54:11
209:4 210:19 2			57:5 62:10 71:8 85:15
212:1,5,11,17 2			
213:14 214:19,			107:22 110:6 114:18
215:8,9,10 217			
219:2,19 220:1			140:6 144:4 145:12
220:21 221:11			
223:8	172:11 173:3,0		
thinking 107:12,			176:20,22 209:17
189:8 204:10	188:10 190:15		217:2,4 223:8
third 49:16 61:15			
64:21	219:8,20 221:	_	
third-party 222:3			
thorough 136:20			67:6 78:21 79:13
142:14,19 143:			
154:6 184:7	171:20 175:4	190:7 129:8 162:12	107:2,14 112:7
thought 25:14,19	9 53:21 207:16	trained 22:15 77	7:4 114:19 115:1,13
90:13 100:11 1:	22:11 TIMOTHY 2:8	129:9	116:19 118:8 120:2
131:17 144:19		training 44:21 6	5:5 134:6 136:1 139:12
166:3 195:19 1		66:16 77:2 122	2:14 139:15 155:6 168:12
200:18 204:7 2	05:9 today 5:11 10:9	13:14 128:7,9,15,22	160:11 171:5 188:13 197:22
	_		
211:12 218:14	*		203:21 214:8
211:12 218:14 thoughtful 149:1	1 101:15 104:12	146:18 transcript 10:6	TUESDAY 1:11
211:12 218:14 : thoughtful 149:1 thoughts 90:7 94	1 101:15 104:12 4:20 174:6 177:12	146:18 transcript 10:6 179:17 transitioning 16	TUESDAY 1:11 53:1 turf 83:10
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6	1 101:15 104:12 1:20 174:6 177:12 193:20 199:13	146:18 transcript 10:6 179:17 transitioning 16 206:10 translate 162:17	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14	1 101:15 104:12 1:20 174:6 177:12 193:20 199:13 1,20 219:9,16	146:18 transcript 10:6 179:17 transitioning 16 206:10 translate 162:17 transmission 20	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 0:2 102:1 119:7 132:11
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2	1 101:15 104:12 1:20 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8	transcript 10:6 179:17 transitioning 16 206:10 translate 162:17 transmission 20 42:14 52:8,11,	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 0:2 102:1 119:7 132:11 219:5 223:16
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1	1 101:15 104:12 174:6 177:12 193:20 199:13 1,20 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18	transcript 10:6 179:17 transitioning 16 206:10 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 104:1 181:14 184:4	transcript 10:6 transitioning 16 206:10 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 13: 211:1 134:9 138:14 2	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 0:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 104:1 181:14 184:4 3 7 Todd's 216:16 2	transcript 10:6 transitioning 16 206:10 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 13: 211:1 134:9 138:14 2 20:20 148:18 164:15	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 0:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 99:4 told 79:20 100:9	transcript 10:6 transitioning 16 206:10 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 13: 211:1 134:9 138:14 2 20:20 148:18 164:15 197:11,13,18	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 TUESDAY 1:11 turf 83:10 11:14 72:18 10:20 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 11:14 72:18 12:15 71:14 12:16 71:16 12:17 71:17 12:17 71:17 12:17 71:17 12:17 71:17 12:17 71:17 12:17 71:17 12:17 71:17 12:17 71:17
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 99:4 told 79:20 100:9	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 13: 134:9 138:14 7 20:20 148:18 164:15 197:11,13,18 transparency 29	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 0:2
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 109	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 199:4 told 79:20 100:9 4 51:8 137:6 159:11 tomorrow 5:12	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 1,10 197:11,13,18 transparency 29 29:21 30:5,12	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 100 133:4,10 139:15	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 199:4 told 79:20 100:9 4 51:8 137:6 159:11 10morrow 5:12 2 20:1 59:3,10 8	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 1,10 197:11,13,18 transparency 29 10:10 29:21 30:5,12 14:15 192:17 2	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1 tweak 207:3 9:2,16 31:2 Twenty 148:14 twice 37:7 46:16
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 104:1 17:6 159:11 109:4 told 79:20 100:9 137:6 159:11 100:15 100:10 100:1	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 197:11,13,18 transparency 29 10:10 29:21 30:5,12 13:9 204:5	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1 tweak 207:3 9:2,16 31:2 Twenty 148:14 twice 37:7 46:16 two 38:12 55:22 66:11
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 199:4 151:8 161:16 2 104:11 tomorrow 5:12 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10	transcript 10:6 transitioning 16 translate 162:17 transmission 26 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 1,10 197:11,13,18 transparency 29 10:10 29:21 30:5,12 1:7 34:15 192:17 2 204:5 transparent 29:	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1 tweak 207:3 9:2,16 31:2 turns 194:4 Twenty 148:14 twice 37:7 46:16 two 38:12 55:22 66:11 70:19 75:1 85:22
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 104:1 Todd's 216:16 2 137:6 159:11 10morrow 5:12 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10	146:18 transcript 10:6 179:17 transitioning 16 1206:10 translate 162:17 transmission 26 42:14 52:8,11, 31:4,7 83:20 95:2 133 211:1 134:9 138:14 7 120:20 148:18 164:15 1,10 197:11,13,18 transparency 29 29:21 30:5,12 11:7 34:15 192:17 2 33:9 204:5 transparent 29: 110:22 113:13	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 102:1 119:7 132:11 219:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1 tweak 207:3 9:2,16 31:2 turns 127:1 tweak 207:3 tweaking 194:4 Twenty 148:14 twice 37:7 46:16 two 38:12 55:22 66:11 70:19 75:1 85:22 86:20 102:21 104:19
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 109 133:4,10 139:13 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 7 Todd's 216:16 2 104:1 176 159:11 137:6 159:11 100:13 111:10 118:11 132:5	146:18 transcript 10:6 179:17 transitioning 16 1206:10 translate 162:17 transmission 26 42:14 52:8,11, 31:4,7 83:20 95:2 133 211:1 134:9 138:14 2 120:20 148:18 164:15 1,10 197:11,13,18 transparency 29 29:21 30:5,12 10:10 34:15 192:17 2 13:9 204:5 transparent 29:: 110:22 113:13 transportation 2	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 109 133:4,10 139:19 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 4 51:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3,	146:18 transcript 10:6 179:17 transitioning 16 1206:10 translate 162:17 transmission 20 42:14 52:8,11, 31:4,7 83:20 95:2 13 201:11 134:9 138:14 2 120:20 148:18 164:15 197:11,13,18 transparency 29 10:10 29:21 30:5,12 1:7 34:15 192:17 2 303:9 204:5 transparent 29: 110:22 113:13 transportation 15:20 17:2 18:2 162:	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112:68:7 3:20 143:21 15:186:14 15:186:16 15:
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 109 133:4,10 139:13 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 151:8 137:6 159:11 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153:	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 211:1 134:9 138:14 7 220:20 148:18 164:15 197:11,13,18 transparency 29 29:21 30:5,12 34:15 192:17 2 204:5 transparent 29: 114:3 136:19 15,20 17:2 18:2 162: 19,22 transporting 14	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112:68:7 3:20 143:21 15:186:14 15:20 16:14 17 18:20 18:20 19:5 223:16 turned 4:5 94:5 turning 38:10 117:2 turns 127:1 tweak 207:3 tweaking 194:4 Twenty 148:14 twice 37:7 46:16 two 38:12 55:22 66:11 70:19 75:1 85:22 86:20 102:21 104:19 121:21 125:21 138:17 143:2 151:15 166:12 9:13
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 1! three 16:22 49:14 62:13 86:20 10: 133:4,10 139:1: 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 4 51:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3,	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 197:11,13,18 transparency 29 10:10 1:7 03:9 10:10 1:7 03:9 114:3 136:19 15,20 115,20 119,22 1156:9 1146:18 1156:9 1146:18 1156:9 1146:18 11	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112:68:7 3:20 143:21 15:186:14 15:2 16:14 15:2 16:14 15:7 16:15:7 16:14 16:15:7 16:16 17 18:17 18:17 18:18 18:
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 1! three 16:22 49:14 62:13 86:20 10: 133:4,10 139:1: 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 151:8 9:10 104:4 79:20 100:9 137:6 159:11 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 120:20 148:18 164:15 197:11,13,18 transparency 29 10:10 17:10 18:18 164:15 197:11,13,18 transparency 29 10:10 114:3 136:19 15,20 15,20 19,22 1156:9 116:20 117:2 18:2 162: 190:18,20 191	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 15 186:14 16 186:14 17 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 127:1 18 128:12 18 12
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 1! three 16:22 49:14 62:13 86:20 10: 133:4,10 139:1: 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 151:8 9:10 2 104:1 104:4,13,14,16 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214:	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 120:20 148:18 164:15 197:11,13,18 transparency 29 10:10 17:10 18:18 164:15 197:11,13,18 transparency 29 10:10 114:3 136:19 15,20 15,20 19,22 1156:9 116:20 117:2 18:2 162: 190:18,20 191	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 16 186:14 17 186:14 18 186:14 18 18 18 18 18 18 18 18 18 18 18 18 18 1
211:12 218:14: thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 1 three 16:22 49:14 62:13 86:20 10 133:4,10 139:1: 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 71:19 159:8 18 181:14 184:4 2 7 99:4 151:8 9:10 2 104:1 109:13 115:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 13: 134:9 138:14 7 120:20 148:18 164:15 197:11,13,18 transparency 29 10:10 1:7 34:15 192:17 2 29:21 30:5,12 34:15 192:17 2 204:5 transparent 29:: 114:3 136:19 15,20 19,22 1156:9 17:2 18:2 162: 19,22 190:18,20 191 192:4,11,12 19 200:10 201:6 2	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 16 186:14 17 18 186:14 18 18 18 18 18 18 18 18 18 18 18 18 18 1
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:12 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 104:1 tomorrow 5:12 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 11:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 1001 46:21 93:17 201:11	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 120:20 148:18 164:15 197:11,13,18 transparency 29 10:10 1:7 34:15 192:17 2 29:21 30:5,12 34:15 192:17 2 20:20 114:3 136:19 15,20 19,22 1156:9 17:2 18:2 162: 19,22 190:18,20 191 192:4,11,12 19 200:10 201:6 2	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 16 186:14 17 18 186:14 18 18 18 18 18 18 18 18 18 18 18 18 18 1
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19 time 4:8 5:5,21,2	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 7 1:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 104:1 told 79:20 100:9 151:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 toolbox 146:2	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 148:18 164:15 197:11,13,18 transparency 29 10:10 1:7 33:9 10:10 117:2 34:15 192:17 2 20:20 114:3 136:19 15,20 119,22 1156:9 119,22 1156:9 12 123:20 124:11,12 19 200:10 201:6 2 1146:1 17:2 146:1	TUESDAY 1:11 turf 83:10 turn 10:20 11:14 72:18 10:2 112 68:7 3:20 143:21 15 186:14 19:2,16 31:2 19:5,23:16 10:117:2 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 117:1 10:10 11
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19 time 4:8 5:5,21,2 10:2,5,12 13:1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 451:8 137:6 159:11 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 125:11 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 toolbox 146:2 18:14 tools 63:4 129:1	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 120:20 1,10 10:10 1:7 10:10 1:7 13:9 15:1 114:3 136:19 15,20 114:3 136:19 15,20 1156:9 11 156:9 12 1223:20 123:20 148:18 164:15 197:11,13,18 transparency 29 129:21 30:5,12 34:15 192:17 2 204:5 transparent 29:: 110:22 113:13 transportation 17:2 18:2 162: 190:18,20 191 192:4,11,12 19 200:10 201:6 2 trend 184:16,22 190:18,20 191 192:4,11,12 19 200:10 201:6 2 trends 16:8 17:2 200:11	TUESDAY 1:11 turf 83:10 7 10:2 112:68:7 3:20 143:21 5:186:14 5:186:14 5:186:14 5:186:14 5:186:14 5:186:14 5:186:14 5:186:14 5:186:14 6:186:14 70:19 75:1 85:22 86:20 102:21 104:19 121:21 125:21 138:17 14 9:13 185:21 185:21 185:21 190:12 191:3 198:22 201:6 209:2 211:19 two-week 173:6 type 38:9 86:20 87:12 183:2,2 199:10,10 201:4,14 208:10 209:19 210:15 211:21
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19 time 4:8 5:5,21,2 10:2,5,12 13:1 18:16 21:7 23:1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 451:8 99:4 told 79:20 100:9 451:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 tools 63:4 129:1 18:14 18:25:6 138:21 182:11	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 1,10 10:10 1:7 20:21 1:7 20:29 11:1 11:1 120:20 11:7 20:20 11:7 20:20 11:1 11:1 120:20 1	TUESDAY 1:11 turf 83:10 7 10:2 10:2 112:68:7 3:20 143:21 15:186:14 16:186:14 17 18:20:186:14 18:21
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19 time 4:8 5:5,21,2 10:2,5,12 13:1 18:16 21:7 23:1 25:7 27:21 28:1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 451:8 99:4 told 79:20 100:9 451:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 tools 63:4 129:1 18:22 183:1,5	transcript 10:6 transitioning 16 translate 162:17 transmission 26 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 1,10 10:10 1:7 03:9 11:7 03:9 15:0 114:3 136:19 15:20 17:2 18:2 162: 19:22 115:20 17:2 18:2 162: 19:22 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 12 19:18,20 19:1 19:4,11,12 19:2 20:10 201:6 2 19:146:1 19:18,20 19:1 19:146:1 19:18,20 19:1 19:18,	TUESDAY 1:11 turf 83:10 7 10:2 112:68:7 3:20 143:21 15:186:14 16:186:14 17 18:20:186:14 18:21 19:16:201:6,8
211:12 218:14:1 thoughtful 149:1 thoughts 90:7 94 96:9 168:6 thousand 186:14 198:2 threat 61:14 62:1 63:11 64:4,17 1 threats 67:9 82:1 126:19 127:4 19 three 16:22 49:14 62:13 86:20 10 133:4,10 139:11 140:16 152:4 thrilled 119:14 throw 166:4 Throwing 194:8 throws 206:13 Thursday 20:21 ticket 60:18 tickets 217:18 tidbits 190:7 tied 164:6 tier 34:3,21 207:1 Tim 8:11 103:19 time 4:8 5:5,21,2 10:2,5,12 13:1 18:16 21:7 23:1	1 101:15 104:12 174:6 177:12 193:20 199:13 219:9,16 Todd 2:7 4:12 8 2 71:19 159:8 18 181:14 184:4 2 7 Todd's 216:16 2 451:8 99:4 told 79:20 100:9 451:8 9:10 2 20:1 59:3,10 8 82:7 102:19 10 104:4,13,14,10 109:13 111:10 118:11 132:5 139:21 142:3, 143:6,14 153: 154:4,6,8,18,2 213:8,19 214: 219:11,13,20 2 tons 26:18 17,18 tools 63:4 129:1 18:22 183:1,5	transcript 10:6 transitioning 16 translate 162:17 transmission 20 42:14 52:8,11, 83:20 95:2 133 134:9 138:14 7 20:20 1,10 10:10 1:7 20:21 1:7 20:29 11:1 11:1 120:20 11:7 20:20 11:7 20:20 11:1 11:1 120:20 1	TUESDAY 1:11 turf 83:10 7 10:2 112:68:7 3:20 143:21 15:186:14 16:186:14 17 18:20:186:14 18:21 19:16:201:6,8

typical 41:4 typically 95:5

U.S 1:1 7:16 41:12 52:11 70:3 113:8 202:12 ugly 178:15 ultimately 164:16 un-invite 33:13 unacceptable 185:15 unaccounted-for 39:6 39:8 unanimously 168:3 underground 166:10 169:8 understand 18:12 19:21 26:2 29:6 31:21 32:18 34:17 48:15 50:11 54:1,11 60:13 60:13 63:14 64:5 72:6 72:13 101:9 123:19 126:6 140:12 143:6 156:9,10 168:18 169:6 179:19 188:15 210:3 understanding 44:19 60:5,6 62:15 67:7,7 125:8,14 156:21 179:1,18 212:4 understands 108:6 understood 53:8 82:22 underway 120:5 178:3 unexpected 39:7 unexpectedly 114:12 114:14 188:19 unfold 159:4 unfortunate 194:9 unfortunately 38:5 unintended 186:5 unique 95:3,19 **United** 35:20 41:7 52:9 173:1 universities 118:3 unprotected 197:9 **unsure** 111:12 upcoming 20:22 update 3:11 26:22 81:20 112:12 128:2 131:21 132:8 133:5 136:18 144:12,16 146:20 150:17 153:11 165:13 193:10 updated 130:18 152:1,2 **updates** 3:6 25:15 updating 67:5 **upper** 39:4

urgency 82:10 use 9:14 10:1 14:16 15:20 16:15 30:19 63:9 64:6 74:8 95:17 115:14 126:16,20 131:18 132:7 135:8 152:15 177:16 178:22 188:5 191:10 192:9 199:13 204:21 208:14 212:2 221:12 222:12 **useable** 129:14 useful 10:1.4 70:22 172:1 186:21 211:12 uses 46:21 usually 50:22 68:16 171:18 Utah 32:12 utilities 35:13,20 48:15 utility 35:17 38:22 39:6 40:4,8 41:5 89:13 94:8

\

valid 196:5 198:10 207:21 218:13 valuable 13:21 21:18 45:8 46:14 177:19 value 13:19 14:3 21:4 53:20,20 110:22 176:14 177:20 179:19 199:22 200:3 208:15 210:8 valued 13:2 values 52:19 53:9 119:18 valve 134:13,15 136:21 143:16 148:18,19 150:7 164:11,11,11 214:3,4,5,9 valves 133:11 142:3,5,9 variety 133:9 138:3 143:9 various 48:10 57:6 73:10 116:5 179:6 185:22 vehicle 58:22 59:4,11 92:22 96:8 **vendors** 42:15 venting 36:19 venue 48:22 verbal 194:6 verification 20:20 112:4 verify 29:7 30:13 195:9 version 37:20 176:14 versus 70:15 141:6 215:13 vessels 141:5

vetting 149:6,7

view 61:21 100:17 101:11 vintage 197:6,21 199:13 violation 75:7 violations 39:1 Virginia 1:20 6:17 7:14 77:16,17,22 85:19,21 87:15 150:6 **vision** 207:7 visiting 91:20 voice 37:17 123:18 155:1 **volume** 130:4 voluntary 212:14 volunteered 51:12 vote 5:22 137:2 139:10 156:18 170:10 172:11 voted 101:4 votes 5:13,14 43:6 100:22 101:8 137:21 172:14

W

voting 100:20 172:12

W 2:5,7

wait 183:17,17,18 185:18 waiting 58:14 112:4 185:12 waiver 109:2 walk 79:18 want 10:17 11:16,17 15:19 18:15 19:3,3 21:18 25:12 26:12 29:8 30:10 33:11 44:3 47:21 50:8 61:20 62:3 68:2 69:1,2 71:8 72:12,21 83:14 85:19 86:16 94:7,11 99:8 105:1,4 106:22 108:2 108:10 110:8 115:2 119:9 126:14 131:14 132:16 146:5 153:17 153:18 154:17 155:12 158:13 161:15 171:15 172:5,9 173:2 175:22 176:17 179:18 187:21 196:10 198:18 214:20 216:12 219:5,9,15 wanted 4:7 10:11 13:10 16:19 24:1 25:6,9 26:16 31:6 53:18 67:3 86:13 97:2 98:21 101:22 108:22 109:15 110:9 112:16 115:8 115:12 117:1 118:19 128:6 146:20 155:17 156:8 164:20 172:18

196:3 216:20 222:18 wanting 8:20 28:11 wants 25:11 80:10 89:22 111:3 warning 29:15 189:13 wasn't 79:20 111:20 115:19 waste 112:15 water 67:9,12 way 25:8,14 29:5 30:4 55:10 72:15 76:11 77:1 78:22 79:19.20 84:9 109:21 110:11 111:16 112:10 120:9 126:21 130:16 147:6 149:16,17 162:11 165:19 168:21 175:11 177:4 188:1 189:19 195:8 196:18 **Wayne** 121:1 203:15 ways 17:9 47:9 74:21 82:17 111:1 118:8 120:7 126:17 134:20 195:16 we'll 4:6 5:18,19,20

10:9,10 16:5,13 20:6 24:22 26:9,14 28:8 29:14 59:3 60:16 69:17 81:7 82:6 86:6 98:14 102:18 105:15 111:10 112:9 115:9 119:21 120:10 124:8 125:21 127:10,14 131:12 132:8 142:13 143:4,13 154:9 156:19 165:21 172:5 172:11,15 175:22 176:6 179:21 191:22 192:11 197:3 201:6 206:1 207:3,17 217:2 223:19

we're 4:4 5:19 9:4 15:16 15:18 17:5,10 19:2,4 19:5 20:4 27:13 28:7 28:14 29:15,22 31:3 31:13,16 32:3,17,22 33:22 34:8 36:6 44:15 44:16,22 50:1 53:2 55:3,10 60:7,17,18,19 61:20 62:13 63:10 64:10 65:16,20 66:2,5 66:6 67:11 71:7 73:20 75:20,22 76:11,12 78:2,21,21 80:8 85:18 86:4 87:2 95:7 96:10 96:15,19 99:15 103:9 104:6 105:14 106:10 106:11 108:8 109:12 109:16 111:2 112:19

upside 77:9

			24:
444740044450	000.4	444044704050	004.5
114:7,18,21 115:3	222:1	144:3 147:3 165:9	221:5
116:14 118:16 119:12	websites 29:17	192:6,7 196:19,21,21	year 20:4 24:18 27:12
119:14 120:18 121:20	week 29:10 42:20 45:1	197:3 203:16,19	27:17 31:15 39:22
122:11 125:19 126:15	49:20 50:4 56:2,3	218:7	44:12,12 45:10 46:2
128:5,11,14,18,20	76:4 136:18	workable 169:12	46:15 47:1 49:1,2
129:7,11,16 130:8,10	weeks 55:22 167:11	worked 22:13 83:18	58:6 61:22 63:19 78:8
130:14 131:2 132:14	185:8	119:17 134:3	86:20 99:16 137:4
134:12,13,18 135:11	weighed 89:3 98:2	worker 44:21 49:15	138:11 139:8 182:1
135:17 136:1,2,3,9,14	weight 201:22	workforce 15:16,17	183:1,19,19 185:13
136:16,19,19 137:2,3	Weimer 2:11 7:20,20	38:18 117:10,17	185:13 193:16 200:1
137:3,20 138:9,11	27:5,6 28:5 33:3,21	118:9 119:2	208:13
139:6,11 142:2,13,19	157:3,13 175:20	working 12:13 18:5	years 5:8 22:14 24:12
143:15 144:3,4,10,14	176:2	19:2,5,12 20:4 21:22	38:12 51:8 52:17
	welcome 4:8,15 12:1	27:13 43:16 54:20	54:19 55:1 58:8 72:3
145:9,11,12,15,22			
146:19 151:4,10,11	26:16 48:7 90:7 98:10	58:10 61:20 63:7	75:1 76:1,15 77:14
154:15 157:10 161:17	111:3 168:16	66:10 71:12 76:18	84:17 86:6,6 92:9
162:13,19 163:5	went 68:18 84:16 106:5	78:10 84:5,9,10,13,19	94:2 97:11,13,15
164:12,13,14 165:9	152:1 167:15 193:16	95:21 105:11,14	102:21 107:11 114:1
168:11 169:10 171:20	193:17 222:10 223:22	107:2 112:19 114:6	115:11 119:16 124:1
172:4 174:3,6,17	weren't 140:9 141:8	125:5 130:4 133:18	143:10 144:13 163:1
177:8 178:21 181:22	what-not 220:5	133:19 134:13,16	166:8 178:20 183:15
182:1 185:12,17	where-with-all 54:3	143:15 145:15 166:12	184:8 196:2 220:17
189:3,3,4,6,8 190:5	Whetsel 2:21 7:8,8	171:18 187:15 190:5	yin 156:3 220:14 221:5
192:18 193:4 194:4	176:9,12	190:21 193:12 198:17	your's 172:8
195:3,22 196:19,20	white 30:19	206:21	
199:20 201:21 203:13	Wiese 2:14 4:3,16 6:12	workshop 20:21 21:1	Z
204:16 205:18,20	8:17 22:16 25:5 33:7	30:17 55:22 56:2,3	Zamarin 2:6 6:21,21
206:3,4,5,12 216:15	79:3 87:16 88:14	125:22 126:1,2,4,14	58:2,2 92:14,14 94:2
217:3,22 220:7	94:11 99:22 106:1,14	127:6,9	159:19,19 160:15,18
221:16 223:4,4	131:16 154:13 155:2	workshops 48:14 57:5	160:20 161:1 163:10
we've 4:9 9:10 18:21	155:14 157:8,14	74:21	
25:8,13 30:6 33:18	158:7 159:14 168:8	world 89:12 107:8,9,17	zero 53:1,3 58:8,16
			60:9 136:8 182:3,4
34:10 42:13 47:12	169:15 171:13 174:22	107:17 108:6	200:16
51:3 54:20 55:2 58:17	175:21 204:9 212:9	world-class 15:11	zoning 32:13
60:1 63:16 75:20 76:2	219:7	worry 30:14	
76:7,8 78:7 89:6 91:6	willing 6:7 118:5 223:7	Worsinger 2:6 7:1,1	0
94:4,6,12,15 99:14	window 143:3	35:2,3,8	
101:12,14 111:11	wing 27:9	worth 154:13	1
113:16,18 115:17	wish 11:11 159:17	wouldn't 80:18 114:13	1 3:4
116:4,17 119:17,18	witnesses 100:19	200:14	1,000 35:19 41:7 217:1
121:15,16 128:12	wiz-bang 177:12	wrap 215:4	1.1 139:5
130:3,5 133:1,3,4	won 101:1	Wrap-up 3:18	1.28 187:5
134:3 135:20 136:11	Wonderful 51:21	wrestled 113:17 155:18	1.5 141:6
137:6 143:17 146:18	wondering 157:6	write 77:2 102:3 146:8	1:00 1:20 4:2
146:22 149:4 152:3	171:22	writers 91:9	10 27:18 40:20 41:1
169:3,7,21 171:21	wording 157:1	writing 112:17	76:15 90:12
177:18 178:12,20	words 16:22 54:21 81:4	written 149:5	
188:14,15 192:10	151:1 155:9,12	wrong 77:8 107:18	10,000 41:13
195:12 199:1 201:5	work 12:15 13:18 20:15	179:2,7,8,11 223:12	100 41:13 55:9 129:6
206:7,21 220:1 222:9	26:8 48:1 53:10 57:21		106 3:8
		wrought 197:8	109 15:19 129:7 159:2
weak 115:18 wear 14:5	59:21 60:2 63:2 64:10	X	10th 21:2 127:7 142:10
WEST 14.7	69:1 71:13 72:20		11 148:15 149:1
	73:13 75:1,11 79:13	x 206:15	110 138:18 211:8
weather 67:10	00 0 00 1 01 0 1 00	Xcel 8:15 42:10	1170 166:13
weather 67:10 web-conference 46:17	80:8 82:4 84:3,4,20	7001 0.10 42.10	
weather 67:10 web-conference 46:17 webinar 172:2,5	85:5 91:16,21 101:7		
weather 67:10 web-conference 46:17 webinar 172:2,5 webpage 221:16	85:5 91:16,21 101:7 104:3 105:18 108:7	Y	
weather 67:10 web-conference 46:17 webinar 172:2,5 webpage 221:16 website 10:7 153:3	85:5 91:16,21 101:7 104:3 105:18 108:7 110:10 112:9 114:4		1173 55:12 65:4 74:22
weather 67:10 web-conference 46:17 webinar 172:2,5 webpage 221:16	85:5 91:16,21 101:7 104:3 105:18 108:7	Y	1173 55:12 65:4 74:22 75:12 81:6 119:17

	I	I	1
185:8 193:10 195:20	3:00 106:2		
196:3 205:8,11	3:06 106:9		
211:16 215:17	3:07 106:6		
12866 135:3,10	30 77:11,13 87:17,19		
13 144:22	144:15 205:8		
131 3:11	31st 173:5		
13563 135:4	38 87:22 93:20		
14 93:5 151:14			
15 106:2	4		
16 103:2	4 3:3,10 131:11		
17 46:10	40 205:8		
17,000 40:18	40th 41:6		
177 3:15	48 148:12		
180 180:9,21			
1850's 199:13	5		
18th 159:6	5 149:12		
192 24:4 74:10,15	5:00 223:22		
193 24:4 130:13,15,18	50 29:17 93:21 161:21		
195 24:4 74:10,15			
	205:9		
1988 190:15			
1991 190:21	6		
1999 1:19	6 3:15 177:9		
19th 28:17	60 127:12,13 180:13,21		
1st 139:22 140:22,22	66 8:13 71:19		
141:13 173:11 [′]	••••		
	7		
2			
2 3:6	700 35:21		
	75 52:11 55:4		
2:47 106:5	77 76:20		
20 148:14 149:1,3,18,21			
200 39:12 42:12	8		
2000 202:13	80 39:13 52:11		
2002 186:16	811 6:18 34:13 122:22		
2006 191:20 192:2	123:1		
2009 202:14	83 129:7 159:21 160:9		
2010's 187:6	160:16,17		
2011 20:8 126:1 147:16	8th 142:21		
2012 186:17	6(11 142.21		
2013 190:16			
	9		
2014 152:3 190:16,17	9:00 219:12,13 223:20		
2015 1:12 45:14 61:12	90 55:6		
66:20 114:15	92 36:13 37:1		
2015/2016 43:8	97 39:16		
2016 47:19 67:2,4,18	9th 21:2 127:7		
140:1			
2020 55:10			
20th 28:17			
22 40:4,5,8,18 150:13			
150:16			
223 3:18			
24 18:21 144:17			
25 1:12 15:17 22:14			
52:10 144:15			
26 3:6 149:22 163:15			
28 148:12			
3			
3 3:8 106:10			
5.5 .55.15			
1			

<u>CERTIFICATE</u>

This is to certify that the foregoing transcript

In the matter of: $_{\mbox{\scriptsize Gas}}$ Pipeline Advisory Committee

Before: PHMSA

Date: 08-25-2015

Place: Arlington, Virginia

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Court Reporter

near Rous &