STATE OF VERMONT
PUBLIC UTILITY COMMISSION

CASE NUMBER 17-3550-INV

INVESTIGATION PURSUANT TO 30 V.S.A. SECTIONS 30 AND 209 REGARDING THE ALLEGED FAILURE OF VERMONT GAS SYSTEMS, INC. TO COMPLY WITH THE CERTIFICATE OF PUBLIC GOOD IN DOCKET 7970 BY BURYING THE PIPELINE AT LESS THAN REQUIRED DEPTH IN NEW HAVEN, VERMONT

September 2, 2020
9:00 a.m.
---
112 State Street
Montpelier, Vermont

Day II of an Evidentiary Hearing held before the Vermont Public Utility Commission via GoToMeeting video conference on September 1, 2020, beginning at 9:30 a.m.

P R E S E N T

Hearing Officer: Michael E. Tousley, Staff Attorney

Staff: Kyle Landis-Marinello, General Counsel

CAPITOL COURT REPORTERS, INC.
P.O. BOX 329
BURLINGTON, VERMONT 05402-0329
(802/800)863-6067
Email: info@capitolcourtreporters.com

A P P E A R A N C E S

ERIC GUZMAN, ESQUIRE; JIM PORTER, ESQUIRE
Appearing for the VT Department of Public Service
112 State Street, 3rd Floor
Montpelier, VT 05620-2601

RANDY MILLER, ESQUIRE
Appearing for the VT Department of Public Service
112 State Street, 3rd Floor
Montpelier, VT 05620-2601

LAW OFFICE OF JAMES A. DUMONT, ESQ.
Appearing for Intervenors
15 Main Street, PO Box 229
Bristol, VT 05443
BY: JAMES A. DUMONT, ESQUIRE

SHEEHEY, FURLONG & BEHM, PC
Appearing for Vermont Gas Systems, Inc.
30 Main Street, 6th Floor
Burlington, VT 05402-0066
BY: OWEN J. McCLAIN, ESQUIRE; DEBRA BOUFFARD, ESQUIRE

INDEX

Exhibit	Admitted
Intervenors Cross 12	44
Intervenors Cross 23	80

HEARING OFFICER TOUSLEY: Okay. This hearing is back in session. Mr. Byrd, you are on the witness stand. You're reminded that you're under oath. Mr. Dumont, you may proceed.

ATTORNEY DUMONT: Great.

MR. LANDIS-MARINELLO: And I'm going to make you a presenter now, Attorney Dumont.

ATTORNEY DUMONT: Great.

MR. BYRD: And just a technical question. So I guess we have to wait until somebody is presenting so I can move all the images over to the other screen?

HEARING OFFICER TOUSLEY: Yeah. I think, as soon as Mr. Dumont gets his images up, you'll be able to do that. Looks like he's doing that now.

MR. BYRD: There we go.

ATTORNEY DUMONT: Just so all you all know what I'm doing on my end, Ms. Bishop taught me yesterday that I can see more of my screen if I eliminate everybody's picture from my screen, because your pictures were interfering with the documents on my screen. So, in order to look at the complete document that I'm showing to you, I have to take you all off my screen. So, much of the time, I actually can't see you when I have a document.

CROSS-EXAMINATION BY ATTORNEY DUMONT

Q. All right. Good morning, Mr. Byrd.
A. Good morning.
Q. How are you and your mom today?
A. Well, Mom was still asleep when I came over here, so I think she's doing fine.
Q. Great.
A. Yeah.
Q. Before I went any further into depth of cover in the Clay Plains Swamp, I thought it might be useful to have an illustration of the setting. Do you remember the video that was filed with the Commission by, was taken by Mr. Shelton and then, when you met in my office, he showed you the video --
A. Yes, I do.
Q. -- and that we gave you a copy to --
A. Right.
Q. -- take with you? This, I'll represent to you, is -- I don't know what the right term is -- but a snapshot from the video.
A. Okay.
Q. And this is, I don't know if you've seen the video recently. When is the last time you've looked at that video?
A. Oh, it's, shortly after you sent it to me, I

probably watched it again, but I haven't watched it recently.

HEARING OFFICER TOUSLEY: Mr. Dumont, for record purposes, what is the name of this? Where can this be located in the record, if at all?

ATTORNEY DUMONT: I believe the video was already in as part of one of the other exhibits, but I took this snapshot and made it Exhibit 42 --

HEARING OFFICER TOUSLEY: Okay.

ATTORNEY DUMONT: -- Cross Exhibit 42.

HEARING OFFICER TOUSLEY: Cross Exhibit 42? Thank you.

BY ATTORNEY DUMONT:

Q. I'm moving the picture up a little bit on the screen. After it's finished adjusting, I'll ask Mr. Byrd a question. Mr. Byrd, do you see that the buried pipe in the right-hand corner or third of the photograph?

A. Well, it, it looks like a pipe. I, it's mostly obscured, but, and I remember the quality of the video wasn't very good. So, I mean, I, I don't disagree that something down there looks like a pipe.

Q. And the pipe has an external diameter of how much?

A. Well, it's, it's 12.75 inches, plus the concrete layer, which, in this case, is another inch and a half

of radius, 3 inches in diameter total.
Q. So what would you say --
A. About 15 inches in diameter.
Q. 15 inches? So what would you say is the total width of the trench shown in this photograph?
A. I really couldn't, couldn't guesstimate based off of this picture. I mean, it looks to be, you know, maybe three feet wide, but I, I really don't have any, you know, any scale to go off of here.
Q. I've adjusted the picture a little bit.
A. Right.
Q. How you would you describe the conditions in the trench?
A. It looks like, like mud.
Q. Yeah. What would you say the width is of the trench at the top of the trench, not the bottom?
A. Well, again, I, I, you're just asking me to speculate off of this. I'm not going to try to give you any precise number, because I really can't. I mean, I, you know, there's nothing in here that has a scale to it, you know.
Q. And would you say that it varies, as we, that it varies; it's not a standard, it's not a uniform width?
A. Well, again, I, yeah, there's just no way to tell from, from this screenshot. You know, it, I've seen

plenty of optical illusions that, you know, looks like something is parallel when it's not or not parallel when it is. I mean, I mean, it looks narrower the farther away you get, but I don't know if that means anything or not. It's just the way that it appears in that image.

Q. Right. Are you aware of any other photographs taken of the construction in the Clay Plains Swamp while the construction was going on?

A. I don't recall seeing any other photographs of this specific area.

Q. So I agree this is not exactly high-quality photography. It was taken with a cell phone, and it's from a video taken with a cell phone, but it's all we had.

A. Right.

Q. Okay. Do you recall what Mr. Heintz testified would be the expected standard width of the trench for the Addison Natural Gas Pipeline?

A. I don't recall what he had said.

Q. I'm going to go to Cross-Examination Exhibit 8. This is Mr. Heintz's testimony, his first prefiled testimony. It's December 20th 2012, and I, I have the screen on Page 25.

A. I'm seeing 28.

Q. All right. I'm sorry. Yes, but it's .pdf Page 28. It's Page Number 25 as paginated, but it's .pdf Page 28.

A. Okay.

Q. And do you see here that Mr. Heintz testified, "For the transmission main line, a four- to five-foot wide trench will be excavated to a depth of approximately five feet, and soil from the trench will be stockpiled adjacent to the trench within the construction corridor"; you see that there?

A. Yes, I do.

Q. Based on your experience in the pipeline construction industry, does that seem -- is that consistent with your experience?

A. Yeah, I would say he's describing a typical trench installation, yes.

Q. I'm going to go to your Attachment 47. It's report Attachment 47 which are the CHA loading calculations from November 7th 2014.

A. Okay. Yeah, I see it.

Q. And I confess what's frustrating about using GoToMeeting is that, for a document to be large enough for anybody other than me to see it, you can only show a third of it at a time, third of the page at the time, so it makes it slow.

And I'm going to ask you whether you agree that the 2014 calculations of load bearing, first, were done by CHA. Do you agree with that?
A. Well, that's who authored this memo, yes.
Q. And do you agree also that they used API RP 1102?
A. Yes. That's, that was the basis of the calculation method was 1102, and one of them used the Pipeline Toolbox. The other one used Bradley Bean software. They're both using the same basic method.
Q. This letter is dated November 7, 2014. It refers to API Recommended Practice 1102 several times during the letter, correct?
A. Well, I'm sure they did, yes.
Q. And it also refers to the technical specifications that you and I talked about at length yesterday?
A. Right.
Q. 312333, you see that?
A. Yes.
Q. And does it say, in the tail end of the first paragraph, "Our review is contingent on the contractor adhering to the backfilling requirements detailed in the contract documents, comma, specifically in the following sections, colon", and then one of the sections listed is Technical Specification 312333, correct?

A. That's correct.
Q. And that's the technical specification that, in your report and as we discussed yesterday, you said Vermont Gas was justified in ignoring based on this quote, unquote, narrative, correct?
A. Well, I didn't say they were justified in ignoring the whole specification. I said they're, when there was a conflict between the narrative specification and 312333, when it concerns the trenching and the backfill operation, they should have chosen the narrative to resolve the conflict, and they did for the first two years. It was only in 2016 that they started using the 333 specification instead of the narrative. I mean, it, you know, 312333 has lots of relevant stuff in it, and I don't take issue with, with most of what's in there.
Q. I'm going to scroll down a little bit here to the last page of the exhibit, I'm sorry, of this letter, last page of the letter. I'll wait for it to show up on your screen.
A. All right. There you go.
Q. So everybody should have that now. And do you see that after Mr. Curran's signature it says "Attachment, parens(1)"?
A. I'm sorry. What are you trying to point out

again?
Q. After the signature line it says "Attachment" and then, in parens, the number 1?
A. Right, okay. Yeah, okay.
Q. And that attachment, if you go back up, is the calculations that are referred to in the very first paragraph, which I'm now putting back on your page.
A. Okay.
Q. The very first paragraph says, "The review was performed based on the specified materials, comma, installation" --
A. I'm looking for that sentence. I'm sorry. I don't see it. Okay. Yeah, in the middle. Okay, yes.
Q. It's, "The review was performed based on the specified materials, comma, based on the specified installation methods and calculation assumptions". You see that?
A. Right. Yes, I do. Yeah.
Q. And did you ever see Attachment 1?
A. I don't recall if I, if that was, you know, in the documents I reviewed or not, frankly. I mean, I just don't remember.
Q. The reason I is ask is because this is your Attachment 1, and it doesn't have the -- I'm sorry. This is your Attachment 47 --

A. Right.
Q. -- but it doesn't have the attachment that's referred to in the letter.
A. Right.
Q. So I've provided that in Cross-Examination Exhibit, the next exhibit, which is Cross-Examination Exhibit 43. There it is okay. I now have 43 showing up on your screen, and, just, I'm going to scroll up so you can see that it goes with the letter.
A. Yeah, and, actually, now that you bring that up, I do believe I've seen it, because I think that's where I saw that they used the Pipeline Toolbox or the Bradley Bean software, one or the other. That's, I can probably tell if you give me a chance to look at it, but it's not that important.
Q. So, looking at the attachment to the November 7, 2014 letter, it had these are the calculations assumptions, correct?
A. Yeah, that looks like the program inputs for the whatever program they're using.
Q. So we know from the letter that one of the assumptions was that Technical Specification 312333 was complied with, correct?
A. Well, the calculations based off assumptions, some of which came from 312333, and I think the relevant

data is going to be right here in the page you're showing.
Q. And one of the assumptions here is that the trench, slash, bore width is three feet, correct?
A. Okay. Yes.
Q. Do you see that there?
A. I do, yes.
Q. So this gets back to Mr. Liebert's question and the National Transportation Safety Board question. If there had been a responsible charge engineer, do you think a responsible charge engineer would have noticed that Mr. Heintz said the trenches would be four to five feet but the CHA calculations were based on a trench width of three feet?
A. Well, I can't really tell you what a responsible charge engineer would have, would have said, but I am, you know, it's one of those variables that I can tell you without even looking that it's not going to matter if you put in four feet or five feet. If I'd been the professional engineer reviewing this, I wouldn't have questioned three feet. It's just a standard number. And the calculation that can be sensitive to the width of the trench, I'm even surprised it's a variable. It probably has some effect somehow, but --
Q. You haven't run those calculations, have you?

A. I actually had one of my employees run the calculations using the Pipeline Toolbox just to make sure he came up with the same kind of answers, and he did.

Q. You haven't run your calculations, you haven't run the calculations using a trench width of four to five feet?

A. No. We didn't do any kind of sensitivity analysis like that. I just wanted to make sure that the answers that we got if we, if we ran the calculations would be similar to what the consultants in this case got, and, and we got same basic answers.

There's one thing on this page I'd like to point out, though, while we're here. If you look down towards the bottom, the crossing data, maximum load per wheel set 18,400 pounds. So, even though in the definition of 1102 it says that highway includes driveways, the calculations are based off of semi tractor-trailers that are fully loaded. I mean, you know, a car, a tractor, you know, even a big truck isn't going to have a wheel loading per axle of 18,400 pounds. So this is heavy, heavy trucks that they're actually calculating for.

Q. There was no pending question. I'm not going to move to strike, but, Mr. Byrd, I think it would be

better if you answer questions rather than making observations, at least easier for me to do what I'm supposed to do. But, since you've brought it up, what's the weight of a large farm tractor --

A. I don't --

Q. -- a large one?

A. Well, I can't say off the top of my head. I'm not even sure how to describe a large tractor, but, you know, the, the issue is the wheel loading, and large tractors have really large, fat tires because, you know, they're designed to go across soft dirt. They have very low wheel loadings. The wheel loadings you get in this case, you know, are based off of 90 psi truck tires, which have very hard pressure points directly below the axle, and that's how this calculation is done. So the point I'm making, it's relevant to the calculation.

HEARING OFFICER TOUSLEY: If I could interrupt for a second just so it's clear in my mind, what kind of traffic would have been anticipated in that area of the Clay Plains Swamp next to the VELCO right, or within the VELCO right-of-way?

MR. BYRD? Well, none. It, it would be very difficult to even send a tracked vehicle down that right-of-way, and, in fact, you know, there were

problems that the construction contractor had while working in that right-of-way, even with tracked vehicles. So, I mean, we could -- we struggled to walk along it because the, the soil is so, so mushy. So, you know, this point load calculation in that kind of soil is really irrelevant. I mean, you'd never be able to get a tractor-trailer truck into the Clay Plains Swamp, much less impose this kind of external load on it. Does that make --

HEARING OFFICER TOUSLEY: How close that -- yes, it does. I have another question. How far from the, the pathway of the pipeline are the transmission towers for VELCO; do you know?

MR. BYRD: Well, if you go to the picture that Mr. Dumont just had up, and there are some diagrams, and, you know, we can give you a more precise number on that, but, but you can see -- oh, can you scroll up a little bit on that picture, or do you have a different? I know there's some -- okay. So, so you can see the width of the right-of-way. The transmission lines are pretty much on the east side, you know, hugging the east side of the right-of-way, and the transmission pipeline is hugging the west side of the right-of-way right along the tree line.

So, so there's no point along the Clay Plains

Swamp where the pipeline is underneath the transmission lines, and, and my guesstimate, albeit exact number, you're probably about 50 feet from the edge of the transmission lines to get to the pipeline.

HEARING OFFICER TOUSLEY: Okay. What kind of vehicles, if any, would VELCO use to maintain and access that transmission line?

MR. BYRD: Well, you'd have to ask VELCO that, but, but, in my experience, and, of course, I'm, probably very seasonally, you know, in this case, as I described in my report, there had been quite a bit of rain in the weeks leading up to them constructing this site, which is the worst possible situation. It's called a swamp for a reason. You know, so maybe in a dry season you could get a tracked vehicle in there, but in most cases I would think you'd have to do what the construction contractor in this case did, which is you'd have to lay mats along the right-of-way in order to get a vehicle into it.

HEARING OFFICER TOUSLEY: Okay.

MR. BYRD: You know, you couldn't just drive a vehicle down there in a normal circumstance.

HEARING OFFICER TOUSLEY: Are you familiar at all with the requirements for maintaining those transmission lines?

MR. BYRD: Well, I'm not an electrical transmission line expert.

HEARING OFFICER TOUSLEY: Okay. Then, yeah, okay. I'm just curious what kind of vehicles, if any, might be going up there, what their frequency would be, how big and fat their tires are, etc. I do recognize that, that the pipeline is at the edge of the right-of-way --

MR. BYRD: Right.

HEARING OFFICER TOUSLEY: -- as opposed to anywhere close to -- or it's, it's at the edge rather than in close proximity to the transmission lines. So thank you for that answer.

MR. BYRD: That's correct, yeah, and, you know, there's, you know, from my generalization of it, there's as much separation as physically possible between the VELCO electrical transmission lines and the VGS gas transmission line.

HEARING OFFICER TOUSLEY: I'm, I'm sorry to be jumping ahead, but I was thinking of Mr. Bubolz's testimony, which we haven't talked about yet. But in that testimony, as I recall, he indicated that, that he had asked why it was such a narrow right-of-way for the pipeline. Do you remember that? Is that accurate?

MR. BYRD: Mr. Dumont probably remembers that

testimony better than I do. I do know that, and I don't recall it being Mr. Bubolz. I think it was afterwards. Well, the Michael's superintendent, maybe that was Mr. Bubolz. You know, after the fact, we had very little room to work with here, and that made the construction issues even more difficult in this situation.

It wasn't going to be an easy situation, no matter how they did it or how much right-of-way they had, but they did have a narrow right-of-way to deal with here, which, you know, I, I don't know why, but, obviously, you know, the construction contractor would have liked a larger, wider right-of-way, and the situation seems to be that VELCO wasn't willing to give it to them.

HEARING OFFICER TOUSLEY: Okay, okay. I think I may be challenging how much you actually know, so I'm going to stop.

MR. BYRD: Right.

HEARING OFFICER TOUSLEY: Mr. Dumont.

BY ATTORNEY DUMONT:

Q. Thank you. Mr. Byrd, do you recall whether or not any of the technical specifications in 2014 specified the width of the trench?

A. The width of the trench?

Q. Yeah.

A. Well, I mean, you have the, the diagrams that show typical installation setups, configurations of, you know, this is where the side booms go, this is where the spoil goes, this is where the trench is, and they, you know, may have had trench widths called out on them. I don't recall that detail.
Q. Do you want to -- I have those if you want to look at them. Let's see. Your Attachment 23 --
A. Okay.
Q. -- which is design drawings, let's see if that helps you. Let's see if I can find that. This is your Attachment 23. There it is, and I'll go through this. So this one is only nine pages. So let's start at the top. Sorry.
A. Okay.
Q. And you can, you can direct me where you want me to go on this.
A. Well, I'm not sure what you want me to direct you to. A trench width?
Q. Yes.
A. Well, I don't -- I mean, frankly, I can't read any of this on my screen, so it's --
Q. Let's look. And your attachment is the typical trench detail. This is .pdf Page 4, and I'm going to try and make it as big as I can.

A. Right. So I --

HEARING OFFICER TOUSLEY: Mr. Dumont, I missed it, but which attachment to Mr. Byrd's report is this?

ATTORNEY DUMONT: Number 23.

HEARING OFFICER TOUSLEY: Thank you.

MR. BYRD: So I see, you know, one example where you'd have a -- this, the one you're zoomed in on here, shows a, you know, sheeting on one side of the trench to provide, you know, physical support for the wall of the trench while you're installing the pipeline. You know, I don't see that specifying a trench width. Maybe it's in the notes here.

BY ATTORNEY DUMONT:

Q. I'll move it up so you can read all the notes.

A. I mean, I, maybe I'm missing something, but I don't see it calling out a trench width.

Q. No, I don't think you're missing anything, because I looked, and I haven't found it anywhere.

A. Right.

Q. And I'm not -- I don't want to testify, but I want to do the examination in the most efficient way we can. So would you agree, Mr. Byrd, this, the Issued for Construction drawings are in the record, and the specifications are in the record, and you don't, you've

told us you don't recall any specification of trench width, and I'll represent to you that I've looked, and I don't see it either, but we'll rely on those specifications and the drawings in our briefing. Is that okay?

A. Well, I, if I followed that correctly, I mean, I'm, I'll just say that the width of the trench isn't really a pipeline safety issue. It's, it's, if anything, from a trench dimension standpoint, it's the depth that you're concerned about, not the width. So the width is really, What do you need to install the pipeline? There's a certain minimum width that the contractor generally likes just to make sure everything fits and you have a little bit of wiggle room, to use a technical term.

But, I mean, there are other times in the, in the gas pipeline industry or pipeline industry in general, and you've seen it plenty of times just around your neighborhood where, where you use a trencher to install the pipeline, so the width is barely larger than the diameter of the pipe, so and that can be perfectly acceptable.

So I don't remember them calling out width of trench, because, frankly, it, from an engineering standpoint, it hardly matters. It's mostly up to the

contractor in the field to make it as wide as he needs.
Q. So, when CHA wrote in the exhibit we looked at that construction was, had to adhere to the calculations and one of the calculations was three feet, you think that, as well, was excessively conservative?
A. Yes. I mean, we can do a sensitivity analyses on that, but it's, you know --
Q. So, if you have a, a steel pipeline at the bottom of a trench and the steel pipeline is 2.5 feet deep, and the trench --
A. Okay.
Q. -- is 2 feet wide, does that make any difference on the load that would be imposed on the pipeline as compared to a trench that's 5 feet wide?
A. Well, assuming that the material you're backfilling the trench with is consistent with the material in the area, no, it doesn't matter at all. You know, it's, the trench width, really, from a calculation standpoint, is only going to matter if the material in the trench physically, you know, bears load differently than the material around the trench, and, in this case, it's backfilled with the exact same material that came out of the trench. So, you know, the width of the trench during construction is, is more

of, you know, a curiosity than anything else. It's not going to matter from an engineering calculation standpoint.

Q. And I'm sure your answer is correct, but you left out a part, which is that API RP 1102 says just what you say, but it says that with the assumption that backfill has been compacted so that it is consistent with the density of the surrounding soil, correct?

A. Well, I trust you to quote it correctly. That sounds correct.

Q. Before we leave, let's see. I'll move out of this exhibit and go back to Cross Exhibit 43, Page 16, .pdf Page 16. So the firm that wrote the November 7, 2014 letter and that did the calculations was also the firm that prepared the contract drawings, correct?

A. Yeah, CHA, yes.

Q. Now, if we go to Mott MacDonald calculations, I'm going to now turn to the Mott MacDonald calculations done on May 25th 2016, which are your report Attachment 48. You see that?

A. Yes.

Q. And is this May 25th 2016 calculation that is referred to in the VELCO letter that you, in turn, referred to in your report in discussing the load bearing of the pipeline at three feet rather than four

feet, correct?
A. That's correct.
Q. And these 2016, May 25, 2016 calculations which are now on the screen also use API RP 1102, correct?
A. That's correct.
Q. I'm going to scroll down so that you can see the rest of the page. So this May 25th 2016 report has no author, does it?
A. I don't recall if it was signed by anybody or not, tell you the truth.
Q. Scrolling back up to the top of the page, it just has the firm's name, correct?
A. Well, that's what it looks like, yes.
Q. And Mott MacDonald were not the engineers of record for the project, were they?
A. Not to my recollection, not -- frankly, I don't remember why Mott MacDonald was involved at this stage of the game.
Q. And Mott MacDonald used a different width than CHA used, correct?
A. I didn't look.
Q. All right. Well, let's scroll down. I'm going to -- this is .pdf 3 of the exhibit. See here?
A. So I, I'm still looking for trench width on that. I don't see it.

Q. Let's see here. There it is. Sorry. Let the page catch up. It says bore diameter in inches.
A. Okay, yeah.
Q. And the assumed trench width that Mott MacDonald used was 12.75 inches, correct?
A. Yeah, it looks like they, they analyzed it as if it was installed as a bore instead of an open trench.
Q. Do you know if Mott MacDonald's calculations were ever run by CHA to say, hey, do you guys agree with this?
A. I don't know.
Q. I'm going to go to Mr. St. Hilaire's Exhibit 2. Okay. And I believe it's .pdf page -- I have the wrong St. Hilaire. It's the St. Hilaire rebuttal, I believe. Let's see here. Sorry for this. But maybe we'll just skip over this.

Do you agree that it was the Mott MacDonald calculations that Mr. St. Hilaire used as the basis for his communication on September 20th with, of 2016, with VELCO resulting in VELCO's agreement on September 21st 2016 of three feet of burial rather than four feet?
A. Yes, that's my understanding.
Q. Okay, great.
A. Yeah. So, so I mentioned this yesterday, and I said I might get it confused, but, now that we've

reviewed them, so the initial ones done by CHA was to verify the method specification for the VELCO right-of-way, because, when you read the original MOU with VELCO, it says that we will meet the HS20, plus 15 percent wheel loading requirement that VELCO has in this MOU by building the pipeline to Class 3 specs and burying it four feet.

So that was a method specification. It said we'll, we'll follow this method, and then it will give us that loading standard or meet that loading standard. So the CHA calculations specifically answered that question and said, yes, you'll meet that loading standard by burying it four feet deep with a Class 3 pipe.

And the subsequent calculations by Mott MacDonald were, well, is it okay at three feet, basically, you know? So they looked at three feet, four feet, five feet depth, how does that change the calculation? And the answer was it barely changed at all. So, so then they said, well, it's even okay at three feet. So the method specification could have been three feet from a loading standpoint and still be fine, and that's what was sent to VELCO, you know, for the second memorandum that they got.

Q. Okay. Now I'm going to go to our Cross Exhibit,

43 which I'll find here. Cross Exhibit 43 is 39 pages. I'm going to go to the very first page.

ATTORNEY McCLAIN: I'm sorry, Jim. Did you say 36?

ATTORNEY DUMONT: This is Exhibit 43, Cross Exhibit 43.

ATTORNEY McCLAIN: 43? Thank you.

BY ATTORNEY DUMONT:

Q. 43. And you can see it's a discovery answer that we obtained. Mr. Byrd, did you ever look at this, start with this email from Ms. Simollardes to the Department enclosing calculations?

A. I believe I've seen it, yes.

Q. And so these calculations provided to the Department the Mott MacDonald May 25th 2016 calculations, correct?

A. I believe that's what they transmitted, yes.

Q. And then later, after this was transmitted to the Department and after a nonsubstantial change letter was filed with the Commission, the additional calculations were done by Mott MacDonald. Did you ever look at those, the ones done in June of 2017?

A. I think I've seen them, but I don't recall them.

Q. Okay. They're in Mr. St. Hilaire's Exhibit 8. So I'm going to see if I can find that.

A. Actually, I'm sure I've seen them, because my report said that they were analyzed at least three times, but then, when I was going back to refresh my memory, I couldn't find the third time. So you're now showing it to me, so thank you.

Q. Well, I'm trying to find this Exhibit 8, and I thought I had it handy here, but I don't. Give me a second.

A. While you're doing that, I'll refill my glass.

ATTORNEY DUMONT: That's all right. Maybe, Mr. Tousley, if you give me five minutes, I'll find it. I thought I had it right here.

HEARING OFFICER TOUSLEY: It's now 9:46, and we'll take a break until 9:55.

ATTORNEY DUMONT: Thank you. I just found it, but we can take a break anyway.

HEARING OFFICER TOUSLEY: Okay.

(A recess was taken from 9:46 a.m. to 9:55 a.m.)

HEARING OFFICER TOUSLEY: All right. We're back at 9:55. I think everybody's here. Thank you for the delightful conversation we just had. Mr. Dumont, are you prepared to go forward?

ATTORNEY DUMONT: Yes.

HEARING OFFICER TOUSLEY: Very well, proceed.

BY ATTORNEY DUMONT:
Q. I have on the screen Mr. St. Hilaire's Exhibit 8, and it's, it's in evidence. We've stipulated to this. The first page is an email from Daniel Hartman at Mott MacDonald to Mr. St. Hilaire on June 20th 2017.
A. Right, okay.
Q. Have you had a chance to look at this at all when -- I think this is mentioned in your report, I believe.
A. Yes, I mentioned it in my report, and then, when I was, just the past couple of days, you know, going back and refreshing my memory on my report, it's like I couldn't put my finger on this third analysis, and I guess I had forgotten it was attached to some rebuttal testimony.
Q. Okay. So I'll scroll down to the middle of the page, and I'll read it so the record is clear:
"Hey, John. The previous calculations we ran were using the 2-foot depth of cover and produced effective stresses less than allowable, period. New paragraph.
"I just ran a scenario where we would have 1 foot of cover with a 25 kip load, parentheses, (the calculation will not allow a trench depth, slash, width ratio less than .5 so I changed the trench width from 3 feet to 2 feet now that the cover is down to 1 foot), end of parentheses, period. The results produced a

hoop stress of 71,752 psi from external loading alone and a total hoop stress of 111,175 psi which exceeds the allowable by a large margin without even adding in the S2 and S3 principal stresses, period. Long story short the calculations pass for up to a depth of 2 feet, but that is the cutoff, period. I reduced the load from 25 kips down to 10 kips, and it still fails at the 1 foot of cover, period.

"New paragraph, Hopefully, this answers your question, period. Feel free to reach back out should you need any further clarification or evaluation, period. Kind regards, Danny".

Did I read that correctly?

A. Yes, you did.

Q. And so do you agree that the calculations that Mott MacDonald did in 2017 assumed trench width was three feet?

A. In 20, these, these calculations you're talking about?

Q. Yeah, yeah.

A. Well, I think it says they changed it down to two feet for width.

Q. And it didn't work.

A. Well, at one foot of cover, but let me clarify. And I can't see the whole document here, and I, like I

said, I'm fussing on the details of it, but I think this also used API RP 1102.

Q. It actually didn't. I'm going to interrupt and say I'm going to show you that page next where they talk about what method they used, but go ahead.

A. Well, my point was regarding the method, so I'd need to refresh my memory on what method they used.

Q. I'm scrolling to Page 4, .pdf Page 4.

A. Um-hum.

Q. And I'll stop with this email from Kelsey, K-E-L-S-E-Y, Kibbe, K-I-B-B-E, to Joseph Wojnas, W-O-J-N-A-S, on May 1, 2017.

A. Right.

Q. And I'll read it:

"Hi, Joe. As requested, comma, I've attached two calculations using two-foot depth of cover and the weakest soil type, period. One calculation was run using 1,440 psig internal pressure, comma, the other was run using no internal pressure, period. Both scenarios pass, comma. The total calculated combined stress for each is less than 90 percent SMYS, new period, new paragraph.

"Note, colon, the calculations were performed using the GPTC guide, comma, as two-foot depth of cover is out of scope for the API 1102, parens, (method used

for previous calculations), end of parens, period. A more conservative design wheel load of 25 kips was used, period.

"New paragraph, let me know if you need anything further."

Did I read that correctly?

A. Right. I guess you did.

Q. And the GPTC guide is the Gasoline Piping Technology Committee, correct?

A. Gas.

Q. I'm sorry. Thank you.

A. Not gasoline, yes.

Q. Thank you. Gas Piping Technology Committee, correct?

A. That's correct.

Q. And that's a committee of the American Gas Association?

A. I think the American Gas Association coordinates the committee. I'm not sure that it's limited to AGA members. My, one of my employees is, is on the GPTC committee that, that authors the guide. It's an ANSI-published standard. So the GPTC guide goes through the standards publication process. It's a Z, something or other. I forget the number.

Q. And you agree that GPTC, the GPTC guideline is not

part of API RP 1102?
A. No. But I'll -- let me just interject here that, you know, as I reread this, I'm going, I didn't realize the GPTC guide even had a loading calculation method in it. So I'd like to go back and refresh my memory on exactly, you know, what basis they used for that calculation, because I, frankly, am not familiar with it.
Q. Thank you. Do you agree that the only calculations that CHA used were API RP 1102 calculations?
A. Well, they're the ones in their memo. I don't know if they used different ones and decided to select the 1102 or, or something else, but that's, that's all I've seen is RP 1102.
Q. Do you agree that no responsible charge engineer at CHA approved the use of the Gas Piping Technology Committee guideline instead of API RP 1102?
A. I haven't seen any evidence of that.
Q. And I'm going to go back up to the first page now. There we go. And do you agree that, even using the GPTC guideline, Mott MacDonald found they could support depth of less than three feet only by assuming trench width would be three feet?
A. Well, they, the way I read that, they aren't

saying that they, they had to change the trench width in order to get an acceptable answer. They said that the, the program they were using wouldn't accept a trench width ratio less than .5, so they had to change the trench width in order to run the calculation.

Now, one reason I want to refresh my memory on what the GPTC guide says about loading calculations is I'm not sure what scientific basis they're using for that, if it's based off of 1102 or some other method. It's, I'm surprised that there's a, a software package out there that would cover a one-foot depth of cover for this kind of calculation, because, like you mentioned, API RP 1102 says this really isn't good for depths less than three feet, because the generalized assumptions you use when you're calculating loading, you know, become less and less generalized the closer you are to the surface. It becomes much more of a very specific pipe, wheel, soil interaction calculation.

And, you know, they say, you know, 1102 says we're just not good for less than three feet. You need to do some more site-specific analysis for that. So I don't know at this stage of the game if it's even appropriate to use the GPTC guide at those depths of cover. I, you know, I can't really speculate very much on, on the, the appropriateness of some of the calculation

assumptions they made, other than note that they were originally using 25,000 pounds per square inch for wheel loading, which is even higher than HS20 plus 15 loading factor that VELCO required, which itself was, you know, extraordinary for something like the Clay Plains Swamp. You know, so they're using very high, you know, highway truck traffic wheel loading calculation or assumptions when they're running their calculations.

Q. Thank you. Did you want to add to your answer? I don't want to cut you off?

A. I was going to offer, I mean, we have a copy of the GPTC guide, and I'd be happy to, to pull it up at a break and see if I can offer anything more relevant than what I've said so far.

Q. Well, I was done with this exhibit, and I was going move on to another exhibit.

A. Okay.

Q. So I've put up on the screen Cross-Examination Exhibit 12, and move down a little bit. You're going to see what it is. This is the prefiled testimony of Eric Sorenson, S-O-R-E-N-S-O-N, on behalf of the Vermont Agency of Natural Resources that was filed in Docket 7970, and the date is June 11, 2013. Got the date on Page 1 of 25. You see that?

A. I am currently looking at Page 1 of 25.
Q. Okay. Which is .pdf Page 2.
A. Yes, yes.
Q. Have you ever seen this before?
A. I believe I have, yes.
Q. When did you see this?
A. Well, I at least saw -- this is one of your cross-examination documents, right?
Q. Yes.
A. So I reviewed it shortly after you posted it, and I frankly can't remember if I reviewed it, you know, a year ago when I was reviewing other documents or not. It, it did look familiar the last time I looked at it, so --
Q. I'm going to go to Page 20.
A. Well, and I'll, and I'll add that, if it was posted in Docket 7970, we did go through a process early in the investigation of downloading all the documents from the docket, and, and I had an admin organize them, summarize them. I reviewed the things that I thought were relevant, so that would include this document. So I'm pretty sure I've seen it more than a year ago.
Q. Okay. Now I'll turn to .pdf 21, which is testimony Page 20, Question 18.

A. I see it.
Q. And, moving on to page .pdf 22, which is Page Number 21 --
A. Is there some specific spot you want to focus on here?
Q. I'm just going to read part of it, and it's starting around Line 11. Before I read from it, just from having looked at this before, do you understand that Mr. Sorenson said that the wetlands at this location was a rare, was a RINA --
A. Right.
Q. -- which I think is rare, irreplaceable natural area?
A. That sounds correct, yes.
Q. And so here he states, "The proposed open trenching in the wetland and clearing of the swamp edge could be completely avoided by locating the Vermont Gas alignment adjacent to Parks Hurlburt Road, parens, (Monkton), and North Street, parens, (New Haven), as was originally proposed in the December 2012 pipeline alignment."
You see that?
A. Yes, I do.
Q. And after that does it state that Vermont Gas's own consultants, Gilman & Briggs, had recommended the

alignment that ANR was proposing in order to avoid harm to the RINA?
A. Right.
Q. Do you see that?
A. Well, I don't see the part about their own consultant, but also referenced by Gilman & Briggs, right. Okay.
Q. Yes, it's Line 15 and 16.
A. Right.
Q. It states, "This alignment along North Street is also referenced in the December 13th 2012 Gilman & Briggs report as a way of avoiding impacts to this natural community".
A. Right.
Q. So we know that another location for the pipeline was originally proposed by Vermont Gas, Vermont Gas's own consultants said it was the preferable location, but it wasn't chosen, right?
A. Well, apparently.
Q. And, and on Lines 17 through 20, Mr. Sorenson explains that the reason Vermont Gas chose the RINA instead of going along the road was there are some residences along the road and this was a way to avoid going through a residential area. Do you see that?
A. Well, I see Vermont Gas has identified the

presence of residences as the reason for moving the alignment away from roads and other locations in Monkton. I don't think it spells out the specific location in that case.

Q. Okay. And you'll remember from yesterday's discussion that part of API RP 1102 says that wet soils should be avoided if there is a practical alternative; do you remember that?

A. Right. It was speaking in general terms. We mentioned it didn't really describe what wet meant.

Q. Do you agree that, at least according to Mr. Sorenson, there was a practical alternative?

A. Well, that's what this seems to -- yeah. At least, in his opinion, he had a preference for a different route.

Q. So let's assume again, Mr. Byrd, that you are a state regulator and you're applying Section 248 of Title 30 and you know from a reliable witness that there's a practical alternative to going through this wetland, and then you find out that it's not possible to bury the gas pipeline four feet deep in the wetland. Do you think you would want to know about that before it's too late and the wetland has been excavated?

A. Well, I'll, I'll preface my answer by saying this wasn't exactly a virgin wetland. This is a VELCO

right-of-way, and I think you showed a picture earlier, the aerial or satellite image that, you know, shows heavily wooded areas on both sides of this clear-cut right-of-way that contains the VELCO transmission pipeline.

So, yes, it's a wetland. I'm not a wetlands biologist, but I would have a hard time believing that a cleared utility company right-of-way was rare and irreplaceable, because, you know, clearly, VELCO has tremendously impacted the right-of-way by installing a electrical transmission line through there, and it's very common for FERC and other regulatory agencies to prefer to colocate utilities.

So we've already impacted this wetland by installing an electrical transmission system through it. You know, impacting it again by installing a gas pipeline through it, that might be preferable to impacting someplace completely new, like some area that contains even a few residences or is beside a road, which they're starting to consider roads to be a, a more like a high-consequence area, because you've got so many people on the roadway.

So, so, as a regulator, I'm not trying to speak for a regulator, and I can't pretend to be one, but, you know, I frequently see regulators making a decision

to, I want to colocate these, these utilities. As opposed to creating new impact somewhere else, I'll take an existing impact and make it a little bit worse.

So that's a thought process I see frequently, and apparently, even though Mr. Sorenson, his specialty is the environment, and he obviously had a preference to say, I don't want to impact this environment any farther than it's already been impacted, and I don't blame him. That's his job. The regulator has to balance his needs or his desires versus all the other ones when they come up with a route. So, when I read this, I thought, well, you know, he lost the argument. But I, I certainly don't see anything here that says he had the prevailing argument or should have had the prevailing argument.

ATTORNEY DUMONT: This may be unnecessary, I think, Mr. Tousley, since you've said you're going to take judicial notice of all the files in 7970, but I want to have the record clear. I'm going to move Exhibit 12, which is Mr. Sorenson testimony.

HEARING OFFICER TOUSLEY: Is there any objection? Department?

ATTORNEY GUZMAN: No objection.

HEARING OFFICER TOUSLEY: ANR?

ATTORNEY MILLER: No objection.

HEARING OFFICER TOUSLEY: VGS?

ATTORNEY McCLAIN: No objection.

HEARING OFFICER TOUSLEY: What's Mr. Sorenson's prefiled testimony in Docket 7970 that we're referring to now -- I'm not sure of the date of it -- is entered into evidence.

(Exhibit marked Intervenors Cross 12 was admitted into the record.)

https://epsb.vermont.gov/?q=downloadfile/426751/111907

BY ATTORNEY DUMONT:

Q. Thank you. I'm going to switch gears now and talk about compaction. Mr. Heintz's prefiled testimony has a typical trench detail we've talked about many times that states, "All backfill material with the exception of resource areas, see Note 4, shall be compacted at near optimum moisture content to layers not exceeding 12 inches in compacted thickness by pneumatic tampers, comma, vibrator compactors, comma, or other approved means", and Note 7 stated --

HEARING OFFICER TOUSLEY: Which prefiled testimony are you referring to?

MR. BYRD: If you're showing a document, we're not seeing it.

ATTORNEY DUMONT: Sorry. It's in so many places. Let me get it.

HEARING OFFICER TOUSLEY: And I think Mr. Heintz had a couple of -- he had prefiled testimony, and then he had supplemental prefiled testimony.

BY ATTORNEY DUMONT:

Q. Okay. And I'm quoting from his Exhibit 3. So many different places here. Let me get it here. We can go back to -- this is cross-examination Exhibit 11B, as in baby. I'll get that, and I'll try and make it big. There we go. I'm sorry for the jerkiness on this one. When I touch my screen, it move, it, it tends to go further than I anticipated. There we go. Is that too small for people to read?

A. I can read it.

Q. Okay. And I was referring to Note 6.

A. I see it, yes.

Q. And Note 7 states, "The contractor shall provide testing to ensure that the in-place density of the backfill meets the above requirements".

Mr. Byrd, am I correct that nowhere in your report did you address the compaction specifications for a typical trench that were set forth in Mr. Heintz's Exhibit JH-3, Typical Trench Detail Notes 6 and 7?

A. Well, I think I addressed it in, in general terms

in the section where I deal with backfill and compaction, and my opinion when I wrote the report and now, is that CHA's compaction specification was really inappropriate for this type of a steel gas transmission pipeline and they should have used the Curtis specification from Vermont Gas and corrected the CHA specification, which wasn't done until late in the project.

Q. So what you're saying is -- well, I want to be clear on what you're saying, honestly. Because yesterday, when I read you the 2014 version of 312333 and its requirement of six inches of backfill beneath the pipe, you stated it was your view that it applied only to bell-and-spigot pipes, correct?

A. Well, their specification, it's hard to, to guess what they were thinking at the time, but, when you, when you narrowly read 312333, when it talks about bedding, it talks about bedding underneath the bell of the pipe, and, to me, that's a red flag that says, hey, they're using the wrong specification for this, because this isn't a bell-and-spigot pipe.

So CHA, I'm presuming -- I can't speak for CHA, and I'm not aware of all the work that they do, but, but in Vermont, as the PHMSA inspection report shows, there's only one gas transmission operator in the

entire state, and that's Vermont Gas, and they hardly ever build any transmission pipeline, so I have to assume the local engineering firms rarely design one.

But they do have lots of water, sewer, and other kinds of utility lines that are much different than a high, high-strength welded steel pipeline, and those, which do have bell-and-spigot construction, you'll see it in water mains. You'll see it -- you know, the easiest example people probably see is concrete culverts where you see a section of concrete pipe that's expanded on one end, and you stick them together like Tinker Toys, that's bell-and-spigot pipe.

And when you've got bell-and-spigot pipe that you want to keep from leaking, well, you have to make sure it's laid nice and straight on a very firm foundation and is firmly supported, because the pipe joints in and of themselves have little, if any, strength, and so you have to be very clear about how much compaction you have, exactly how flat the trench is, how well it's compacted, and you've got to do all kinds of detailed, you know, work to ensure that that pipe is going to stay exactly where you put it, because the pipe joints really aren't holding the pipe together. The environment is holding the pipe together.

This pipe is a totally different kind of pipe, and

the Vermont Gas narrative specification was appropriate for that kind of pipe, and the, you know, there are numerous places throughout the CHA specifications that I simply think they used the wrong specification. So they should have resolved the differences in favor of the VGA (sic.) narrative, not per the what, in my opinion, inappropriate CHA specification for those things.

Q. I was starting to ask you about compaction. We've talked -- and I am to blame for this, I'm sure. We've switched from compaction to six to nine inches of fill beneath the pipe, so let's stick with that for a minute.

A. Okay.

Q. So we're clear, you're saying that the CHA specifications could be read as applying only to bell-and-spigot pipes?

A. At least, well, the section that specifically talks about the bell of the pipe, I believe, had to do with bedding. I don't think it was in the section that deals with compaction, but, in my mind, they go together. The compaction specification CHA was also appropriate for a bell-and-spigot type of construction but not appropriate for a welded steel pipeline like ANGP.

Q. And I believe your recollection is correct that the section of 312333 that states there shall be six inches of bedding beneath the pipe said beneath the bell of the pipe.
A. That is correct, yes.
Q. Okay. Now, but the exhibit we have in front of us, Exhibit 11B, doesn't say that?
A. No, it doesn't.
Q. No. This is the specification submitted by CHA to Vermont Gas to file with the Public Utility Commission, and it specifically says 12-inch gas main. So we know they're talking about not something off the shelf that would be a sewer pipe.
A. Right.
Q. This is a gas pipeline, 12 inches, and it says 6 inches, it shows 6 inches of sand fill beneath the pipe and 12, 9 inches if it's, the pipe is on ledge, correct?
A. That's correct.
Q. And in your report I don't recall you addressing whether or not this specification that was submitted to the Public Utility Commission was complied with.
A. Well, like I said, I think I addressed it in general terms under the section of my report dealing with compaction and backfill. I didn't attempt to

address every statement and every diagram submitted by CHA or by, by VGS. And I, you know, my issue is that, you know, fundamentally, I think all of those mentions of compaction, except as clarified in my report, when you're dealing with an area that does require compaction such as a road bed, you know, the, the compaction specification was simply inappropriate, and, as soon as it was raised to CHA's attention, CHA should have said, You're right, that's the wrong spec for this. We should go to the Vermont Gas narrative spec. But, for whatever reasons, they didn't do that.

Q. So now I'm going to refer you to your report, Page 60. Pulling it up on the screen here. In the middle of the page, did you write, "Any noncompliance is noncompliance, comma, but I differentiated, parens, (as does PHMSA), end of parens, between noncompliance that impacts pipeline safety versus noncompliance that does not when formulating my conclusions and recommendations, comma, including noncompliance with specifications that were unnecessary or inappropriate to that situation, period".

Did I read that correctly?

A. Yes, you did.

Q. So what you're saying is what -- what you're saying is that, in writing your report, you applied the

same standard that PHMSA applies, to wit, if a deviation would not affect safety or if the deviation was from a specification that you believe was unnecessary or inappropriate, you concluded that it was not a violation, correct?

A. I didn't say I did it the same as PHMSA. I did it in a similar fashion in that PHMSA considers certain types of violations to be paperwork violations. You know, paperwork is maybe a generic term, but, but they're not the kinds of things that lead to real safety issues. So, so and I believe I included as an attachment PHMSA's recently published at the time penalty guidance where they specifically call out, you know, was the noncompliance due to a specification, noncompliance with a specification that went above and beyond the minimum regulatory requirements, which could actually end up giving a credit in their penalty calculation.

So you're saying, I was planning to do better than average, but I only did average. Well, that's noncompliance, because your plan was better than average. But PHMSA says, well, you know, you still met my basic requirements, so I'm not going to penalize you very much for that, you know, if at all.

So, so that I, what I'm saying here in this

paragraph is that, hey, you know, there are some things that I think are potentially serious, and I'll deal with those as serious issues, and the things I don't think are serious, well, I'm going to point out that it was noncompliance, but I'm also not going to try to make a mountain out of a molehill for something that was technically noncompliant but wasn't required in the first place, or maybe it wasn't even required but wasn't even appropriate.

Q. Did you determine whether or not the Addison Natural Gas Pipeline had, typically had a trench detail with six to nine inches of sand fill beneath the pipeline?

A. Well, I'm not sure I got the gist of your question, but this diagram does show six to nine inches, and it's mentioned elsewhere as well. So I would agree that that's, that was the general specification for the pipeline.

Q. Did you determine whether or not, typically, the ANGP was constructed with six to nine inches of sand fill beneath the pipeline?

A. Did I determine?

Q. Yes.

A. Okay. Well, I, I think we discussed this yesterday. You know, the inspection reports that I saw

don't call out six inches of gap between the bottom of the pipe and the bottom of the trench or nine inches of gap between the bottom of the pipe and the bottom of the trench, but they do call out from time to time where there wasn't a gap between the pipe and the bottom of the trench, which tells me by exception that, well, the rest of the time they were checking and there was a gap.

Now, they don't document that it was six inches. They don't document that it was nine inches. So, you know, I, I'm left to assume that it was appropriate to the situation, or they would have called it out like they did elsewhere, but, you know, the documentation just isn't that detailed.

Q. I've turned to Page 64 of your report. Just a minute. Okay. You got it there? And it says, "Burial" is the caption or the subcaption, and the subheading is "Backfill Materials". Did you write, "There was never any requirement for the pipeline to be laid in clean sand above the trench bottom, comma, and that was not typically done"? Did I read that correctly?

A. Yes, you did.

Q. All right. But, in fact, there was a requirement. You just looked at it, right?

A. Yeah. So the, you know, so it seems that there's a tremendous amount of emphasis in this case that --
Q. Well, yes or no?
A. Well, I'm answering the question. So there's a tremendous amount of emphasis in this case on the word "sand". You know, what is clean sand? Is clean sand something you have to -- you know, is it only clean sand if you buy it from a vendor? You know, the specifications, throughout the specifications both for VGS and CHA, they talk about sand, but they also talk about select fill material, which is mostly the material that was already there that you excavated from the trench, and they're synonymous terms.

So the implication that I am trying to address here is that you had to buy sand somewhere else, put it in, lay a nice bottom on there, and then put the trench in or put the, lay the pipe on top of it, and that's simply not a requirement, even though you do find, from time to time that people say it'll be on clean sand. Well, in the pipeline industry, they're saying sand-like material. So it's, select backfill is a more wonky way to say it.

You know, so, so I do agree the specifications said, yeah, you're going to have select backfill between the pipe and the trench bottom, at least on the

CHA specification.
Q. I want to make sure I understood what you just said. Are you testifying that clean sand is the same thing as select backfill, there's no difference?
A. In this context, yes, they're the same thing.
Q. So, if it's loam or silt, to you, that's still clean sand?
A. Well, if it's select backfill, that's what you put around the pipeline. So, when they say it's going to be sand, what they're, what they're saying from a practical standpoint in the pipeline industry, they're saying it's not going to have rocks, it's not going to have things that would damage the coating.

When you actually read in the specifications what's the purpose of this, it's finely grained material that can support the pipe and will not damage the coating, and, and that's the gist of what you're looking for. So the easy way to say that is it's clean sand. Doesn't have anything else in it. It's just finely grained material. It's going to be great. So but the, the more precise way to say it is select backfill, and, you know, you see both terms used throughout the specifications and throughout the testimony.

So I, I don't -- I think it's a big mistake, and

this is what I'm trying to address here, to think that there's only one specific type of thing that you have to buy that would classify itself as clean sand for purposes of backfilling a pipe.

Q. When you wrote on Page 64 that, "There was never any requirement for the pipeline to be laid in clean sand above the trench bottom, comma, and that was not typically done", tell us what was not typically done if clean sand means the same thing as select backfill.

A. Yeah. Well, this is getting to the -- so maybe there's a, you know, better way to have said that, but I'm getting at the usage of the term "clean sand", and I clarify that later in the paragraph where I say the select fill material and/or padding material. You just scrolled off of it.

Q. Yeah, sorry. Do you want to go back to that?

A. Yeah. So I was, I was saying the, the first sentence taken in context, you know, goes on to explain what I was trying to say in the first sentence, which is that select fill material and/or padding material shall be sand in accordance with this or shall be screened native material containing silt, sands, gravels, large material be no greater than a one-inch longest diameter, yada, yada.

So what I'm trying to say here, and I apologize if

it wasn't stated as clearly as I intended, was that clean sand and select backfill are the same thing as far as these specifications are concerned, so --
Q. I don't want to interrupt. Tell me when you're done.
A. Okay. So, so, if you -- like I said, maybe I, in hindsight, would rephrase the first sentence more along the lines of the point I'm trying to make, which is, for purposes of the pipeline specifications, clean sand and select backfill material are synonymous terms.
Q. Okay. Then how can you explain the quote that's right after that, Section 3.13.I? Quote, "Select fill material and/or padding material shall be sand in accordance with the VTrans Standard Specification 703.03 or shall be screened native material containing silts, sands, and gravels with the largest material being no larger than one inch on the longest dimension".
A. Um-hum.
Q. You don't see an inconsistency between that sentence and your position today that clean sand and select backfill are the same thing?
A. Well, I'm saying, for practical purposes, okay? So they're saying sand, meaning a specific VTrans Standard Specification 7.03, 703.03, which I don't

know, but I'm sure it's a very specific requirement about, Here's what we call sand, or it needs to be this stuff, the select screened native material. So, instead of using a sentence that's 40 words long every time, you know, frequently within the specifications or in verbal communication, you say, well, it's going to be sand. So it's a generic term, kind of like Kleenex. You know, it's, when we say clean sand, I'm trying to say that involves more than something that meets VTrans Standard Specification 703.03.

Q. Let's go back to the exhibit.

A. All right.

Q. This exhibit was submitted to the Public Utility Commission, right? You understand that?

A. Yes, yes.

Q. And it used the common English term "sand", right?

A. Yes, it does.

Q. And it also referred to backfill, correct?

A. Yes, yes.

Q. But you're saying, when -- let me have you read Note 2. Note 2 says, "Backfill with clean sand to twelve inches over pipe". We've been talking about six to nine inches of bedding beneath the pipe. The same term is used. The term "clean sand" is used for the twelve inches over the pipe.

A. Right.
Q. So you believe that, when it said backfill with clean sand to twelve inches over the pipe, that also meant any kind of select backfill?
A. Yes, but, when they say sand, they really mean select backfill.
Q. If you felt that clean sand means the same thing as select backfill, is there a reason you didn't explain that in your report?
A. Well, I, as I just explained, I was trying to explain it, and, if I wasn't as clear as I needed to be, I'm sorry. But I think the paragraph, taken as a whole, says exactly what I was trying to say.
Q. Okay. We'll go back to your paragraph. Quote, "There was never any requirement for the pipeline to be laid in clean sand above the trench bottom, comma, and that was not typically done".
A. Right. Are you showing the report again?
Q. Yes.
A. Yeah, yeah. So and there's actually two aspects to that sentence. You know, one is the point I'm trying to make, which I clarify a little later, that, you know, for purposes of this, clean sand includes, is synonymous with select backfill.
The other is the concept of bedding the pipe

before you put it in the trench. You know, so we discussed yesterday a couple of different options that you would have for installing a pipe. So, so one would be you excavate the trench, you lay the six inches of material in the bottom, you put the pipe on top of that, and then you fill around the rest of it, and that's one way to do it. So laying it in clean sand over the trench bottom would be that method.

The other method is you take the pipe, you support it every 15 or 20 feet with sandbags, as we discussed yesterday, and then you fill in around it, including the bottom, and that was typically the method done for this pipeline, so and, and it's common throughout the gas transmission pipeline industry.

So I'm also saying, hey, you know, they didn't lay the bed of sand or select backfill and then put the pipe on it. They were supporting the pipe and then filling around it, but that point is kind of secondary. I mean, the heading here is "Backfill Material", so I'm talking about the material primarily in this paragraph.

Q. Are you, are you saying -- well, is it your belief -- is it your opinion that, even though the specifications submitted to the Commission used the words "sand" and "clean sand", in your judgment, select backfill does just as good a job, and, therefore, you

differentiated -- I'm now paraphrasing from your report -- you differentiated, as does PHMSA, between noncompliance that impacts pipeline safety versus noncompliance that does not in formulating my conclusions and recommendations, including noncompliance with the specifications that were unnecessary or inappropriate to that situation?

A. That's not exactly what I'm saying. What I'm saying is there was no noncompliance in that case, because, you know, clean sand and select backfill are synonymous terms. So, if I had it to do over again, I would just put that in my report. They're synonymous terms. So, so there's no noncompliance at all. I think it's perfectly in compliance, what they did.

Q. All right. Going back to Exhibit 11B where we started a while ago, we started talking about compaction. Notes 6 and 7 say that the typical trench shall be compacted in a certain way and shall be --

A. Yes.

Q. Am I correct that nowhere in your report did you address the compaction specifications for a typical trench that are set forth in this exhibit that was submitted to the Commission?

A. Well, as I explained earlier, I, I didn't attempt to address that issue drawing-by-drawing and

exhibit-by-exhibit. I dealt with the issue generally when I talked about compaction.

Q. And so you looked at whether or not CHA's specifications were complied with or the narrative was complied with, right?

A. Yes, I compared both of them, yes.

Q. And you concluded the narrative was complied with, and that sufficed, correct?

A. That is correct from a, from a practical standpoint. Now, that does get to the point you were making earlier that there's noncompliance, and I will, you know, I'm not shy about saying it. They didn't comply with the compaction part of the CHA specification. I mean, they just didn't, right? They complied with the narrative part of the specification when it comes to compaction.

So, you know, I'm not, I'm not trying to ignore the fact that, no, they didn't test the compaction, they didn't compact in the methods that were explained or required in the CHA specification for that, but my opinion is, well, that was the wrong specification. So I don't fault VGS for not following the wrong specification. You know, somebody, either at VGS or CHA, should have eventually resolved that. I think they did, but it took, you know, quite a bit of time

into the project before they, they fixed that one specification.

Q. I've moved to Page 67 of your report. There we go. That's the right part. You wrote near the top of the page, third paragraph from the top, "The issue concerning compaction isn't noncompliance with the specifications, comma, but rather that the specifications were excessively conservative and overprescribed and should have been changed prior to construction". Did I read that correctly?

A. That's correct.

Q. So your opinion is that the specifications submitted to the Commission and the evidence that Mr. Heintz submitted were excessively conservative and overprescribed and should have been changed prior to construction, correct?

A. Regarding compaction, that is correct.

Q. Excuse me one second. I have to turn off the timer in the kitchen.

A. There's always something new, isn't there?

Q. The oven is on, and the timer went. So I'm, hopefully, I'll get to share with all of you the bread that's in the oven.

A. I was going to say, What's for lunch? Yeah. You're not eating at Circle K, I take it.

Q. No, I'm not.
A. Right.
Q. So, Mr. Byrd, the specifications were not changed prior to construction, right?
A. That is correct.
Q. So, in this respect, the ANGP was built in violation of the evidence and plans submitted to the Commission, correct?
A. On that one topic, you know -- well, I will grant, yes, there was noncompliance with that specification, and my, my report says the issue in my mind, as a pipeline safety expert, isn't that they didn't comply with the specification but that they didn't get it changed. So the failure, to the extent there was one, was failing to reconcile the specifications before they started construction. So that didn't happen.
Q. You're aware there's a procedure that was available to Vermont Gas to come in before the Commission and obtain approval to depart from the evidence and plans that had been submitted to the Commission?
A. Yeah. Well, I see the nonsignificant change submittals. I assume that's the process or some similar process.
Q. You are an expert in this, and you're an expert on

API RP 1102, so let me ask you. We'll start with we can agree that 1102 calls for compaction so that the soil in the trench is the same density as surrounding soils, correct?
A. Yes. It's similar, words to that effect, yeah.
Q. And the API standard, by its terms, applies to highways, which it defines as any paved or unpaved route of travel that is frequently used by self-propelled vehicles, correct?
A. I, that sounds familiar to what we read yesterday, yes.
Q. But Mr. Heintz's typical trench, the typical trench detail we've been looking at right now was not limited to highway crossings, was it?
A. Well, actually, the, the part that you were zoomed in on was road crossings. If you go back to that diagram, it shows a road on top of the trench.
Q. Okay. It's paved of unpaved.
A. Yeah, I think they had one paved and one unpaved side-by-side examples.
Q. So, with regard to compaction for what the API refers to as highways, Mr. Heintz was not being very conservative, was he? He was simply reiterating API RP 1102, correct?
A. I'm lost about what Mr. Heintz was talking about,

so you have to refresh my memory. What was that?
Q. So the requirement of compaction that Mr. Heintz puts in the typical trench detail, that is also found in API RP 1102, correct?
A. Well, I mean, here they're -- and I really see the compaction described here different than the compaction the way they describe it in 1102. 1102 just says it's got to be similar to the surrounding soils. This one says, you know, Note 6, "shall be compacted at near optimum moisture content". That's a more specific requirement.

You know, when you're compacting soils -- and, actually, when I was in grad school, I did a little bit of that, you know, on the side, so compaction testing of soils, and there's standard methods you use to do it. Basically, you're dropping a hammer on a container of soil and, you know, measuring how thick it is and how much it weighs, and, and the ability for that soil to compact together varies with moisture content.

So there is an optimum moisture content at which the soil will be its densest, and, if you put too little water in there, it doesn't compact as much. If you put too much water in there, it doesn't compact as much. So there's, you know, when you think about soil as being a whole bunch of small, little grains of

material and the water in between them, you know, that's about the optimum amount of water.

You know, so this is a very specific part about compaction saying optimum moisture content, which is the kind of thing that you would do for a road crossing, and I mentioned that in my report, because you want it to never compact any more, right? So you want the optimum amount of moisture content for road crossings, and that's what they're showing here, you know, but API 1102 just says, well, it just needs to be consistent with the surrounding area. Well, the surrounding might be suboptimum. That make sense?

Q. So what you're saying is what Mr. Heintz submitted to the Vermont Public Utility Commission was more conservative than the American Petroleum Institute recommended practice, correct?

A. Well, I'm not saying it's more conservative. I'm just saying it's not exactly the same.

Q. It's more protective; is that correct?

A. I wouldn't say that either. It, it's more specific. It's definitely more specific.

Q. Well, whether it's more specific, more protective, the requirement of compaction is consistent with API RP 1102, correct?

A. Well, they both address compaction. Frankly, 1102

says hardly anything about it.
Q. Well, we've now read it two or three times. It says it shall be consistent with the density of the surrounding soils, correct?
A. That's about all it says about compaction, right there. You just quoted it out of a multipage standard. You know, it just doesn't say much about compaction.
Q. And you've said now several times that it just didn't happen for the ANGP, correct?
A. That's correct. There was a handful of places where compaction was actually tested, and those are areas, you know, looking at aerial photography, that clearly were places where VELCO routinely crossed the pipeline. You can see the, you know, basically dirt road kind of environment where the VELCO roadway, you know, has an access point that crosses over the pipeline, and that, you know, even though they're all unpaved, you know, those, those are getting routine truck traffic, and those are the areas where VGS actually measured compaction. They didn't do it anywhere else that I've seen.
Q. So there's a measurement of compaction which was required by this, and then there's compaction. Are you saying that, generally, the soil was compacted or it wasn't?

A. Well, so they have a, you know, VGS deals with compaction, and I, I deal with it in my report where I talk about there are two ways to look at this. There's method specifications, and there's end product specifications.

So the method specification is I'm going to do things a certain way, and, because I did them that way, I can reasonably expect to get the right result, and that goes back to the CHA loading calculations that you mentioned earlier on, in 2014 where they answered the specific question for VELCO right-of-way, If the pipeline is built to Class 3 standards and buried four feet deep, will it meet the HS20 plus 15 percent loading specification that VELCO demands for their right-of-way, which I think is incredibly conservative, but, nevertheless, that's what they insisted on, and CHA said, yes, it will, okay?

So the VELCO MOU has a method specification in it. That is confirmed by the CHA calculations where they say, You will meet HS20 plus 15 percent loading criteria by building the pipeline to Class 3 standards and burying it four feet. You know, so that's a method specification, and, you know, so they met that, and that --

You know, then and end-product specification is,

I'm going to meet 90 percent, you know, optimum, you know, soil compaction in every area, okay? Well, how do I know I'm at 90 percent or 95 percent? Well, I actually have to test that, and that's the areas where they tested in the VELCO right-of-way.

But the, you know, the ANGP or the VGS narrative specification deals with, you know, methods of compaction, and it will be done with lifts and, you know, compressed with the excavator bucket and, you know, the final compaction be done by, you know, running the tracked vehicles over the trench, you know, to ensure that it's, you know, adequately pushed down. You know, it says those kinds of things. The CHA specification tends to be more end-product specifications, you know, you have to test it to ensure it meets this specification.

Q. We talked about this yesterday. We don't need to go back over it. So let me switch gears to stream crossings.

HEARING OFFICER TOUSLEY: If we could, why don't we take a break until 11:10?

ATTORNEY DUMONT: Okay, great. Thanks.

(A recess was taken from 11:02 a.m. to 11:15 a.m.)

HEARING OFFICER TOUSLEY: Mr. Dumont, you may continue.

BY ATTORNEY DUMONT:
Q. All right. Thank you. I have a few questions for you, Mr. Byrd, about stream crossings. Have you read Mr. Nelson's prefiled testimony and his affidavits?
A. Yes, I have.
Q. I've put Exhibit JAN-2 on the screen.
A. Um-hum.
Q. Go on to the page, it's .pdf 5 onto 6 of the, of his affidavit, Paragraph 17.
A. Right, I see it.
Q. In his affidavit he states that the EPSC plans that were filed with the Commission were incorrect, because they stated there would be seven feet of cover under all of the streams identified in the plans. Do you see that?
A. Yes, I do.
Q. And he writes that Vermont Gas intended to bury that pipe, the pipeline that depth only when crossing ANR jurisdictional streams. Move that down a little bit.
In your report on Page 68, you state that you disagree that the ANGP was constructed in violation of the CPG in this regard.
A. Yeah, I'm looking for that sentence.
Q. I think I found it here.

A. Right.
Q. On .pdf Page 68 you say, "I disagree with their interpretation of the specifications as to the depth of cover requirement but agree that any violation would be purely of a technical nature with no impacts on pipeline safety or the environment".
I have a couple of questions about that.
A. Okay.
Q. You're definitely an expert on pipeline safety. Why do you think that you're qualified to talk about whether depth of burial raised any issues for the environment?
A. The depth of cover, I guess, is what you're referring to, right?
Q. Yeah.
A. Yeah. So I'm -- you're right. I'm nothing more than a knowledgeable layperson when it comes to the environmental impacts of trenches across streams or any kind of wet area. You know, I'm relying more on the, the environmental consultant and ANR when they say it doesn't really matter. When I look at it from a layman's standpoint, it's like you're digging a trench across the, the wet stream, whatever you want to call it. The term "stream" is loaded in this situation, but I'll use the word "stream".

But whether it's, whether you dig that trench four feet deep or seven feet deep, you've trenched across it, and then you put your pipe in, and then you backfill it. So I have a hard time imagining, from a depth-of-cover standpoint, that there's any environmental impact that's different from digging a four-foot-deep trench or a seven-foot-deep trench, you know, and I would argue, if there's any difference, the deeper trench makes a bigger impact, because you have more fill, and you have to do more backfilling, whereas a shallower trench would have less impact. That's my layman's interpretation of it.

Q. Okay. Your report doesn't say why you disagree. We know Mr. Nelson has testified that the incorrect specifications were filed with the Commission.

A. Correct.

Q. And you disagree with that. You're saying the correct ones were filed with the Commission. So tell us why.

A. Well, I'm saying -- so the ANR letter of October 12th 2017 says there was a technical violation. Well, the, the plans had been modified prior to that letter to eliminate the nonjurisdictional streams from that Type 7 construction, so and that, that nonsignificant change had been approved by the Commission. So I don't

even think it's a technical violation, because the specification had already been changed.
Q. Are you sure that the change in depth of cover of the trench in streams was approved of by the Commission, or was it approved of by ANR?
A. Well, I believe it was, if I'm recalling everything correctly, the nonsubstantial change Number 3, that was approved by the Commission. I don't remember, you know, the details of the ANR.
Q. So Mr. Nelson has explained in his affidavits that, in a nonsubstantial change request that had nothing to do with depth of cover, some of the supporting documents had the new depth of cover, but he does not claim that this change was brought to the Commission's attention or that any request was made of the Commission to accept the change. It was just in the backup materials without any mention in the request. But it's your position that, in that setting, the Commission actually approved of the change; is that what you're saying?
A. That, I, I can't speak for the Commission. I'm just saying that those, those revised plans were submitted, and the change was approved, and, and that's -- I'm just going by the facts.
Q. Okay. Your report at Page 68 discusses, which is

the page we're on right now, residential. There we go. It will show up on your screen. There it is.

A. Yes, I see it.

Q. You agree that Mr. Heintz's testimony on December 20th of 2012 and on February 28th of 2013 stated, "The pipeline will have four feet of cover in agricultural areas within the VELCO right-of-way and residential areas, comma, and generally five feet of cover at road crossings and seven feet of cover at open cut streams".

As I understand your report, Page 68, you're saying that, because the Commission, in its order, did not reiterate that part of Mr. Heintz's prefiled testimony, the Commission rejected it. Am I summarizing your position correctly?

A. Well, you could summarize it more accurately by saying they quoted his prefiled testimony verbatim with the exception of that one statement about residential areas. So, you know, it's more than a coincidence, in my mind. When they quote something verbatim and then leave four words out, or six words out of a verbatim quote, to me, that's intentional. So I didn't ask the Commission if they did it intentionally, but it certainly looks that way to me.

Q. And you are aware that the CPG and the final order both stated that the project had to be constructed in

accord with the evidence and plans that were filed? The Commission, the CPG and the order did not state it has to be constructed in accord with those parts of the evidence and plans we specifically referred to in our decision; you understand that?

A. You seem to be arguing, from my perspective here, that nothing that is said in any, you know, statement to the Commission can ever be changed, and I, I don't see it that way, and, clearly, that statement was modified in the final order. That's the way I read it, and that's the way I described it in my report. You know, these things, once said, can never be retracted, I don't think is correct.

Q. Why do you think that's the Intervenors' position?

A. Well, because you keep harping on it. That's --

Q. Our position is, if you change, make a material change from the evidence and plans, you have to go to the Commission first and obtain their approval.

A. Yeah.

Q. You understand that?

A. I would look at it as, if you want to change things in the final order or the certificate of public good, I would want to go back and get approval, but, once I know what the final order says or the CPG says, I would assume that's what I need to comply with and

that's -- you know, there is some circular logic involved, I will grant you, that says, well, our approval is contingent on all the stuff you told us to begin with. So and there is, there is kind of a -- you can go around in circles forever on that, which would lead you to the conclusion, in my mind, that nothing said can ever be retracted. It's like, I don't think that's what they're trying to say.

Q. All right. Thank you. I want to talk about the first day you and I met. Do you remember you were staying at the Inn at Baldwin Creek at Mary's Restaurant in Bristol?

A. Yes, that name sounds familiar, yes.

Q. Because you had asked where would be a good place, and I, I had recommended the Inn at Baldwin Creek.

A. You said there's not much to choose from, so I was searching for a place that was close to your office, and you said this would be a good place. Like, okay, fine, I'll take your word for it.

Q. And you didn't have a car, so you asked if I would pick you up and bring you to the meeting?

A. Yeah. I, you know, normally, I would just rent a car and drive down, but, since I had been warned of the winter conditions and remote rural area, that that might be tricky driving, I decided it was better to

hire a car to take me down there that knew the area better than I did. So, yeah, I didn't have a car, and I needed a ride, and you offered to pick me up, so I appreciate that.

Q. And, when you got into the car, did you say to me, "We're not going to discuss the investigation, because I don't want to discuss the investigation unless all the parties are present"?

A. Well, this is the first time I'd ever seen you, and, you know, I didn't want to begin our investigation just you and me. You know, we were, the whole purpose of the visit was to go meet with all the other parties. So I don't remember exactly what I said, but I'm sure I said something about, hey, I don't want to talk about the case in the car. Let's talk about the case when we get to your office when everybody else is there, and we talked about logging and everything else. I, you know, it's not a long car ride. It was 15 minutes, something like that.

Q. I think we talked about the Red Sox.

A. I remember talking about logging too. Yeah. You were talking about deforestation and, you know, history of the area and that kind of thing.

Q. You agree you made it clear that, in your view, there would be no conversations during your

investigation, unless all the parties were involved, conversations with me, unless all the parties had the opportunity to participate?

A. I didn't say it that way. What I do remember saying, you know, number one, I was telling you -- I don't know how you heard it, but I was saying, I don't want to begin this by being lobbied by the lawyer for one side. I want to, you know, I want to, I want to start the discussion in the group setting that we had already set up. And I remember telling the Intervenors at the meeting or the people who were in attendance at the meeting, I said, I am an independent investigator. I'm not an advocate.

No, the wrong word. I said I'm not an ombudsman, right, so I'm not here to be the ombudsman. I'm here to investigate certain issues as described in the scope of work with the Public Utility Commission. So and I remember telling them, "Look, don't call me directly with your issues. I want to make sure the issues are vetted, you know, in a larger setting". I didn't want individual landowners calling me up and saying, hey, you know, you need to look at this, you need to look at that. It's like, you know, I didn't want to do that, because I'm not the ombudsman. I'm not the individual troubleshooter. I'm just doing an investigation.

Q. Thank you. I've put on the screen our Exhibit 23. Are these your answers to interrogatories?
A. It looks like it, yes.
Q. I'll go to the end of it. There's a signature page somewhere else. Do you agree this is an accurate copy of what, how you answered the interrogatories?
A. It appears to be, yes.
Q. I'm going to move Exhibit 23.
HEARING OFFICER TOUSLEY: Is there any objection? Department?
ATTORNEY GUZMAN: No objection.
HEARING OFFICER TOUSLEY: ANR?
ATTORNEY MILLER: No objection.
HEARING OFFICER TOUSLEY: VGS?
ATTORNEY McCLAIN: Sorry. Couldn't find the button. We have no objection. Thank you.
HEARING OFFICER TOUSLEY: Okay. So what's been previously marked as Intervenors Cross Exhibit Number 23 is entered into evidence.
(Exhibit marked Intervenors Cross 23 was admitted into the record.)

https://epsb.vermont.gov/?q=downloadfile/426809/111907

ATTORNEY DUMONT: Mr. Tousley, I have about a half an hour of questions left, and I, I'm going to suggest that, if everybody is willing, that we take our lunch break now, and, that way, I'll be more efficient and I'll have my leftover questions better organized. I could go forward now, but it's only about a half an hour's worth of questions.

HEARING OFFICER TOUSLEY: Okay. I think that's a good idea. Mr. McClain?

ATTORNEY McCLAIN: Yeah, that's, that's absolutely fine with me, whatever works best for everyone else. I, what was it? We're going to take lunch now and then do a half an hour of questioning, Jim?

ATTORNEY DUMONT: Roughly half an hour, 40 minutes. So, you know, it's a, I'm at a good transition place.

ATTORNEY McCLAIN: Yeah. So, as a practical matter that would be helpful, I believe that Mr. Rendall will be ready to testify after lunch, and so earlier than 3:00 if needed, and I don't think we need to rush Mr. Dumont in any fashion. I do not expect to have -- I need to review my notes, and I'll do that over lunch, but I do not expect to have questions for Mr. Byrd.

HEARING OFFICER TOUSLEY: Okay. With that, it's now 11:30. I think 45 minutes seemed to give Mr. Byrd the opportunity to go across the street to the Circle K yesterday, and we'll do 45 minutes again. We'll try to get back together again at 12:15.

(A recess was taken from 11:31 a.m. to 12:17 p.m.)

HEARING OFFICER TOUSLEY: Okay. We're back in session, and you may proceed.

BY ATTORNEY DUMONT:

Q. All right. Mr. Byrd, we were talking about DPS inspection reports yesterday. I told you we would return to that subject.

A. Yes.

Q. Page 60 of your report was the jumping-off point. It still is. You found that the critical comments were minor deficiencies that are routinely found and corrected on a daily basis during a project of this type.

I want to now go to the DPS inspection report for, the summary of the DPS inspections that is your Attachment 39.

A. Okay.

Q. This, so we'll go to the top. This is your Attachment 39, and, if we go through that, I'm going to start on .pdf 8, and you'll see here an unsatisfactory

rating under the heading "Weld Inspections and Nondestructive Testing Requirements". Now, on the left-hand side of this form are some numbers, and correct me if I'm wrong. Those are, the numbers refer to the PHMSA regulations?

A. Yes. Those are citations under 49 CFR Part 192, and, to clarify what you said earlier, I said the things that didn't result in NOPVs were minor and, you know, didn't indicate a large -- the welding did actually result in an NOPV, so --

Q. Okay. Thank you for that clarification.

A. Just to make sure we're talking about the same topic here.

Q. So here's one that resulted in an NOPV?

A. Right.

Q. If we look at the footnotes, there's an X with a 9 and an X with a 10. Scroll down. You see some comments, and I'll wait until you've got it there.

A. Um-hum.

Q. The comment for September 17th 2014, is that large enough for you to read?

A. Yes, I can see it. Thank you.

Q. As I read it, it says, "Inspection of NDT procedures at Redmund Road", R-E-D-N-U-N-D is how it's spelled here, "Redmund Road, radiographer advised that

he uses TEAM procedures, period. Unable to locate NDT procedures in any of VGS documents".

A. Right.

Q. Footnote 9, a little further -- I'll wait until the page catches up. There we go. Footnotes 9 and 10 say, "As of December 8th 2014, NDT procedures have not been adopted from TEAM NDT, and, as of 12/8/14, have not been provided that information". So how do you interpret that?

A. So, so I'll preface this by saying I think issues with welding are potentially serious, and, you know, when I saw this, I thought, oh, there you go. That could be a real issue, and, and PHMSA or, in this case, the State, you know, called out a situation where -- you know, the person who is performing the NDT, which stands for nondestructive testing, which is in the regulations, you know, when you weld a steel pipe together in the transmission industry, you have to inspect that weld using some kind of nondestructive testing.

And, in this case -- doesn't always have to be an x-ray, but, in this case, they were using x-rays, and, you know, the x-ray is only as good as the person and the procedure that they used to create that x-ray. So, so PHMSA demands detailed procedures for how I conduct

that x-ray. You know, because the thickness of the material, the strength of the radioactive source, the location of the, of the radiographic film, all of that matters, you know, to ensure that you get a good x-ray. So PHMSA demands detailed procedures for that.

And, in this case, as I read the inspection report, they're saying, well, the person who is doing the x-rays had procedures, and PHMSA didn't raise any questions about the adequacy of those procedures, but they did note, hey, VGS, as part of their project specifications, doesn't have procedures for this, and they should, and I agree. They should.

So, so, you know, obviously, the state inspector was okay with them using the procedures from TEAM, and I assume that's a company name. I'm, it's not an industry term, so I assume that's a company, TEAM, NDT that had their own procedures for doing this, and you would expect a company that specializes in it to have procedures for it, but those procedures hadn't been adopted by VGS officially as of the end of December.

So that's how I read this, and the inspector is clearly saying, hey, I need to see that VGS has officially adopted these NDT procedures into their procedures. That's what I think this is saying.

Q. So the, the state inspector raised this issue on

September 7th, and three months later it had not been addressed, correct?
A. Well, they, they hadn't seen an official adoption. That's what it looks like to me. Now, Footnote 10, having not been provided that information, I would have to go back up to the item that had Footnote 10, because I don't remember exactly what that was. Okay. So are there records to qualify procedures. Okay. So, so, if you'll stop crawling for just a second. So .243, Question A is a detailed written NDT procedure established and qualified, and I'm sorry. You scrolled past it.
Q. I thought you wanted me to go down to the bottom. I misheard you.
A. No. I wanted to stay there.
Q. Okay.
A. So is the procedure established and qualified? Okay. So you have to, not only have a written procedure that's very detailed, but you have to show that that procedure works, okay, so qualify the procedure. So they said "unsatisfactory", and the footnote explains that, while there is a procedure, but Vermont Gas hasn't officially adopted it yet, so it's not a Vermont Gas procedure. So they wanted to see the official adoption.

Then B is a slightly different question, Are there records to qualify the procedures? So A asked if you had a qualified procedure, and then B goes a step further and says, okay, where are the records that document that your qualification of this procedure was done properly? You know, so some test x-rays perhaps with weld defects in them so that you could see the defect and know that the procedure worked.

So Footnote 10 says, I'm still waiting on the records. So my, my assumption in this case would be that TEAM NDT was the, the party that needed to provide the records to show that the procedure was qualified, and the inspector is just noting that, hey, I still haven't gotten those records from TEAM as of that date.

Q. Here on .pdf 9 is more information about what you've been discussing. It looks like October 2nd 2014 addresses the same subject.

A. Right. And that's consistent with what I was trying to explain earlier, and they refer to ASME. The, the pipeline safety regulations let you qualify welding under an ASME code or the API code. So they're obviously following the ASME code here.

Q. Here we are. I moved this, the document to Page 10, "Construction Requirements", and the regulation is .303. The question is, "Are comprehensive written

construction specifications available and adhered to?", and the check box was "Unsatisfactory".

A. Right.

Q. Further down, "When pipe is placed in the ditch, is it installed so as to fit the ditch, minimize stresses and protect the pipe coating from damage?", and the check box was "Unsatisfactory".

A. That's right.

Q. Below that it says, "Does backfill provide firm support under the pipe, and is the ditch backfilled in a manner that prevents damage to the pipe and coating from equipment or the backfill materials?", and that was checked "Unsatisfactory".

A. That's correct, yes.

Q. I'll wait until it catches up. Going down, it says, "Is there 12 inches clearance between the pipeline and any other underground structure? If 12 inches cannot be attained, are adequate provisions made to protect the pipeline from damage that could result from the proximity of the other structure?", and that was "Unsatisfactory".

A. That's correct, yes.

Q. Then I tried to scroll down so that you could see the comments.

A. Um-hum. Right. So the comment on 10/15/14 where

they say, Observed pipe at Station 198 being forced into ditch. Chief pipeline inspector's finding, after meeting with the contractor, a section was cut out and replaced with a field bend.

So, so the point there is, you know, we talked about width of ditch earlier today, and, you know, in this case, obviously, the pipe was bending at a certain diameter, and, you know, it was being forced into the ditch, and that's against the rule. The ditch has to be, has to fit the pipe and vice versa. You know, so, so the inspector noted, hey, you're squeezing the pipe into this ditch, you know, around some kind of bend, and you need to fix that.

So they cut it out and bent the pipe. You know, field pipe bending is actually a thing, right? They, it's a service that companies provide. So they bend the pipe to the right diameter, then put it in the ditch, and that time it worked fine. So the field inspector noticed that.

Q. The field inspector for APS or for VGS?

A. Well, in this case, it was a PHMSA or a state inspector report. So the state inspector noticed it.

Q. Turn to .pdf Page 11. Let's see here. Testing records. I'm sorry I'm moving around. I want to show you the top of the page first. You see it says

"Testing Requirements"? And I'll move down the page a little bit. What do you see on this page that's relevant?

A. Mostly, they're talking about the issues with documentation of the pressure test, and I don't, I don't see Footnote 13. So I see the comments here, and this, this seems to be for pressure testing that was done of horizontally directionally drilled pipe. So, so, but my opinion of that particular decision, see, they're saying they didn't have these detailed documents that back up the pressure tests for those HDD pipes, and, you know, ideally, you would document that just as completely as you would a code test.

But I, my assumption here, and this is a pretty decent assumption, I think, is that these weren't code-compliant tests, they weren't intended to be. So that the point is, when you do a horizontal directional drill, you're going to weld together a long segment of pipe, maybe thousands of feet. Then you, you drill the, the directional drill, you know, the hole for the well bore, and then, and then you pull the pipe through it, and that's, then you tie it off on each end.

Well, and, eventually, you're going to pressure test the entire pipeline system, and that's your code-compliant pressure test. That includes the

directional drill. But people learned early on that, hey, I don't want to have a failure in a directional drill during a pressure test to cost me a fortune to go back and replace it. I can't fix it after it's been pulled through, so we should pressure test these things before we pull them through, and, and, that way, you know, or at least you're fairly confident, that that section of pipe is going to pass your code-compliant test.

So this is really, from what I can read on the form, more of a pretest that the operator was doing for those sections of pipe, the HDD sections, so that they could be fairly confident that it would pass the final code-compliant test. So, clearly, when they did those pretests -- that's my word, not theirs -- but, when they did the pretests, they didn't keep all the documentation that they would normally you're required to have for a code-compliant test. You know, so, if I, I probably would have argued with the inspector over that if I had been on site, but that's, that's the way I read it.

Q. Turn to .pdf 13 on this exhibit. Do you see that?

A. Yes, Attachment 1, but I'll start by saying this whole section is nonapplicable, because they were not using an alternative MAOP, so this attachment is

specifically for pipes that are using an alternative MAOP, so it didn't apply to ANGP.
Q. Well, let's look at that. Do you see the comments at the bottom?
A. I can't see the bottom.
Q. It will show up in a minute.
A. Okay.
Q. The comment is, "Vermont Gas has not provided the QA, slash, QC data to substantiate pipe inspection conducted at pipe and coating mills".
Did I read that correctly?
A. Yes.
Q. That's really, really, really important, isn't it?
A. I have no idea why an inspector would put a comment like that on a form that doesn't apply to that pipeline. The whole form is checked "NC" for not checked, which is appropriate, because you wouldn't check something that doesn't apply to this pipe. So how he came up with that comment down there, I don't know. Maybe he should have just put the comment somewhere else. But I do believe there's a lot of documentation in the file where that data was later provided. I don't remember the exact reason why.
Q. This report was the end-of-the-year report for 2014, correct?

A. Yes.
Q. And, as of the date it was written at the end of the year, Vermont Gas had not provided QA/QC data to substantiate pipe inspection conducted at pipe and coating mills, right?
A. That's what it says.
Q. That's really, really, really important, isn't it?
A. Well, that applies to pipe that's using an alternative maximum allowable operating pressure. So what do I mean when I say maximum allowable operating pressure? So, under the normal gas piping code, the regulations, I can operate a pipe up to 72 percent of SMYS, the specified minimum yield strength. So it's a percentage of the ultimate yield strength of the pipe, but, if I get an alternative MAOP and I have a special section of the code to go to for that, then I can operate up to 80 percent, about 10 percent higher.
Well, we wouldn't bother with doing all of that for a 40-mile pipe. It, there's not enough steel involved to make a difference. If I was building a 3,000-mile-long pipe or a $3 billion pipe, 10 percent makes a huge difference, because I buy steel by the pound, okay? So, so large transcontinental kind of transmission systems will, will go through all the hassles to comply with alternative MAOP requirements,

and that goes all the way back to the steel mill, okay?

So here they're saying, hey, you don't have QA/QC data to substantiate the pipe inspection at the pipe mill and at the coating mill. Well, you have to do that to get an MAOP, alternative MAOP, but you don't have to do that for a pipeline like the ANGP. You know, you can trust that the steel is, is what the manufacturer said it was.

You know, so, I, I think the comment is irrelevant and inappropriate. You know, I haven't talked to the inspector, so maybe he's thinking something different than I am, but -- on the largest pipeline systems, you know, companies will send people to Korea. They'll send people to India and actually inspect the QA/QC data for that steel mill, for the pipe mill. You know, it's a totally different level of inspection for those specific types of pipelines.

Q. So sorry I'm moving around here. So on the next page, sorry, the bottom of the page -- hopefully, now we're at the bottom of the page.

A. Right.

Q. There it is. Sorry. 192.328, Quality Assurance, under the heading of "Additional Construction Requirements for Pipe Using Alternative MAOP", and "NC" meaning what?

A. Not checked. Again, they just weren't using an alternative MAOP, so this section of the form is irrelevant.
Q. So, if we turn to the next page where I've now gone, Page 14, the comments -- wait until they show up on your screen. There we go. The comments are, quote, "Vermont Gas has not provided QA/QC program details, period". And your criticism of that is the same as the criticism on the earlier page?
A. They didn't need to is, is my response. So I guess my, my quibble with the, the way that form was filled out is they, they shouldn't have just checked NC. They should have checked NA. It's just not applicable.
Q. But, if your interpretation is correct, then their comments don't make any sense?
A. That's correct. So I think they made two mistakes on the form. Well, they didn't make a mistake by checking NC. I mean, they're admitting they didn't check it, but they didn't fill out the part that says NA. Because, I mean, this pipe, it's almost the opposite of a pipe that is trying to get an alternative MAOP. An alternative MAOP means I want to run at a higher stress level than you let a normal pipe operate at.

And ANGP did the exact opposite of that. They said, we're going to build it to Class 3 everywhere, no matter what stress level you'd let me operate at. So most of it you'd let me operate at 72 percent, but I'm only going to operate at 50 percent. So, so, yeah, it, it's not only irrelevant, it's, like, doubly irrelevant.

Q. So you, you take the position that, because this wasn't a large enough pipeline, there was no need to provide quality assurance or QC documentation from the mill that manufactured the pipe? That's what you're saying, correct?

A. I don't think you heard me correctly.

Q. Okay.

A. Yeah. So what I'm saying is there are a number of extra requirements that apply to pipelines that want to use an alternative MAOP, okay? So that's, you know, the platinum standard, if you will, of quality control to get PHMSA's approval to operate at 80 percent of your yield stress, you know, 10 percent or more higher than the normal limit, okay? So, if you want to operate at this higher level, we've got some extra special requirements for you, okay? So ANGP didn't do that, so they don't have those extra special requirements that only apply when you're trying to get

an alternative MAOP, okay?

Now, my part about expensive long pipelines is more, more commentary that nobody does that for small pipelines because there's just not enough money at stake for the hassle. You know, there's only enough money at stake when you're building a really long, really expensive pipeline and that extra 10 percent makes a difference. So that's --

Q. Perhaps, perhaps I didn't ask my question carefully, and I'm sure that's true. Is it your testimony that, if a pipeline construction company or a pipeline operator is not using the alternative operating pressure, that the operator is just using standard operating pressure, is it your testimony that there is no need to obtain QC documentation from the mill?

A. Well, I'm saying the specific questions that are asked on that form don't apply. I'm not saying you don't need any QA or QC documentation from the mill, but you don't have to do it the way you would have to do it as asked on this form.

Q. So aren't you really saying the inspector used the wrong form, but what he wrote is very clear; there is no QA/QC documentation from the mill, right?

A. Well, he's answering questions on that form. He's

not answering questions on the general PHMSA inspection form. I mean, you know, the form includes the general PHMSA inspection questions, and he answered those. These questions are specific to the QA/QC process required for an alternative MAOP, and he's saying I haven't seen that. Well, surprise, you didn't need it.

Q. The standard, the comment says, We haven't received QA/QC documents from the mill or that VGS doesn't have QA/QC documents --

A. Right.

Q. -- from the mill. That's a very broad and clear statement. It's not saying we lack the QA/QC for the alternative operating pressure. It's we don't have the QA/QC documents from the mill, right?

A. When he puts it on the form in the section that deals with alternative MAOPs, I assume he's commenting on alternative MAOP requirements. Otherwise, he'd put it in the normal inspection form, and he didn't do that.

Q. But you just told us that this is not an MAOP pipeline, right?

A. That's why that part of the form is irrelevant.

Q. So doesn't it make -- isn't it obvious to you that he just used the wrong form when writing down the relevant information?

A. No, that's not obvious to me at all. I think he was trying to answer questions that are irrelevant, you know, and, otherwise, he wouldn't write it down under that section.

Q. Okay. Let's go to .pdf 15. Now, you've seen this, these pages before, right?

A. Yes, I have.

Q. And these pages go on four or five, six of these pages. Can you describe what Attachment A consists of?

A. So it's a, it's a listing of various pipeline construction issues that the inspector found during 2014, and the first one is, in my opinion, probably the most significant and potentially serious where he's saying VGS, you know, VG Systems, Inc., failed to qualify welding procedure, quote, "16X-65 butt weld", close quote, in accordance with the written procedure specification.

And then it goes on to give the details. The record indicates an electrode E6010 was used in the root pass only, while the welding procedure specification requires E6010 electrode in both the root pass and the hot pass, okay? So this is a very detailed finding here, going down to the specific type of welding rod that was used in different layers of the weld.

So, when you're welding a pipe like the ANGP, you don't just go around one time and have it welded together. Each weld lays down a little bit more metal, and then you go around again, and then you go around again, and you go around again. It's kind of like filling something up with the layers of glue, and you let the glue dry and you do it again and again. That's kind of how you build out the entire weld.

So there will be multiple passes, and the very first pass you make is the root pass, okay? So that's where you have, I have pieces of metal that are adjacent to each other, but they're not welded at all, and I've got a bevel so I can get to the bottom of the metal where they're joined together, and I do the very first weld, and that's a root pass, okay?

So they, they spelled out root pass electrode E6010, and one procedure said you use that for the root pass only, but then another procedure said you can use it for the root pass and the hot passes, the additional layers. So can you use that electrode for both or only for one? And, and this really points to the fact that, you know, PHMSA inspectors, I mean, they were digging pretty deep to find that, but I agree, hey, you know, you have to follow your welding procedure verbatim, I mean, to the letter, and, if you don't, they will find

a violation, and they may cause you to cut out the welds and do it over again.

So the status -- well, they said violation, yes, and I agree that that was a violation. And the status was the company requalified the procedures, okay? So, so what the resolution here was, they didn't have to change the process. They just qualified the way they did it to show that it was okay. So it was okay to do E6010 electrodes for the whole weld, not just for the root pass. You know, so you had to prove that to the, to the PHMSA inspector, and they did, and then they, you know, then their procedure conformed with what they were actually doing in the field.

Q. Thank you. So why don't we scroll down to -- I don't want to rush you through this, but I think it's fair to say that the next page is, there are many entries similar to what you've described where procedures were questioned, and then they were requalified.

A. Right.

Q. I'll stop a couple of places here so you can see that.

A. Yes, I remember there were several specific issues with the, with welding.

Q. And then we get to some on .pdf Page 17 which were

not resolved, and I'm going to try and get the page in the right spot there. Okay. This is .pdf 17, Issue Number 9.

A. Okay. Yes, I remember this one.

Q. So this was unresolved as of the date of the year-end report?

A. Right.

Q. Would you describe what the issue was and how it was unresolved?

A. Well, so, in this case, it was a, a specific circumstance that occurred at one point in time, and it's unresolved, because you can't unring a bell. I mean, that's basically the way I read unresolved. It's like, I can't undo what happened.

So what happened there is there, because the welding process is so important, their requirement was that you don't weld without a welding inspector present so they can ensure that, you know, for example, like we were just discussing, you're using the right kind of electrode. You know, you can't tell what kind of electrode they used after they weld. You can only know that while they're welding.

So, you know, so they checked that and a million other things. So there was a tie-in weld that was being made, and there was no inspector present. So, at

the bottom of the paragraph there as to why no inspection staff was present, and she advised me that the contractor had been ordered to stop work and had disregarded the order, okay?

So somebody -- I don't know if it was VGS or somebody else -- had told them, look, we're not ready to inspect this. We're not ready to do this. Don't weld it, and the welder did it anyway without an inspector present, and, and they got caught. So, like I said, you can't unring a bell. I mean, that's why I assume it's shown as unresolved.

Q. Okay. Thank you. I'm going to move down a little bit on the page, same page. Issue Number 10, "Compliance with specifications or standards, 9/19/2014".

A. Right.

Q. Can you describe this one?

A. As I was talking about the backfilling requirements, and it says on, at the very bottom, "On said date, in a pipeline ditch which traversed an abandoned sanitary landfill, numerous articles of plastic, metal, and glass were observed in the backfill material in the ditch".

Okay. So this goes to the word "clean". When we talk about clean sand or, you know, you know, select

backfill, it's not supposed to have junk in it, and the inspector in this case is saying, hey, I, I observed a place where the pipeline had been installed across an abandoned sanitary landfill, and I saw a bunch of junk in the backfill. I mean, that's essentially what it's saying.

Q. And it was unresolved by the end of the year, correct?

A. Yeah, they showed that as unresolved. I do know that VGS went back later and did some test digs, and, certainly, there's a bunch of junk in the area, but in the pipeline trench they didn't see any. So, so I don't know what the inspector was expecting on that, at that point in time to show that as resolved, and --

Q. Sorry. Go ahead.

A. Yeah. I was going to say, in my mind, it's a pretty minor issue. You know, you shouldn't have junk in your backfill, yeah.

Q. Turn to .pdf Page 18, Issue Number 11, Nondestructive Testing Procedures, 9/24/14.

A. Um-hum.

Q. This is the same issue that -- I'm sorry. This is a different issue than you've discussed, isn't it?

A. Well, it looks like it's maybe the same issue that we talked about at the very start about the NDT

procedures. It looks like an NDT procedure finding, and let me just read in the middle:

"On 9/24/2014 VGS representative Kristy Oxholm presented the following response to our request: Quote, 'All nondestructive examinations, NDE, will be provided by a third-party company. Personnel will be qualified and certified to the American Society of Nondestructive Testing Procedures, ASNT SNT-TCIA or ASNT C9. Examinations will be performed in conformance with the VOS NDT specification" -- I assume that should say VGS -- "and using procedures approved by a certified ASNT Corporate Level 3".

So that was VGS's position at the time, and the inspector disagrees with that, says, "It is the exclusive responsibility of the operators, capitalized, of pipelines to conform to the requirements of the pipeline safety regulations embedded in 49 CFR 192. The above statement does not constitute a procedure".

And I agree with it. It's like you can't say that my procedure is to depend on somebody else's procedure, and that's essentially what VGS said is like, well, our procedure is we're hiring people that have procedures, and they're going to comply. You know, as the inspector noted, it's like, it's not that easy. You need to have your own procedures.

Now, you might adopt their procedures, which may be what they did. I don't know. You know, that's fine. But you, you can't just depend on your contractors to have adequate procedures. It's the operator's responsibility to ensure people have adequate procedures.

Q. And, by the end of year, this remained unresolved, correct?

A. That's what it shows, yes.

Q. Did VGS ever obtain the missing procedures, obtain them and share them with the Department?

A. Yeah. I don't have any recollection of that, but I don't remember seeing this issue in the, in subsequent inspections, so I assume the answer to that question is "yes".

Q. Move down to the second half of the page. Issue 12, Pipeline Construction QA/QC, is this the issue we were discussing earlier about awaiting QA/QC documentation?

A. No, I don't think so. The issue we were discussing earlier was where he was filling out QA/QC documentation on a portion of the form that I believe is irrelevant. This seems to be referring to 110 identified anomalies by the materials manager on site, and, you know, that's not very specific about who found

what, but my assumption would be that's referring to coating anomalies that were found at the pipe storage yard, because I have seen other notices of that kind of thing.

So, you know, so the, the comment is, "I've not received the QC findings from the mill inspections". So the, so what I'm assuming this means -- and, again, I'm reading between the lines quite a bit, because it doesn't have a lot of backup here. You know, they're saying, hey, you found 110 places where the pipe mill or the coating mill, in this case, didn't, you know, didn't correctly repair the coating on the pipe they shipped to you, okay?

So, well, shame on them, good for VGS to find 110 locations that, that weren't repaired correctly, but, but, obviously, the inspector is saying, hey, you need to go back to the mill and, and get their QC records. You know, how come they didn't find this and you found it? So it's more of a manufacturing quality control process, I think, where the inspector is saying, look, you know, it's good to find the problem, but, you know, how come the pipe mill or the coating mill had the problem to begin with? So go back, and let's try to solve the root cause of the problem, not try to fix it once it shows up on our site. I think that's what

they're saying on Item 12.
Q. So, as of the end of the year, the company had requested from the mill the QA/QC documentation and had not received it, correct?
A. That's what it looks like to me, yes.
Q. And this is pipeline that had already been buried in the trench and covered up?
A. Again, this is kind of a root cause analysis, you know, let's keep this problem from happening in the future. I don't see it as a, as something that tells you the current pipe is unsafe or, or noncompliant. It's just that, you know, if I'm on an assembly line and a number of the parts that I need to assemble are defective when they come to me, well, I can throw out the defective parts and keep going, but somebody needs to ask the question, How come defective parts are coming to me down the assembly line?

So, as long as I'm catching the defective parts and not putting them in the final product, you know, the final product's okay, but, you know, somebody needs to go back upstream in this process and go, How come I'm getting defective parts to begin with? So that seems to be what's happened here. It doesn't imply that the pipe that was buried is noncompliant in any way.

Q. Okay. The next one is Issue Number 13, Pipeline construction, installation of pipe in ditch. That's the incident you've already told us about --
A. Right.
Q. -- with someone forcing, a contractor forcing the pipe into the ditch?
A. Right.
Q. And that pipe was cut out, or that part of the pipe was cut out and replaced, correct?
A. Yeah, with a, with a field bend. So they, they permanently bent the pipe and then reinstalled it in a way that actually fit the ditch.
Q. Next issue, Number 14, welding, why don't you just describe that very briefly?
A. Let's see. "Observed fabrication of pig launcher piping consisting of Grade BX42 pipe being welded with welding procedure 16X65 butt weld".

Okay. So, so this, again, points to the, to the level of detail involved in a welding procedure. So, so, even though they look the same, you know, to the naked eye, X42 pipe has a 42,000-pound yield strength, and X65 pipe has a 65,000-pound yield strength, and the procedure to weld what appears to be identical pipe may actually be different to weld the X42 as opposed to the X65.

Now, I would, you know, as a nonexpert welding engineer knowing enough, you know, knowing more than the average person about welding, you know, I would assume the issue was really more the opposite, right? If I had an X42 welding procedure and I used it on X65 pipe, it's like, oh, that weld might not be strong enough. If I'm using an X65 procedure and using it to weld X42, pipe that's probably fine, maybe overspecified.

But, nevertheless, you know, your procedure is specific to the type of pipe that you're welding, and it's going to have a pretty narrow band of this procedure's good for X60 to X70, or this is good for X30 to X45, or whatever, and they were welding using a procedure that wasn't qualified for that strength of pipe, and so, again, they went back, and they requalified the procedure.

Q. Thank you.

A. Yeah.

Q. On Page 19, which is the last page, and I'm going to participate a little bit interactively in the question here. Issue Number 15, procedure, slash, support, November 3rd 2014, quote, "Observed installation of pipe in ditch at Station 120 plus 00 in area where shot rock in ditch, comma, supported by

sandbags spaced between 23 feet and 35 feet on center, period".

So am I correct that they observed a pipe in an area where there was shot rock in the ditch supported by sandbags that were 23 to 35 feet apart?

A. That's correct.

Q. That's a long distance between sandbags, isn't it?

A. Actually, I think elsewhere in my report I deal with the unsupported span calculations for this pipe, and this pipe being a 65,000-pound yield strength, relatively thick for its diameter. You know, I, I think I used a couple different methods to say, What's the unsupported span, acceptable unsupported span distance, and it was well in excess of these distances.

So it wasn't really a safety problem for an unsupported span, because the pipe can handle that. The, the problem was that it was in excess of what their specification said they were going to have. So you see the resolution, the contractor went back and put sandbags at 16 feet, and then they rewrote their procedure for pipe support.

I'm not sure exactly what changed in the pipe support procedure there, but this is more an issue of noncompliance with the procedure at the time that this was done as opposed to a safety problem where the pipe

was strung too far apart between supports.
Q. So, Mr. Byrd, if the pipeline specifications and training had specified compliance with our exhibit, Cross Exhibit 11B, which is Mr. Heintz's drawings that he submitted to the Commission, which required at least six inches of sand beneath the pipe if it was on earth and at least nine inches of sand beneath the pipe if it were on ledge, we wouldn't have to worry about how far apart the sandbags are, would we?
A. Well, if I'm following what you're saying, you're just describing two different construction techniques. So this, this observation here on the inspection report doesn't say anything. It quotes the specification, which does talk about, you know, nine inches and things like that, but, but the finding here wasn't, didn't have to do with the elevation of the pipe above the bottom of the ditch. It, it, my assumption would be the elevation was fine, because he didn't cite that. All he cited was the spacing between the sandbags.
So I've explained earlier, you know, there are a couple of different ways to provide the bedding around the pipe, and the most common way in the transmission pipeline industry is you support it above the bottom of the ditch with sandbags, as they're describing here, and then you put the select fill and let it go

underneath as well as on the sides and on top of the pipe.

So, so they didn't, they didn't raise any issues with the actual distance between the bottom of the pipe and the bottom of the ditch. They just raised issue with, hey, your supports are too far apart. You're supposed to have them closer together. They went back and put them closer together.

Q. I'm sure I asked a poorly worded question, so I'll try and ask a better one. Exhibit 11B, the drawings that, the typical trench detail that Mr. Heintz submitted to the Commission, didn't say anything about sandbags. It said the pipe will rest on six to nine inches of sand, correct? That's a yes-or-no question if you can handle it.

A. Well, I would prefer to see the exact exhibit, because I don't remember the details of that exhibit and what else it might have said. So I don't want to be tied into a yes-or-no answer where sandbags might have been somewhere else that you didn't talk about.

Q. All right. We'll get Exhibit 11B up on the screen here again. Jumping around here. There we go. Do you see Exhibit 11B, .pdf Page 4 of 9?

A. Yes. Yeah. So, so Item 5 there, the typical trench detail, I mean, that, that is specific to roads.

I mean, it's, it's clearly a trench for roads, whether they're paved or unpaved. It talks about the crushed stone and gravel sub-base, "See pavement section". So this, in my mind, this particular image you're showing me here isn't a general trench detail. It's a road crossing trench detail.

Q. Mr. Byrd, it says "Typical Trench Detail", does it not?

A. I'm also looking at the road surface in the detail. I mean, you know, I'm just -- all these titles don't necessarily go on for six paragraphs to tell you every single thing they might apply to or not apply to. I'm just seeing typical trench detail. By the way, these are the road details.

Q. Well, we'll start with this exhibit. Does it say anything about using sandbags?

A. I don't see the word "sandbag" on that part, but I think I saw lots of sandbags in some of the other diagrams as you were scrolling around.

Q. This example for erosion control trench breakers?

A. Well, I didn't get a chance to actually examine all of that, although I think these are the EPSC, you know, diagrams. So EPSC stands for erosion prevention and sedimentation control. So the focus of these diagrams would be, How do I prevent erosion and how to

prevent sedimentation, you know, from, you know, muddy water getting off site and stuff like that. So you'd see lots of detail around, you know, sandbags for stream crossings and that kind of thing. You know, I'm not sure the point of this set of diagrams was even intended to give you a lot of detail about the trench itself.

Q. Mr. Byrd, typical trench detail Item 5 has nothing to do with EPSC, does it?

A. I think these are the EPSC diagrams we're looking at. If you'd scroll down a little bit, maybe it will show.

Q. Right. It says "Construction Details - Vermont Gas Proposed 12-inch Pipeline".

A. Yeah. So this is ANGP. If you see the drawing number on the bottom right-hand side, some of them say ANGP. Some of them say EPSC. So, yeah, so this is the ANGP diagram, not just the erosion prevention sedimentation control.

Q. And you if look at -- okay. Detail Number 4, permanent trench break spacing guideline, that typical drawing does use the word "sandbags", right?

A. Well, let me read this. Yeah, trench breaker, sandbags. Yeah. So, I mean, that's how a trench breakers are typically done is you build a sandbag wall

across the trench.
Q. And, if we return back to typical trench detail, which is Number 5, there's no mention of sandbags. It says, sand fill 6 inch under the pipe and 12 inches over it, right?
A. Right. But in this diagram you would presume that the pipe magically floats in the air until I backfill it, and it doesn't do that. I mean, something has to put the pipe six or nine inches higher than the bottom of the trench so I can backfill it, and that happens to be sandbags. They just didn't call out that detail in this diagram, but I don't see that as an issue at all.
Q. Are you testifying that it is not a common procedure to put the padding down first and lay the pipe on top of it?
A. Not for transmission pipeline like this, no, it's not.
Q. Why not like this?
A. Okay. I thought I explained that pretty clearly this morning, but I'll try again. Okay. So, so it's common to -- you excavate the trench. You're welding the pipe together outside the trench, you know, so, when you're excavating the trench, you put the spoil on one side of the ditch, the spoil side, and the other side of the ditch is where you're putting your, you're

stringing your pipe together and all of your joints of pipe and you're welding them together, and now you have an above-ground pipe that's all welded together, and now it's going to become a below-ground pipe when you lift it up and you stick it in the ditch.

And, when they do that, they put, you know, various locations, maybe too far apart, 16 feet, 20 feet, whatever, they've got sandbag supports, and then you lay the pipe in the ditch on top of the sandbags, and, in my opinion, that, that is a better way to guarantee that you've got the proper amount of clearance between the pipe and the bottom of the ditch, because I can measure with a ruler before I ever start backfilling exactly how high it is.

So that's the common technique in the industry. It is not the alternative that you're suggesting is I excavate the ditch, I put six inches of padding down, and then I put my pipe on top of the padding, then I fill around it. Now, that is common for bell-and-spigot pipe. You know, it's common for pipe that doesn't have a lot of strength in and of itself that I can't support every 15 or 20 or 30 feet with sandbags. You know, so water pipelines and things like that, you've got to lay them on a prepared bed. You don't have to do that with this kind of pipe, and,

typically, within the industry it's not done that way.
Q. I want to ask you to listen to my question a little more carefully. I didn't ask you whether laying it on a pipe on a bed of sand is the only way to do it. I didn't ask you whether it's the most common way. I only asked you whether it is a common way.
Is laying the pipe directly on a bed of sand a common way of laying a transmission pipe into a trench?
A. I would say it's an uncommon way.
Q. And, whether you view it as common or uncommon, isn't that what typical trench detail exhibit number, Diagram Number 5 on Exhibit 11B shows?
A. With all due respect, Mr. Dumont, that is what an untrained person might assume, but that is not what anybody in the transmission pipeline industry would assume when they look at that diagram. That's my professional opinion, and I'm sticking with it.
Q. Why don't we turn to our cross exhibit -- I'm sorry. It's not a cross exhibit. It's an exhibit to Mr. Liebert's prefiled testimony. It starts at Page 193 of his prefiled rebuttal testimony. Excuse me. Scroll this down a little bit so you can get the date here. Are you familiar with this document called "Pipeline Integrity Management - a Report to the Secretary of Transportation"?

A. It's not one that I'm very familiar with, no.
Q. Where have you seen it before? Where have you run into it before?
A. Well, I've certainly seen it in the documents you produced. This, as I recall, is a report that was commissioned by PHMSA, you know, to PHMSA. You know, if you'd scroll up a little bit so I can see the whole title here. So I'm familiar with the issue.

Okay. So the report to the Secretary of Transportation, and let's see. What's the date of this report? Could you refresh my memory? 2013? Okay. So seven years ago. So, if you scroll back up a little bit, the focus of this report is the words "performance-based", okay? So an evaluation to help improve PHMSA's oversight of performance-based pipeline safety programs.

And, and, when they use the word or the phrase "performance-based", that's as an alternative to prescriptive, and the PHMSA regulations are both, okay? So there are numerous places in the PHMSA regulations where they spell out a very specific thing. You have to do your cathodic protection readings every year. You have to inspect your rectifier 6 times a month, or 6 times a year, not to exceed 2.5 months between inspections. You have to inspect your right-of-way at

a certain frequency. So there are very clear expectations, and it's easy for an auditor to say they did it or they didn't do it, right? Do I see the inspections, or are they properly spaced in time? Okay. Then they met that requirement.

Integrity management, even though there are prescriptive parts to it, it's a much more performance-based. You know, the operator has to do a risk assessment. Well, they don't tell operators how to do a risk assessment. You know, they, they say these are the factors you have to consider when you perform a risk assessment, but they say you have to do a risk assessment. You have to do a risk prioritization of your pipeline segments. You have to do a threat identification process.

So, you know, so there are all these things that are very pretty high-level from a management system standpoint that PHMSA regulations require operators to do. Well, it makes the inspectors's life very difficult, because, you know, operators like performance-based stuff, because it gives them a lot of latitude to do things differently, you know, as appropriate to their situation.

But inspectors generally don't like it, because it's like, well, where, where is the bar, right? What,

what exactly do I have to require somebody to do, and how do I know that they did it correctly? And it requires a lot more expertise for an auditor to evaluate a performance-based system like integrity management.

So this report was to help inform PHMSA about how to do that better. You know, how do you train, how do you qualify your inspectors? Because, I mean, there was, at this point in time, there was a lot of back-and-forth between PHMSA and the pipeline industry, because, you know, the pipeline industry felt a lot of inspectors were missing the point, you know, and they were trying to create expectations that didn't exist, or they were focusing on insignificant issues and not really looking at the big picture, and so this report was to help improve PHMSA's oversight of the performance-based stuff. You know, because, at the end of the day, they have to audit these programs, and they need to figure out a way to do it effectively. So that's, that's my understanding of this report and why it was generated.

Q. And you agree this is, was paid for by the US Secretary of Transportation and filed with PHMSA?

A. It, it looks like it. I don't know the details.

Q. It's on PHMSA's website.

A. I'm not surprised. I don't know who paid for it.
Q. But you saw it before I produced it as an exhibit, correct?
A. I'm sure I, I'm sure I have seen it. I mean, I typically would see this kind of thing as it's generated, but it wasn't written for me. It wasn't written for consultants. It's not the kind of thing that I would -- you know, it wasn't actually written for the pipeline industry. It was written for PHMSA to help them do a better job with their audits. So it's not the kind of report that I would spend a lot of time on.
Q. If it's written for PHMSA, do you believe it would be a reliable source of information about pipeline safety for the Vermont Public Utility Commission?
A. Well, I mean, I, I'm sure that you can find a roomful of experts that will disagree with different parts of this report. I mean, it is what it is. It's a report to PHMSA for a specific purpose as of that point in time. You know, so, I mean, I, I don't grant it any authority other than that.
HEARING OFFICER TOUSLEY: Mr. Byrd, just a quick question if I can interject. Did, in the construction of the ANGP, was a performance-based pipeline safety program used?

MR. BYRD: That's a, that's a pretty high-level question. A performance-based pipeline safety program? I would say, generally, the answer to that is "yes". Now, did they have a manual that says, This is my performance-based pipeline safety program? I don't recall seeing anything like that. But they did have management systems that they were using, and they, you know, went through, you know, kind of the standard processes that you would do to say, What did we do? How well did it work? What adjustments do we need to make, you know, based off of their learnings, based off of problems that they had during construction, and that's, you know, generally speaking, the performance-based safety management system thing that I would expect them to have.

So I would answer your question, functionally, I think, yes. You know, did they have a manual to point to? I don't remember one.

HEARING OFFICER TOUSLEY: Okay, thank you.

MR. BYRD: Did that answer your question correctly?

HEARING OFFICER TOUSLEY: Yes, it did. Thank you.

ATTORNEY DUMONT: Thank you. Mr. Tousley, since this was an exhibit to Mr. Liebert's testimony

and his testimony and exhibits were stipulated as not being objected to, it's actually an exhibit already, but I felt I should still try and lay that foundation.
BY ATTORNEY DUMONT:
Q. If you could turn to -- I'm going to turn to .pdf 196.
A. Now go ahead. Yeah, sorry.
Q. This is Page Number 1 of the report.
A. Okay. The part about scope, objectives, and methodology?
Q. Just above that, the paragraph above that, I'm going to read it to you and see if you agree:
"Pipelines have been a comparatively safe mode of transportation over the last several decades, comma, with relatively few deaths and injuries while transporting extremely large quantities of energy products across the country, period".
Do you agree with that?
A. I do.
Q. "Nevertheless, comma, they present a substantial threat of low-probability, comma, high-consequence accidents with very high public concern when these accidents occur". Do you agree with that?
A. I do.
Q. Great.

A. I think the bottom of the page really speaks to the purpose of the report. They say the evaluation was planned initially in 2006, but they only finished the report in 2013. So seven years to do a report of this type seems exceptionally long, but they, they started thinking about how to do this better in 2006, but they mention specifically the San Bruno incident.

And, for those who aren't in the pipeline industry and don't live outside of San Francisco, maybe you're not familiar, but San Bruno is a suburb of San Francisco, basically between San Francisco and the San Francisco Airport, and a pipeline ruptured there, a 50-plus-year-old pipeline, large diameter gas transmission in the middle of a neighborhood and burned down 30-something houses, killed, you know, a dozen or so people. I forget all the exact numbers.

A tragic, tragic pipeline incident, and that pipe was in an integrity management program, and PHMSA had been, or the state, in this case, the California Public Utility Commission, had been inspecting that operator and that pipe, which was part of an integrity management program.

So, so, obviously, the question of, hey, is your oversight of integrity management programs effective? You know, how can you have an operator that has an

integrity management program and you inspect that integrity management program, and yet you still have this tragic incident? You know, why did you not see this coming?

So, so that, you know, from, from my reading of this is what really kicked off this report again, and then they finalized it, Here's how you can do a better job inspecting these integrity management programs that are performance-based. So that's the rest of the context on that report.

Q. Now, turning to .pdf 220, middle of the page --

A. Right.

Q. -- chart, the name of the chart is "Gas Transmission Pipeline Incidents".

A. Right.

Q. And then the text to the left of it states, "Gas transmission pipeline incidents were rising at a rate of about 3 percent per year before IM implementation, and the total number of reported incidents has increased even more after IM implementation. In fact, every year since IM implementation in 2004 has been higher than any of the 18 years before IM. While the numbers and proportion of HCAs are relatively small, the patterns here appear to be increasing since 2004 as well".

Did I read that correctly?
A. Actually, you made a mistake in there. It's proportion in HCAs. I think you said proportion of HCAs. HCA in this context stands for high-consequence area. So those are the specific areas that the integrity management program rule applies to. So they're saying this is the trend for all pipelines, and, by the way, the trend is similar even inside the specific parts of the pipe or the environment that integrity management was intended to protect.
Q. Is there anything that I just read that you, as a pipeline safety expert, disagree with?
A. No. I, I have no doubt that those are facts. I'll add, you know, for, for context that these numbers aren't normalized by miles. So, so what they didn't say is, well, you've been building more than 3 percent per year of extra mileage too. So the actual trend isn't up per mile. It's flat or down a little bit, but that's not the point they wanted to make.
Q. If I turn to .pdf 223, which is Page Number 28 of the report --
A. Okay.
Q. -- there's a chart on the right that says "Hazardous Liquid Accidents Property Damage". Does that apply, or are we not -- no, I'm sorry. That's the

wrong chart. That's hazardous liquid accidents. I guess I want you to look at the part above that which has gas transmission pipelines, "Accidents, Incidents and Consequences". On the left it says "Hazardous Liquid". On the right it says "Gas Transmission". You see that?

A. That's right. So and the graph is property damage, right?

Q. Right.

A. So this is dollar values, yeah.

Q. And the text says "Property Damage: Incident reports show property damage overall rising substantially clearly in contrast to the expected reduction from IM". Did I read that one right?

A. Yeah. So, when you, when you look at the graph just above that statement on the right-hand side for gas transmission pipelines and HCAs for 2004 and 2012, you see it's virtually zero, and then you have one huge jump, which was San Bruno. I mean, you have a billion-dollar accident, and, all of a sudden, the cost for property damage goes through the roof.

You know, you could make of this what you will as far as, most of the time, it's almost nothing. Every now and then, you have a really huge, expensive one, and that's just the case, and you see the same thing on

the liquid side as well.
Q. Okay. The next page is Page Number 29, .pdf Number 224. On the bottom of the page, there is a chart "Accidents/Incidents and Consequences". On the left it's for hazardous liquid pipelines. On the right it's gas transmission pipelines, and then there are two rows beneath that. One is corrosion failure. One is material failure. And then there's text underneath it. I will read the text.

It says, "Corrosion and material failure, colon, the IM program concentrated most attention on two accident causes, dash, corrosion and material failure in HCAs, period. The program expected these incidents to go down, semicolon; instead, comma, they are rising for gas transmission pipelines, period. Data for liquid lines are inconclusive".

Next paragraph, "Corrosion and material failure are the two most frequent causes of incidents for both liquid and gas transmission pipelines".

Starting with did I read that correctly?
A. Yes, you did.
Q. And, as a pipeline safety expert, do you agree with what I just read?
A. I, I don't doubt their facts, yes, but I agree with that.

Q. Next page is .pdf 225, Page Number 30. There's more detail about gas transmission incidents due to corrosion and material failure. Why don't you take a second to look at that?

A. So this whole paragraph here? Yeah.

Q. Yes, that wraps around the two charts.

A. Right.

Q. Why don't you explain in your own words what it says here?

A. Well, so, I mean, the larger issue that I think they're trying to get at is, hey, if we've got this integrity management regulation and companies are spending billions of dollars, which they are, to comply with it, how come we're not seeing a much more dramatic decrease in the types of incidents that this program is intended to prevent?

And I think that's an excellent question, and, you know, we're still grappling with that. Is the, you know, program, you know, I mean, already, already at a level so low that you just can't do any better? I don't believe that. I think that, you know, you can do better, but we're already at a very low level, and you do see a trend going up.

Now, like I've mentioned earlier, these aren't normalized by mile. So, so we're also building a lot

more miles of pipe. The other thing that this doesn't give any, you know, doesn't recognize at all is there isn't data that starts in 1986, and the criteria to report an incident have changed significantly over that period of time. So they didn't normalize the data to say, well, yeah, but back in the day, we didn't even have to report that stuff.

So, you know, they didn't go back and say, well, using the 20, you know, 2016 or 2013 criteria, this is what would have been reported back then. They have no way of knowing that. All they know is what was reported back then, and the criteria were much more, less strict than they are now.

So, so, in one respect, I'm not surprised to see the trend go up, because the reporting criteria become more, more strict, but, that being said, even when you use the same reporting criteria for the past, you know, 10, 20 years, you know, there's an upward trend. It's offset by the upward trend in mileage, but the question remains, hey, how do we do better on these integrity management programs? And, and PHMSA was working on it then, and they're continuing to work on it now.

Q. The text states, "Corrosion and material failure are the most frequent causes of GT incidents, comma, accounting for 20 percent and 28 percent respectively

of all reported GT incidents since 2004".

GT means gas transmission, correct?

A. Yes. In this context, they're talking about gas transmission.

Q. And do you agree that corrosion and material failure are the most frequent causes?

A. Well, I'm not surprised. I mean, I don't remember, you know, I don't remember all the data since 2004, but, but they consistently show higher on the list. Now, now, what they're, what they're showing is here is all reportable incidents. They're not showing these are the tragic incidents, and these are the nontragic incidents. They're just showing what's a reportable incident.

So, in the, the liquid industry, and I know we're not talking about liquid pipelines, but in the liquid industry they've come up with some different definitions that they use for significant, serious. You know, I forget the other phrase. You know, trying to look, okay, what's the -- you know, the point of integrity management isn't to eliminate incidents. It's to eliminate tragic incidents, okay?

So, you know, I know lots of operators will tell you, look, I'd happily have ten spills inside my containment in my pipeline facility as opposed to one

big spill out on the right-of-way. Okay. So spills aren't all the same. Incidents in this situation aren't all the same.

So they didn't really parse, you know, what's, are you getting rid of the really important stuff? You know, this part of the report, anyway, doesn't really address that, and, and I would argue that that was the whole point of integrity management wasn't to eliminate all incidents. It was to get rid of the worst ones in the, quote, "high-consequence areas".

So we have shown in other analysis that, you know, incidents in high-consequence areas very rarely, like, 2 percent of the time actually affected that area. So you can argue that, well, at the end of the day, it's pretty effective. It doesn't show up in the numbers.

Q. The next sentence is, "The next highest causes are excavation damage and natural force damage, comma, both at 14 percent". Do you agree with that?

A. Well, again, I, I, I haven't checked their math, but I'm not surprised. And it's interesting. The last sentence, "The change in reporting might account for some increase here too", and that's all they say, you know, a little parenthetical statement saying, hey, well, some of this increase is probably because we report more stuff now, but they didn't attempt to

reconcile, and, you know, if I were putting on my cynical hat for just a second, I would say, well, they didn't intend to reconcile, because that would refute their point, but I don't know that for a fact.

Q. All right. Go to .pdf 229, which is report Page Number 34, the section on aging infrastructure, which states, "The infrastructure is aging, comma, but the data suggest that pipe 50 to 80 years old is just as, quote, 'safe', unquote, as pipe that is 10 to 50 years old, period. Newer pipe, parens, (zero to six years old) tends to present a greater rate of failure, comma, but there is not enough newer pipe to account for the increases", and then I ran off the bottom of the page. Next page, "for the increases in accidents".

A. Right.

Q. I'm now on the next Page 35, .pdf 230, "for the increase accidents, period. At about six years old, comma, the failure rate for newer pipe reaches the, quote, 'base rate', dash, the level we continue to see for pipe up to 80 years old".

Do you agree with what I just read?

A. Well, I, you know, there is, not just within the pipeline industry, but in all industries, when you look at failure rates by age of a component or a system, the system, a phenomenon they refer to as the bathtub

curve. So brand-new systems fail fairly frequently for a variety of reasons, and then you level out, and that's the bottom of the bathtub, and then, eventually, they reach the end of their life, and then you get to the other end of the bathtub where the failure rates go really high, okay?

So what they're saying here is, well, you know, once you get to the six years, you're kind of at the bottom of the bathtub curve, and, you know, there's, there's good news in that statement, which is, hey, we've learned how to effectively manage integrity of pipes, even when they're 50, 60, 70, 80 years old, until they reach the end of their life, and then you just start replacing them or abandoning them.

So, so it's true, and there's plenty of data that shows failure rates for brand-new pipes are higher for a number of reasons. You know, inside facilities, construction defects, operational errors, because people didn't know how to operate it correctly. You know, there's a variety of, of causes for that.

Q. All right. I've moved to .pdf 241, Page Number 46. No, I put in the wrong number. I put in 246. Wrong number. There we go. This is a discussion on in-line inspection tools.

A. Yes.

Q. I'm going to read it to you and ask you if you agree. "In-line inspection tools, dash, called smart, quote, 'pigs', unquote, because of the squealing sound these kinds of tools made as they moved through a pipeline, dash, provide measurements of wall thickness, comma, length and depth of corrosion, pitting, or excavation gouging, comma, detection of certain kinds of cracks, comma, and measurement of dents or other deformation in the pipe, period. Different tools typically are used for each kind of threat, period. ILI tools offer the most extensive characterization of defects and condition of the pipe, period. But they have several important limitations, colon: First bullet point. ILI tools generally can't detect seam cracks or stress corrosion cracking, period".

So let me ask you. Is there anything I've read up until now that you disagree with?

A. Well, I disagree -- well, I agree that their statement was probably accurate back in 2003 when they wrote the report, but there's been quite a bit of development within the industry on ILI tools that can detect seam cracks and stress corrosion cracking. So I disagree with that statement, but that was probably true when they made it.

Q. I'm sorry. You said 2003. Did you mean to say

that?
A. Did I say 2003 instead of 2013? Even in the last seven years, and that's, crack detection and stress corrosion cracking has been a focus of the pipeline industry, and they've been, you know, rapidly developing tools that can do that better, but I will add that those are irrelevant for the, for the ANGP pipeline anyway.
Q. Because?
A. Well, let's take stress corrosion cracking. So the key word here is "stress". So, so this is designed to be a Class 3 pipeline, so it operates at a maximum of 50 percent of SMYS, and you tend to see stress corrosion cracking in pipelines that are operating at a high stress level, not a 50 percent stress level, and you tend to see it in old, thin-wall pipe that has bad coating in a corrosive environment.

So this pipeline has excellent coating and excellent cathodic protection through its entire length, so you don't have the corrosion problem. You don't have the stress problem. It really is just not susceptible to stress corrosion cracking, period.

Seam cracking, on the other hand, is almost exclusively for pipes that were manufactured prior to 1970 using electronic resistance welded technology. So

low-frequency ERW pre-1970 pipe is particularly susceptible to seam cracking, and there's plenty of that pipe in the industry, and, you know, so we've been developing tools so we can find those kinds of seam cracks. I mean, this, this is an ERW pipe, but it's designed with modern technologies. It's just not susceptible to seam cracking.

Q. Thank you. Bullet point, I'm sorry, the next bullet point, "Different kinds of tools, parens, (EG magnetic flux or ultrasonic), end of parens, have different strengths and weaknesses in finding different kinds of anomalies, comma, and even within the same type of tool the detection capabilities can vary, period".

Do you agree with that?

A. I do, yes.

Q. Next bullet point, "ILI tools can't detect every defect in the pipe, comma, because of a basic design limitation, dash, most ILI tools advertise a 90 percent probability of detection, comma, which means that about 10 percent of defects simply will be missed with a single ILI run".

Do you agree with that?

A. Well, I think that statement's a little too simplistic, and, when you start talking about ILI

specifications, they have a probability of detection, and they have a probability of identification. Those are two different things.

So probability of detection is, Did I see anything? And then probability of identification, Did I correctly identify it? So these, these tools are giving you what I refer to as squiggly lines on a page, and, you know, you have trained operators using computer algorithms. It's kind of like reading an EKG on your heart. So, if you've ever been to the doctor and gotten a EKG, I look at it it's just a squiggly line on a page. I have no idea what it means, but a doctor who knows what they're doing can look at it and go, oh, well, you've got this heart valve defect, or you've got this rhythm problem or, you know, whatever. They know how to read the squiggly line.

Well, that's, that's what a technician is doing when they're reading an in-line inspection result. At the end of the day, it boils down to that. It's a lot more sophisticated, but, you know, did the squiggly line detect something? Did it identify it correctly as internal corrosion, external corrosion, cracking, pitting, you know, selective seam corrosion? You know, the list goes on and on.

So this is a very general statement saying that,

well, they don't have 100 percent detection for every kind of anomaly, and that's true. You know, the 10 percent of defects simply missed, I think, is a little bit misleading, because the things they're missing are the least significant ones. They're, they have a better than 90 percent probability of detection for a significant defect.

Q. I don't want to interrupt you. Are you done? Or keep going if you want.

A. But I'll grant that they can miss even a significant defect. I mean, we've seen that in the industry. So it's a -- I agree, in general, with what this says, but I believe it's too simple.

Q. Okay. I've scrolled to the bottom half of the page. The next bullet point says, "For defects that are detected, comma, measurement of their size is subject to a margin of error, dash, typically 10 to 20 percent with 95 percent confidence, comma, meaning that the reported depth and area would be within 10 to 20 percent of the actual measured depth and area 95 percent of the time, period".

Do you agree with that?

A. Yes. And this is a, it's a good example of how the math gets incredibly complicated very fast, because you're talking about probabilities of probabilities.

So what's the probability that I'm within this probability of being accurate? What's the probability that I'm within this probability of being accurate?

So I'm looking at now a matrix of probabilities, and, you know, that's where, you know, I guess people make their money, right, knowing how to do risk assessment with complicated math, but, but, yeah, you don't have 100 percent confidence of anything 100 percent of the time. That's just the way it is, and ILI tools are a perfect example of that.

Q. Next bullet point, "ILI tools also present a problem of, quote, 'false calls', unquote, dash, indicators of anomalies that do not, in fact, meet the detection criteria, period. False calls are like false alarms, semicolon; they waste resources, comma, and lead to questioning of results, period".

Do you agree with that?

A. I do, and, in fact, we've seen that in the ILIs for ANGP where the, the ILI tools have detected very few anomalies, and none of them, even under a normal program, would be considered significant enough to dig, but Vermont Gas did dig a number of those anomalies, and none of them were significant. So, so, basically, all they're dealing with is false calls.

Q. Now I'm going to read the following, the paragraph

that follows the bullet points.
A. Um-hum.
Q. Quote, "How you read these uncertainties can make a big difference, period. A 90 percent probability of detection sounds like a lot, comma, but knowing that you are completely missing 10 percent of the actual defects in the pipe should make people very cautious about how to interpret what they see and the predicted burst pressures that result, period".
Do you agree with the sentence as I just read it?
A. Yeah. I mean, the pipeline industry has a way to deal with that, which I'd be glad to explain, but, I mean, what they said is true.
Q. Next sentence, "There is no way to know what wasn't detected, semicolon; it's not just the smallest defects, comma, it's a function of whether the pads or gauges on the tool missed a spot, period".
Do you agree with that?
A. That's true. Sometimes it's the tool's fault. It's not the, you know, something else about the defect.
Q. Next sentence, "A 10 to 20 percent measurement tolerance is another matter, semicolon; this could be accounted for in the calculations, comma, except that the 95 percent confidence means 5 percent of measured

values will fall outside the reported range, period". Do you agree with that?

A. Yes.

Q. Next sentence, "PHMSA's guide to operators, parens, (FAQ7.19), end of parens, requires tool tolerances to be used in the risk evaluation, comma, but provides latitude for the operator to decide how to do this, period".

Do you agree with that?

A. Yes.

Q. The next paragraph, "Tests comparing ILI tools results and predictions to findings from excavations and actual failures have shown that anomaly depths can exceed the reported depths, D-E-P-T-H-S, depths, semicolon; anomalies are missed even", and we go to the next page, "even though their length and width exceed the threshold detection limits of the tools, semicolon", and this is now in italics, "pipe sometimes" -- I'm sorry. Start over. And, in italics, "Pipe sometimes fails at less than the predicted burst pressure, end of italics, from ILI data, period".

Do you agree that?

A. Yes, I do. So and the predicted burst pressure is a common field that you get from an in-line inspection tool inspection. So it says, not just -- you know,

when you run an in-line inspection tool, the vendor will give you a report. Of course, the details vary from vendor to vendor and the type of tool that you ran, but, but they'll generally tell you, okay, here's all the defects I found. These are the locations. This is the length. This is the width. This is the depth, and, and, based off of that calculated information, I can tell you this pipe would rupture at a certain pressure, okay?

So, obviously, a pipeline operator would look at that and go, well, do I have any that are predicted to rupture at a pressure lower than I'm operating at or that I want to be able to operate at? And those would be critical defects, at least until you prove otherwise. Because, if, if you think you can operate your pipeline at 1,440 psi like the ANGP and you get a predicted burst pressure of 1,000, you'd go, well, jeez, that, that calculation tells me I'm not good for my operating pressure. I need to go work on that or go, go deal with it immediately, and those are what the regulations refer to as immediate repair conditions.

Of course, as we've already explained, the tools aren't perfect. So what they said was a length, what they said was a width, what they said was a depth all comes with a margin of error. So sometimes that margin

of error is conservative. Sometimes that margin of error works against you. So there are times where the predictive burst pressure might be 1,000 and it actually bursts at 900. You know, it's, that's just the nature of random statistical variation, and that's why operators build in these margins of errors into their calculations to, to try to accommodate for that.

Q. Thank you. Now I'm going to turn to -- sorry. I have a different one.

HEARING OFFICER TOUSLEY: Mr. Dumont, I want to remind you that it's just about 2:00 o'clock.

ATTORNEY DUMONT: Yes.

HEARING OFFICER TOUSLEY: Okay.

ATTORNEY DUMONT: I'm nearly done.

HEARING OFFICER TOUSLEY: Okay, thank you.

BY ATTORNEY DUMONT:

Q. I just wanted to ask about Pages 1, 2, 3, 4 of our Exhibit 1. This is PHMSA, the PHMSA website frequently asked questions about pipeline construction.

A. Okay, yeah. Just, if you would pause just a second so I can -- yeah, they have lots of FAQs. So this is the pipeline construction FAQs, I assume, for gas and liquid. Okay. You can go ahead.

Q. Have you seen these or this page before?

A. I'm familiar with the things that are on PHMSA's

website. I mean, I, you know, the nature of websites is they just change all the time, but, you know, yeah, I'm familiar with this.

Q. Do you believe that the information in PHMSA's frequently answered questions is reliable information?

A. Well, it's PHMSA. You know, I'll give you my, my small diatribe about, you know, they call it frequently asked questions, but, frequently, it's not a question. It's just something that PHMSA wants to opine about. So they call it an FAQ, and then they opine about it. So, with that caveat, it's just PHMSA opining about different topics. It doesn't bear the weight of regulation. It doesn't go through a rulemaking process. There's no peer review process or anything like that.

Q. This is a question that I know you'll want to talk about. Number 9, "Don't high-strength steels make pipelines safer?" And the answer is, "Pipelines are designed with a safety margin, period. As high-strength steels are used, comma, new pipelines are being designed to use thinner walled and higher strength steel pipe, comma, and may operate at higher pressures, period. It is thus important to assure that the high-strength pipe material meets specifications to assure that the required safety margin is maintained".

Do you agree with that?
A. I do, and that, that goes to some of the earlier conversation we had about the alternative MAOPs and expensive, you know, really expensive pipeline projects, if I spent a billion dollars on a pipeline project, it makes sense for me to buy the highest strength steel possible so I buy less of it. So the higher the strength, the thinner the wall, especially if I run it at a higher stress level.

So that's what operators are doing, and, and you can do that from an engineering standpoint, but it comes with its own set of risks, and, like I said earlier, that's the opposite of what ANGP did. They built it thicker than normal. They didn't go to the thinnest option.

And I, my report deals with the diameter-to-thickness ratio for this pipe and how it's much less than the commonly accepted industry limits. So I think that's what this question is getting to. You know, high-strength steel, yeah, all by itself is better, but, if you use high-strength steel to make a thinner pipe, well, it comes with its own issues, and I think that's what they're saying.
Q. Turn to Question 14, "Isn't nondestructive testing required after welding? Why is it not finding the

problems?" Answer, "Nondestructive testing is required following welding. Ultrasonic inspection and radiographic inspection, parens, (similar to x-rays) end parens, are the most common techniques used, period. These inspection techniques are designed to find gaps in the weld and foreign materials, parens, (i.e. inclusions), end parens, in the weld metal".

New paragraph, "Welds in high-strength steels are more susceptible to hydrogen-induced cracking, period. Hydrogen from the welding rods dissolves to make the mold weld to the metal. This hydrogen comes out of solution as the metal cools. If all of the hydrogen is not allowed to escape, comma, it can result in delayed cracking of the finished weld, period. In some recent cases, comma, reviews of NDT records following weld failures have found that there were no cracks or inclusions in the welds, period. In these cases, comma, it is likely that hydrogen-assisted cracking occurred after the post-welding NDT was done".

Do you agree with that?

A. Not exactly. I mean, I agree with most of it, but I don't agree with their conclusion at the end. You know, an x-ray frequently, I mean, it's, it's a pretty lousy tool to find cracking. So, so the fact that they missed the cracking in that weld during the

post-welding NDT just tells me that's what the NDT wasn't good for it. UT, if they had UT'ed it instead of x-rayed it, then they very likely could have found a crack.

But this goes to the thing we were talking about earlier on the 2014 PHMSA inspection and the issues they had with welding. You know, the question is, well, hey, didn't I inspect the weld after I welded it? Why didn't it find all the problems? Well, because your inspection can't find all the problems, and that's why it's so important that you have very detailed procedures and you follow them to the letter, and that's what the PHMSA inspector or the state inspector, in this case, was requiring, that I want to see the detailed inspection, and I want to know that you're following it to the letter.

Because, otherwise, you can create problems in a weld that aren't visible to the naked eye and won't be found during a post-welding inspection like NDT, and hydrogen is a specific example, and this FAQ goes to a specific pipeline project that was done a few years earlier that was one of these billion-dollar pipeline projects, and they weren't following the welding procedure as it had to do with time between passes.

I had mentioned that, when you're welding a

pipeline, it's not just one time around and you're done. It's, you do the root pass, and you add all these extra passes, and every one you do adds a little bit more metal.

When you're building, you know, a 36-inch or a 46-inch diameter pipeline, that's a tremendous amount of weld metal, and the point is you have to keep welding. If you stop and let it cool down and then you weld over it, well, then you get a hydrogen-induced cracking problem, and they were not following their procedure correctly, and they were allowing hydrogen to build up in the weld.

And I've got pictures I use in my training programs of that specific example where they had to cut out all the welds and reweld the pipeline, an incredibly expensive problem, and it's, it was a stupid problem, frankly, because they should have followed their procedure, and they should have avoided the problem.

Q. Thank you. What I believe is the last question I have for you is about your Attachment 20.

A. Okay.

Q. Attachment 20 says, "IFC plans 5/13/16 in Modification Bulletin Trans-09", and then there's two asterisks after it, and at the bottom of your list of

attachments, it says asterisk, asterisk, "Too large to post to PUC's website".

A. Okay. Yeah, you're not showing anything, but I remember, I remember saying that. Okay.

Q. Right. Because it, you never posted it. So it's on your list of attachments, but I don't believe you filed it. So I want to first put that in the record. And do you remember looking at that document?

A. Yes, I do, and, and I remember sending an email to you and to Officer Tousley and to Ms. Dumont (sic.) indicating that it was one that was simply -- it was, like, 800 megabytes or something, and the PUC's ePUC website doesn't allow you to post anything that size, one huge document. So I said in the cover letter that I would send a thumb drive to you and to Ms. Dumont and to Mr. Tousley containing that attachment, and so the PUC was served with that document, and I notified you and the others of that.

Q. Right. And I just want to make sure it's actually in the record and that we can all use it, because it's not on the ePUC, and it's a very important document.

A. Yeah, it can't be, unfortunately. It's just a technical limitation. There's nothing, you know, there's nothing, you know, extraordinary about that document. It was a very comprehensive list of, you

know, hundreds and hundreds of pages of diagrams, and, you know, I found it to be one of the most comprehensive ones that I had, so that's why I included it as an attachment, but, unfortunately, the file was just so large that I couldn't post it.

Q. Yeah. In your list of attachments, you said it was the IFC plans. That means the Issued for Construction plans, correct?

A. Right.

ATTORNEY DUMONT: Okay. I just wanted that in the record, and I'll have the record reflect that I hope we all agree that that, those IFC plans are, in fact, part of the record of the case. That's all I have.

MR. BYRD: Thank you.

HEARING OFFICER TOUSLEY: Great. Thank you. Do the other parties have questions in light of Mr. Dumont's questions? Department?

ATTORNEY GUZMAN: No, I don't have any further questions.

HEARING OFFICER TOUSLEY: Okay, thank you. ANR?

ATTORNEY MILLER: I have no questions. Thank you, Mr. Byrd.

MR. BYRD: Thank you.

HEARING OFFICER TOUSLEY: And, Mr. McClain, VGS, do you have additional?

ATTORNEY McCLAIN: We don't have any questions for Mr. Byrd. Thank you for your time.

HEARING OFFICER TOUSLEY: Yes, thank you, Mr. Byrd. That was, that was extensive testimony, and you did a great job, and I hope you liked that Circle K.

MR. BYRD: Yeah, well, you know, frankly, I didn't mention it, but we, we broke for lunch at, like, you know, 10:45 local time, so I'm going to eat lunch after I'm done here.

HEARING OFFICER TOUSLEY: Okay, sounds good.

MR. BYRD: All right. Well, I'm logging off, unless you need me.

HEARING OFFICER TOUSLEY: Just a second. Do we see any reason why we might want to call him back?

ATTORNEY DUMONT: Well, he wanted some of my bread, Mr. Hearing Officer.

MR. BYRD: The next trip, Mr. Dumont, I'll expect homemade bread.

HEARING OFFICER TOUSLEY: With that, Mr. Byrd, you're excused. Thank you very much for your testimony.

MR. BYRD: All right, thank you.

HEARING OFFICER TOUSLEY: Okay. It's now

2:10 or thereabouts, just about 2:10. Mr. McClain, when will, when will our next witness be ready?

ATTORNEY McCLAIN: Mr. Rendall will be ready. Could I, could we take a break and, and I can just make sure he's got a computer set up and everything?

HEARING OFFICER TOUSLEY: What time would you like to start with Mr. Rendall?

ATTORNEY McCLAIN: How about 2:20, ten minutes?

HEARING OFFICER TOUSLEY: Let's make it 2:30.

ATTORNEY McCLAIN: Okay, that's fine.

HEARING OFFICER TOUSLEY: Okay, thank you. So we're, we're adjourned until 2:30.

(A recess was taken from 2:10 p.m. to 2:30 p.m.)

HEARING OFFICER TOUSLEY: It appears that we are all back together again. Mr. McClain, are you ready to present your witness?

ATTORNEY McCLAIN: Yes. Mr. Rendall's testimony has been admitted into the record by stipulation and is listed on the Joint Exhibit 1, and he's available for cross-examination.

HEARING OFFICER TOUSLEY: Okay. Let's just identify him first, though, just to say that we can see his face.

ATTORNEY McCLAIN: Absolutely. Mr. Rendall,

can you please state your name for the record?

MR. RENDALL: Yes. I'm Don Rendall.

ATTORNEY McCLAIN: And could you state your occupation?

MR. RENDALL: Yes. I'm the President and CEO of Vermont Gas Systems, VGS.

ATTORNEY McCLAIN: Mr. Tousley, is that sufficient, or would you like me to go through any more background before he's available?

HEARING OFFICER TOUSLEY: No, I think that's sufficient. Thank you. I'm just trying to find my script for the swearing-in. Since we're not in the hearing room, it's not taped on a piece of paper in front of me.

DONALD RENDALL,

duly sworn to tell the truth, testifies as follows:

HEARING OFFICER TOUSLEY: Very well. Mr. Rendall is available for cross-examination. I think we'll start with the Department. Do you have questions for Mr. Rendall?

ATTORNEY GUZMAN: I have no cross-examination questions at the moment.

HEARING OFFICER TOUSLEY: Okay. ANR?

ATTORNEY MILLER: The Agency has no questions for Mr. Rendall. Thank you.

HEARING OFFICER TOUSLEY: Okay. Mr. Dumont?
ATTORNEY DUMONT: I do have some questions.
HEARING OFFICER TOUSLEY: Very well. You may proceed.

CROSS-EXAMINATION BY ATTORNEY DUMONT

Q. Good afternoon, Mr. Rendall. How are you?
A. I'm fine, thank you. How are you?
Q. I'm good. You became Chief Executive Officer and President on January 1st of 2015, correct?
A. Yes.
Q. Do you agree that, in Docket Number 8328 on July 31st of 2015, Vermont Gas Systems was fined $100,000 for waiting 164 days in 2014 before informing the Commission of a significant cost increase in the ANGP?
A. Yes.
Q. Do you agree that the principal reason given by the Commission for the $100,000 fine was the length of the delay?
A. I'd have to go back read the order, which I haven't read in a long time, but I, I recall that the delay was a significant issue for the Commission.
Q. Do you agree that, while you were the CEO after the Docket 8328 ruling, VGS waited 256 days before informing the Commission of the agreement to bury the ANGP three feet deep in the VELCO right-of-way rather

than the four-foot depth in Mr. Heintz's testimony and in the final order?
A. I, I recall that the nonsubstantial change filing we made with the Commission was in the timeframe that you have described. We certainly had had direct and detailed conversations with the Department of Public Service leading up to that filing.
Q. In Docket Number 8328, do you realize the same defense or argument was raised by the company, that, Gee, we informed the Department?
A. I'm not, I'm not raising it as a defense. I'm simply explaining the circumstances.
Q. Okay. We'll get into those circumstances in a few minutes then. Do you agree that, while you were the CEO in May of 2016, Vermont Gas began exploring with Mott MacDonald burial only three feet deep?
A. I don't recall what you're referring to, Mr. Dumont. I'm sorry.
Q. I'm referring to Mr. Byrd's Attachment 48. It will show up on your screen.
A. I see the exhibit.
Q. And scroll down a little bit. I'm now in the middle of the page where it describes results, three feet of cover is sufficient.
A. Okay, yeah.

Q. This is an --
A. You'll have to -- if that's what the date on the document is, then it speaks for itself, yes.
Q. So Vermont Gas began exploring with Mott MacDonald in May of 2016 burial depth of only three feet, correct?
A. I don't think that's what the document says, and I don't recall that being, those being the facts.
Q. Okay. Well, you were CEO in May of 2016?
A. Yes.
Q. Why was the company in communication with Mott MacDonald about burial depth of three feet?
A. I think that this, this document, which is, if you could scroll up, we can all be comfortable with what the date of it is. This document is the result of an, a review, not the beginning of it.
Q. So you started exploring three-foot depth of cover before May of 2016?
A. I don't recall precisely when the, the discussions with, which, with Mott MacDonald began that led to the report on May 25th 2016. I wasn't directly involved in those discussions. I generally recall that our operations team and the pipeline team were having those discussions with Mott MacDonald.
Q. When did you, when do you think those discussions

began?
A. I don't, I don't specifically recall when they began, Mr. Dumont.
Q. Would it have been in 2015?
A. Yes. I'm looking at this now. I, I, actually, I, this is before the construction was done. This was in May of 2016. I had my years wrong in my own mind. So I don't, I don't have any recollection of these discussions. May of 2016. Yeah.
Q. So can we agree it was no, these discussions began no later than May of 2016?
A. Yeah. I, as I said, I don't have personal knowledge or recollection as I'm sitting here of the discussions that underlie this document.
Q. Do you agree that, weeks or months prior to mid-September of 2016, Mr. Bubolz, B-U-B-O-L-Z, of the Michels company informed Vermont Gas that the planned open-trench construction down to four feet would not succeed in the Clay Plains Swamp?
A. I don't have a recollection of when Mr. Bubolz from Michels informed our project team of its concerns.
Q. You do agree that he did, in fact, inform the project team of his concern?
A. Yeah, I don't dispute that.
Q. Have you read his deposition?

A. I, I have not read his deposition from cover to cover. I have seen his deposition. I have scanned it, but I can't say that I have closely read it.
Q. Have you made any inquiry, as the Chief Executive Officer of the company, when the first date was that you were informed by the construction foreman or by Michels Corporation generally that the planned four feet of burial in the Clay Plains Swamp would not work?
A. I, well, my best recollection, Mr. Dumont, as I'm sitting here is that the, the specific issue of construction in the Clay Plains Swamp and achieving a four-foot depth arose in the timeframe that the construction was undertaken. At least that's, that's when I remember it --
Q. Well, you told us --
A. -- arising.
Q. Sorry. Go ahead. Are you done?
A. Yes.
Q. Well, you told us you haven't read Mr. Bubolz's deposition, but you scanned it. I guess I need to know. What does that mean?
A. Well, that means that I remember having -- I remember seeing a, a copy of his, of a written copy of his transcript, either in paper form or on a screen, and I may have flipped through the pages. I did not

read it for substance or detail.
Q. Do you recall whether he got on the phone or he sent an email or he --
A. I'm sorry, Mr. --
Q. Let me just finish the question so we have a complete record.
A. Sure.
Q. Do you remember whether he got on the phone, sent an email or got in a car and drove to Williston to make his point known?
A. I don't recall.
Q. Did Vermont Gas Systems make any record whatsoever of the communication from Mr. Bubolz about what we now know as the Clay Plains Swamp?
A. I don't know.
Q. If you don't know, who would?
A. Mr. St. Hilaire may well know. He was the executive sponsor of the project.
Q. You testified in your prefiled testimony that you're basically proud of how the company constructed the ANGP, including the construction in the VELCO right-of-way, right?
A. Yes.
Q. But you made no inquiry when the company learned from Mr. Michels that four feet of burial wasn't going

to work; is that right?
A. My, my recollection of the facts are that the, that, that there was a concern about whether or not they would be able to achieve four feet of burial in the Clay Plains Swamp, and they were going to make their best efforts to achieve it, and they, and they undertook their construction with the hope and expectation that they would.
ATTORNEY DUMONT: That wasn't my question. So I'm -- Ms. Donath, could you read back the question?
(Question read by the reporter:
"Q. But you made no inquiry when the company learned from Mr. Michels that four feet of burial wasn't going to work; is that right?")
THE WITNESS: My answer stands.
BY ATTORNEY DUMONT:
Q. Your answer was your recollection was we were going to make the best effort, but the question was, What inquiry did you, as the testifying witness, make before you wrote your testimony to answer that question?
A. Oh, I'm sorry. I was, I -- that is the basis for my, my conclusion on that particular point. That is one of the bases for my conclusion on that particular point that the company proceeded in a, in an

appropriate manner using appropriate judgment in undertaking the construction.

Q. So you reached your conclusion without finding out when Mr. Michels came to the company to warn the company it wasn't going to work; is that what you're telling us?

A. Well, I'm looking at this exhibit, Mr. Dumont, and, and the exhibit seems to refer to, to compaction, not to depth of cover, at least, at what, at least the portion that you're making visible to me, and, as I said to you before, my recollection is that the company learned that Michels was anticipating having a challenge in the Clay Plains Swamp. They made that known to us.

The construction and project management team evaluated how best to proceed, and, together, they determined that it would be appropriate to proceed by proceeding with construction with the hope and expectation that they would be able to reach four feet of depth of cover in the Clay Plains Swamp and that, that area of, of the project.

Q. Mr. Rendall, isn't it true that, even though you've just said they evaluated it, they created no document whatsoever of the contact by Mr. Bubolz or any of their evaluation?

A. I don't know if they did or didn't. It would not surprise me if they did not.
Q. Well, you're testifying as the President and CEO of the company that you're proud of the way they handled the Clay Plains Swamp situation. Are you telling us that you don't know whether there are any documents that show how they evaluated this information? Is that what you're telling us?
A. No. I'm saying it would not surprise me if the, if the discussions were, were verbal, as were the reports that I received about this during and after construction, and that the, and that the team was working together in the, in the construction trailer, in the field, wherever they were working, to, to make their determinations in the midst of a large construction project.
Q. Your answer was, "It would not surprise me to learn that an evaluation was purely verbal". My question was, As the testifying witness about what the quality of the work that your company did, did you make any effort to see if there were any documents that would show the evaluation the company went through? Did you ask? Did you get any documents?
A. No.
Q. You did not ask?

A. I did not.
Q. Why not?
A. I did not consider it to be necessary.
Q. Why not?
A. Because I had confidence in the reports I was getting from my team, from the project team, about the facts and circumstances in the field.
Q. Do you know of any document that contradicts Mr. Bubolz's testimony in his deposition that he went to your company to warn them it wasn't going to work?
A. I don't know if that was his testimony or not, and I don't know of any specific document that would refute his testimony. There may be. I just don't know.
Q. Do you agree that the agreement that VGS reached with VELCO in the fall of 2016 about burial less than four feet consists of an email from Mr. St. Hilaire on September 20th and a reply by VELCO on September 21st?
A. I, I'm generally aware of that email exchange. I don't know if that is the, the only evidence of the agreement, including conversations that Mr. St. Hilaire may have had with, or others on the project team may have had with VELCO or VELCO representatives.
Q. So this is -- I, I've put up on the screen Mr. Byrd's Attachment 55. So this is Attachment 55 to Mr. Byrd's report. This same document appears under

various names elsewhere in the record. Have you seen this email dated September 21 from Mr. Lind to Mr. St. Hilaire?

A. I may have seen it at some point before. I'm looking at it now. Let me just refresh myself.

Q. All right.

A. It appears to have a stamp on it of an exhibit to an affidavit from Mr. St. Hilaire, and I may have seen it in connection with that affidavit. I don't recall. I may have seen it also at the time that it was, it was prepared. I just, I don't have a specific recollection.

Q. We can agree that Mr. Lind gets up early to go to work?

A. Or at least that he punches the "send" button early.

Q. 5:21 in the morning. So I'm now scrolling down through Attachment 55 to the email dated September 20th from Mr. St. Hilaire to Mr. Lind. Do you recall seeing this before?

A. Is this also an exhibit to Mr. St. Hilaire's affidavit? I just don't recall. I may have seen it. I, I don't have a specific recollection.

Q. And, if we scroll down on Byrd Attachment 55 to the .pdf Page 3, we get back to that same Mott

MacDonald 5/25/16 report. You see that?
A. Okay. So, just so I'm clear, we're shifting now from September back to May; is that right?
Q. No. If you look at the September 20th email from Mr. St. Hilaire, he's attaching the Mott MacDonald report from May 26th 2016.
A. Okay. I, I didn't read the document closely when it was up on the screen.
Q. All right. We'll go back there. Yeah.
A. All right. I see that, that this, the May document, was an attachment to the September 20th email from Mr. St. Hilaire to Mr. Lind.
Q. So on September 20th and 21st you were the CEO of the company, correct?
A. I was.
Q. Did you know it was, that this agreement was being reached?
A. I knew contemporaneously, right? I say that because I don't remember what specific date I became aware of which facts, but I knew contemporaneously with this, this exchange that, that we had communicated with VELCO about the, the construction in the Clay Plains Swamp and that we had an analysis that made clear that the depth of cover at three feet would be ample with respect to the, the concerns that VELCO had about their

load limits, my phrasing, in the right-of-way.
Q. Did you personally approve of the agreement that's shown in these two emails?
A. No.
Q. Were you asked?
A. I, I, no, I, I relied on the project team to address the issue, along with the field issues that arose every day over the course of the project. I had confidence in their professionalism and in their ability to do so effectively.
Q. Were you aware that Mr. Heintz had testified that the depth of cover in the right-of-way would be four feet?
A. I, I'm sure I was aware that the, that the, the depth of cover that we were expecting to achieve was four feet based on the agreement with VELCO and based on the, the record in the CPG case.
Q. Were you aware that there was explicit testimony from VGS's witness that the depth of cover in the VELCO right-of-way would be four feet?
A. Well, I was aware that there was testimony about four feet and, and the, and I would just say that the testimony speaks for itself as to the adjective that you used.
Q. I wasn't asking if I was characterizing the

testimony rightly or wrongly. I'm asking whether you were aware that Vermont Gas Systems' witness had explicitly stated the depth of cover in the VELCO right-of-way would be four feet. Were you aware of that in September of 2016?

A. Yeah, actually, I don't recall that testimony as I'm sitting here. I, you'd have to refresh my recollection on what exactly Mr. Heintz said.

Q. Well --

A. You're asking -- you're using the, the term "explicitly", Mr. Dumont, and I don't mean to quibble with you, but, as I said, the testimony speaks for itself.

Q. What's your best recollection, as you sit here today, what you personally understood on September 20th of 2016 about the representations your company had made to the Vermont Public Service Board about depth of cover in the VELCO right-of-way?

A. My understanding was that we had an agreement with VELCO, that the agreement with VELCO was focused on -- I'm going to use the term, because this is my term -- loading limits, making sure that we achieved those loading limits and that we agreed on a four-foot depth of cover, and we agreed to continue to discuss and negotiate as, as appropriate, on issues inside of that

MOU.

I also remember that, that Mr. Heintz testified in the CPG case, remember being informed -- I was not a part of VGS at the time. I remember being informed that Mr. Heintz had testified in the CPG case about a depth of cover including 4 feet at depth of cover at various places in the 41-mile project. I don't remember his specific words, and I don't remember if he made a specific representation about, about the MOU. I just, I don't remember what his specific testimony was in the case.

Q. As of September 20th 2016, had you read the Public Service Board's December 23rd 2013 final order?

A. Yes.

Q. Did it say anything about depth of cover within the VELCO right-of-way?

A. Yeah, I don't remember. I mean, the, as of 2016, I had read it, I'm sure, more than once. I haven't read it in a long time. I just don't remember what specifically it says in the final order about depth of cover. I, I don't remember.

Q. In September of 2016, did you go look at the December 23rd 2013 final order issued by the Public Service Board?

A. I don't remember if I went and looked. I'm sure I

received a briefing on it from our counsel.
Q. Did you possess a copy of it in your own office, or did you, did only your lawyer have a copy?
A. Oh, I'm sure that I, that I had a copy available to me on, either in paper form or in an electronic file.
Q. Do you recall whether or not you read it in connection with the depth-of-cover decision being made in September of 2016?
A. Yeah, I, the, I, I don't have a specific recollection. I generally remember reviewing the order in connection with the briefing that I received on this issue.
Q. So, to summarize, you delegated to your team the decision whether or not to enter into this agreement with VELCO; you didn't make the decision, correct?
A. Which agreement are we referring to, the MOU or the, or the, the confirmation that, that VELCO was content with three feet or greater of depth of cover?
Q. The proposal on September 20th to construct the ANGP through the VELCO right-of-way with as little as three feet of cover, which VELCO agreed to on September 21.
A. Yeah, yeah, I delegated the project team, yes.
Q. And you did so knowing that that subject was -- or

let me start over. Did you do so knowing or not knowing that that subject was explicitly addressed by one of the company's witnesses during the hearings leading to the CPG?
A. I did so understanding what the, what the VELCO MOU provided, what the CPG provided, and what was in the final order.
Q. So it, regardless of who that worked for you actually made the decision, you knowingly delegated that decision to that person?
A. I, I, yes, but make no mistake. The buck stops here, and I'm not, and I am accountable for the decisions of the team, and I delegated to the team. The team had the authority to, to address and resolve this issue as they deemed appropriate. I was confident, and I, I'm confident as I sit here in that determination.
Q. So now I have to ask you. Did you find out whether anyone on the team to whom you had delegated this decision were aware of Mr. Heintz's testimony?
A. I, I'm sure they were.
Q. Why are you sure that they were?
A. Because I, because I have confidence that the team made a, a reasoned evaluation of how best to proceed and they did it with an understanding of the, the

relevant conditions in the MOU and the CPG.
Q. So, Mr. Rendall, you were a practicing lawyer for over three decades, correct?
A. Yes.
Q. You went to one of the best law schools in the country, correct?
A. I went to excellent law school, yes. I was privileged to have done so.
Q. In September of 2016, you were aware that this issue had come up in the 7970 permitting, but you couldn't remember the detail; is that right?
A. I'm sorry. Could you repeat the question?
Q. Yes. In September of 2016 you were aware that the depth of cover in the VELCO right-of-way had come up during the 7970 proceedings, but you weren't sure exactly of the details, correct?
A. I, I, I'm not, I'm not -- I want to be careful here about timeframes. At the time of September '16, I received briefings from my team, including our legal team, about the issues relating to depth of cover. At that time, I am, I was aware of the issues as they were presented to me and the portions of the CPG and the VELCO MOU as they related to this issue.
So I was, at the time, aware of the facts and circumstances, including the, the compliance-related

facts and circumstances. I'm, today, right, which is now, what, four years later; is that right, four years later? My recollection of the specific things that were happening at that time is, is not crystal clear.
Q. Just now you used the term "CPG", that your briefing from the legal team included the CPG. We know -- you and I are lawyers. We know that the CPG was a separate document that was attached to the final order, but it's separate from the final order. Can you clarify what documents you were aware or briefed on by your legal team?
A. I was briefed on the relevant documents. I don't recall a specifically a, a checklist of what those documents were, but I received a thorough briefing.
Q. Okay. In that briefing were you told that Mr. Heintz had testified that depth of burial in the VELCO right-of-way would be four feet?
ATTORNEY McCLAIN: Can I interrupt, please? I'm happy for Mr. Rendall to answer the question. I just want to clarify that, you know, to the extent Mr. Dumont is asking Mr. Rendall what legal advice he was given, it would be privileged information, and I don't think that's what you intended to do, Mr. Dumont, but I just wanted to make sure that we understood.
MR. RENDALL: Thank you, Mr. McClain, and I,

I remember seeing the, a set of materials in connection with a briefing that included testimony from Mr. Heintz. As I said, what I don't remember as I'm sitting here today is what that, what those words were.
BY ATTORNEY DUMONT:
Q. Did the team to whom you delegated this decision also receive the legal briefing with Mr. Heintz's testimony?
A. Um, yes. Leaders on the team were, were, I'm confident as I'm recalling it, part of that briefing. I don't recall what, whether the entire project -- I don't recall who from the project team was, but the, but I'm, I'm sure that the, that Mr. St. Hilaire was, for example. I don't recall what, who else may have been involved.
Q. This was back in the good old days when meetings were held in person.
A. Yes.
Q. Where was this meeting held?
A. At, at VGS. There were -- it wasn't just one meeting. It was that the, I received a briefing. I received follow-up. We talked about this during this time. We talked about it.
Q. Thank you. So that was September 21 of 2016?
A. That was, that was in this timeframe. It was not

necessarily September 21 or September 20 or September 24th. It was during this timeframe. That is the best of my recollection. I cannot tell you what day, with reference to any of this documentation, what day the, the briefing, the briefings, the, the discussions that we had occurred. It was contemporaneous. It was during this timeframe.

Q. So we, we know that the email to Mr. Lind from Mr. St. Hilaire, which was on the screen here, was September 20. We know the reply was September 21, and we know the work was then done immediately, correct?

A. The work? I'm not sure what you're referring to when you say "the work".

Q. The excavation and laying --

A. I don't remember in relation to these, these emails when the excavation occurred. I just don't remember.

Q. Okay. But you do recall that, on April 12 of 2017, you personally held a press conference and announced that gas was running through the pipeline?

A. I recall gassing up the pipeline, actually, Mr. Dumont. The, I'm, I don't recall the press conference.

Q. Do you recall giving a statement that said, quote, "Now that the project is completed and we're fully commissioned, we'll be rolling out the service to

families and businesses throughout Middlebury"?
A. If that's what our, our statement says, then I recall that we issued a statement. I don't recall its specific contents. It's been a long time since I looked at it, and, as I said, I don't recall a press conference, and I don't recall whether we issued a press release or how we communicated it.
Q. Do you recall the date?
A. I, I don't recall the specific date. I recall April of 2017.
Q. I'll represent to you that the "Burlington Free Press" reported it on April 12th. Does that refresh your recollection?
A. Sure. It would have been then the day before that, perhaps, or two days before that. I don't know.
Q. And you had mentioned earlier today that you informed the Department of Public Service of the change in depth, correct?
A. The Department of Public Service? Yes. I didn't, but the, but VGS did, the company did.
Q. Right. And I've put up on the screen here Cross Exhibit 43, which is part of a discovery response we obtained from the company, Discovery Response VGS1-84.3J, as in Jim. Have you ever seen this?
A. It's not ringing a bell. I don't, I don't recall

it. I may have. I just don't recall it.
Q. It's dated April 26th 2017, and it's from Ms. Simollardes to Louise Porter at the Department of Public Service. Let me read it to you. "Hi, Louise".
A. No. I, I, I have it in front of me. I can read it myself.
Q. All right. Well, I want to read it into the record:
"Hi, Louise. Vermont Gas has been working with VELCO regarding a few locations within the VELCO right-of-way where the pipe does not have four feet of cover but does meet the loading standard articulated in the VELCO/VGS MOU, period. We thought it would be appropriate to share the information regarding the agreement with VELCO and the underlying analyses that confirm the standard is being met with the DPS. We would appreciate the DPS, apostrophe, DPS's reviewing this information as soon as possible. Please let either John or me know if you have any questions. Regards, Eileen".
Did I read that right?
A. Yes.
Q. So the Vermont Gas Systems waited through October, November, December, January, February, March, April, until after gas was running, and then you sent this

email to the Department saying, We want to let you know we don't have four feet of cover; am I right?
A. If this is the first communication that we had with the Department about the, about the depth of cover, then, then you would be correct that we, that, that April 26th would be the date.
Q. Are you aware of any communication prior to April 26, 2017 to the Department of these facts?
A. Not, not without going back and, and asking for a review of the records, no.
Q. And, in preparing your prefiled testimony, you did not make that inquiry either, did you?
A. No, I did not.
Q. Who made the decision not to inform the Department until April 26th of 2017?
A. I don't believe anyone made a decision not to inform the Department.
Q. Why was the Department informed on April 26th 2017 and not in September, October, November, December or some other earlier month?
A. The, the issues that, that the company was dealing with during this timeframe were, as you know, were, there was a lot going on, and the, this issue, this was an issue. As I said, I received a briefing on it. The, the team did a, a significant amount of work

around it, and the, in connection with this while a lot of other things were going on, and the, and our view at the time was that this was a nonsubstantial matter with respect to the, to the CPG, that is, that it was with VELCO's agreement that the, that the, that the depth of cover was adequate in the VELCO right-of-way in this area, the, with the, the standards under which the, the team was working.

The federal standard of three feet meant the, that the, the matter of whether or not the, the pipeline was safe and compliant in the, in the Clay Plains was one that was not a, an issue that required special handling, if you will, special attention. We were confident that we had done the right thing and that the, that, that the pipeline was, was adequately installed.

Q. So on June 2nd of 2017, you notified the Commission, correct?

A. I'll, I'll take you at your, at your assertion on the date. I'm not familiar with a specific date, but if that's when it was, then yes.

Q. So tell us what relevant facts had changed from September 21, 2016 to June 2nd 2017 such that you initially thought it was clearly an insubstantial change, but then you changed your mind and said, Well,

maybe we should run this by the Commission.
A. Yeah, the, the, the Department, my recollection is that the Department recommended -- that may be too strong a term. The Department thought that that's what we should do. The, we were determined to, to be sure that we didn't create an issue that, that was of concern to the Department or perhaps to other stakeholders that, that could create a, a claim or an allegation that we had done something inappropriate, and we concluded that it was the best course to file a nonsubstantial change request with the Commission, even though it was different than the nonsubstantial change requests that we had made before, which my recollection serves me were focused on changing the location of the pipe, rerouting the, the pipeline.
Q. When you became Chief Executive Officer in January of 2015, Vermont Gas was actively in proceedings before the Board in which private citizens and public interest groups were seeking to reopen the approval and shut down the construction, correct?
A. Yes.
Q. So are, isn't what you're saying you didn't want to give them any grist for their mill?
A. Well, we, we -- no, that's not what I'm saying. What I'm saying is that we concluded, when we filed the

nonsubstantial change, that there could be a concern, and we made the filing to provide an analysis as to why it was not significant and why it was nonsubstantial.
Q. But that doesn't explain why you waited until after gas was flowing to notify the Department of Public Service.
A. I, the, I actually don't recall the, the, there being any relationship between gases flowing and the timing of the, of the determine of the, of the filing. I do recall that we, we discussed how best to proceed. We were informed by the, not only by our own analysis, but also by the, the encouragement from the Department, and we made the determination that the best course to, to undertake was to file a nonsubstantial change on our own.
ATTORNEY DUMONT: So, Mr. Tousley, this raises an interesting point. Mr. Rendall has just talked about the advice he was given by his lawyers, and I know Mr. McClain doesn't want to --
MR. RENDALL: I think I said "we", and, when I said "we", I meant VGS.
BY ATTORNEY DUMONT:
Q. Well, you said the advice you got from the Department and from your own team.
A. So my team, yeah.

Q. So I've just -- I don't want to make this an inadvertent way --

ATTORNEY McCLAIN: Mr. Dumont, I'm happy for the Witness to testify how he wants to, and, if you want to try to characterize it different ways, that's fine, too, but I'm not uncomfortable with what the Witness has stated so far, so you can proceed with your questioning.

BY ATTORNEY DUMONT:

Q. Great. So let's clarify. Did the advice you got that led you to file with the Commission include advice from your lawyer?

A. The advice that I got regarding the nonsubstantial change, actually, I'm, as I'm recalling it, I don't recall having any specific conversations directly with counsel on it. I recall discussing it with, with my VGS team.

Q. Okay. So, when you said the team, that did not involve your lawyers?

A. Well, no, it did not specifically involve my lawyers in my recollection.

Q. Okay. Well, then that's my mistake. I assumed they were part of the team, so I apologize about that.

A. We do not have a, a lawyer in-house at Vermont Gas --

Q. Other than the CEO?
A. -- acting, practicing as a lawyer.
Q. So I'd like to talk about the company's history of violations that precede this proceeding. Do you agree in 2014 the docket in the case we've discussed, the Commission found that Vermont Gas had violated Rule 5.409 by delaying notice to the Commission of large cost overruns by 164 days? Do you agree with that?
A. Yes, I, I -- we, we talked about that at the beginning of my testimony here today. Yes, I do recall that.
Q. And the decision by the Commission to impose a penalty of $100,000 was issued in July of 2015, correct?
A. Sounds, sounds right.
Q. And then, on December 8th 2016, the Commission approved a stipulation between Vermont Gas and the Department in which Vermont Gas agreed to pay a civil penalty of $95,000; do you remember that?
A. I don't remember that specifically. I remember a $95,000 penalty. I don't remember the specific date.
Q. Do you remember what it was for?
A. I, actually, as I'm sitting here, I, I don't recall the specific violation that, that underlies that particular penalty.

Q. In 2017 there was another penalty case. In this one the Commission imposed a fine of $25,000. Do you remember what the violation was in that case?
A. I, I recall violations. I recall a harsh sunflower violation. I recall a, an induced voltage violation. There, I'm recalling there was -- I believe there was one other violation, but I don't recall the, the, as I'm sitting here, I don't recall the sequence or which monetary penalty went with which violation without, without having my recollection be refreshed.
Q. And in June of 2016 there was a fourth violation. Do you remember what that one was?
A. June of 2016?
Q. That's when the violation occurred, and the proceedings just finished up this summer.
A. Oh, that. So that would have been the -- I'm guessing here that you're talking about the blasting pattern.
Q. Yes.
A. Yes, yes, I, I recall that. I recall those circumstances as well, yes.
Q. So in your prefiled testimony, for example, on Page 5 Line 11 --
A. Are you going to call it up, or do you want me to pull out a copy?

Q. I can. Whatever works for you.
A. Let me see. I have a copy here. Let me --
Q. Sure.
A. Page 5?
Q. Yes. Answer 8.
A. Answer 8? Yes, I have it.
Q. You refer to an admittedly troubled early start with the ANGP, correct?
A. Yes.
Q. You were referring to what had happened when you, before you were the CEO, correct?
A. Yes, and the, and the time in my first several months as CEO as we, as we reset, reorganized, and determined how best to proceed with the project.
Q. You used the term "reset", R-E-S-E-T. What do you mean by that?
A. Well, we, as you may recall, Mr. Dumont, in, in the, at the end of the construction year in 2014, we sent the contractors home, closed up the project and, and made a reevaluation as to how we wanted to proceed. We determined that we would not proceed with construction immediately in 2015. We terminated the, the work on the, the phase of the project that was designed to bring natural gas service to the International Paper facility in Ticonderoga. We, we

shut down all of our planning and, and early development work regarding any further extension of the pipeline beyond Middlebury.

We made the decision to proceed with construction only on the first, what we called the first 11 miles, which was that segment of project that had been started in 2014 and had been constructed on kind of a hopscotch basis over the, over the span of 11 miles. We determined that we would only complete that portion of the project until we had further guidance from the Public Utility Commission, and we, we reevaluated our contractors.

We, we made some decisions about not retaining contractors. We made some decisions about, about project management. We made some decisions about project governance, and, and those were all ongoing from the, from the time that I first walked through the door at Vermont Gas, which was actually in November. My tenure as CEO began in January and continued through -- well, it was, it was an ongoing process that really never had an end, but the, the, we had put the, the pieces in place for how we would proceed with construction by the spring of 2015, as I recall it.

Q. Did you say that deciding not to go to Ticonderoga was part of your reset?

A. Yes.
Q. But that wasn't your decision; International Paper had informed you it would no longer participate in the project, correct?
A. Yes, we, yes, we, we had, we had many rounds of discussion with International Paper around what it would take to proceed, and, yes, it was International Paper that actually made the decision not to proceed after we had presented them with the, the, the manner in which we thought it was, it could be feasible to proceed.
Q. So, of the four violations that we've discussed, the cost increase --
A. The cost increase?
Q. -- the electrical risk to your workers, the harsh sunflowers, and the blasting plan violation, three of them occurred well after you began work as CEO, correct?
A. Yes, they did.
Q. If you have your prefiled in front of you, I have another quick question about it, Page 7. It's the tail end of Answer 8. You stated that, "We self-reported issues that we discovered", and I want to --
A. Yes.
Q. -- ask you if you've read Ms. Lyons's rebuttal

testimony.
A. In this case?
Q. Yes.
A. I, I'm sure I did at the time it was submitted. I just don't have a -- I'm not recalling it as I'm sitting here.
Q. She testified in her prefiled that, in the blasting plan violation case, the company did not report itself to the Commission until she he reached a settlement agreement with the company that compelled the company to report its conduct to the Commission. Do you remember that?
A. We, I don't dispute it. We reported to Ms. Lyons as soon as we discovered that the, that the incident had occurred. We were very proactive in, in contacting her and letting her know what had happened.
Q. In her testimony she says the company had waited until the next day. Are you aware of that?
A. Well, I, the, we may have waited until the next day. I don't know when we exactly determined that the, that it had occurred, but we, I view the next day as prompt and proactive.
Q. And you're aware that, by the time she was notified, your contractor had removed all of the blasted rock from her property, so there was no

evidence left of what had happened?
A. Well, I wasn't aware of that, but it wouldn't surprise me that the contractor was, was prompt and diligent about removing blast rock from her property. I would think that that's what they would do. I would hope that that's what they would do.
Q. Tell me, are you informed? Do you know what the process was that the company used for implementing the plans and evidence that the company had submitted to the Public Service Board in order to obtain the CPG?
A. I'm sorry. I, I'm not getting the question.
Q. Sure. You know from reading -- well, start off. You know from your prior experience that, whether it's Act 250 or Section 248, there's a general principle that you would only construct in accordance with the plans you submitted; you're aware of that right?
A. It would construct in accordance with a CPG and the final order. I, from my experience, a, a utility has or a permitted party with a CPG has a range of, of appropriate flexibility around the construction methods and, and details that they use in construction. So, when you say "in accordance with the plans", I'm, I, I don't want to agree with that. I can't agree with that based on the, the discussion that you had with, with Mr. Byrd this morning about the -- because I think your

view of what is in accordance with the plans and mine are not the same.
Q. But what counts is what the Commission's view is, right?
A. Of course it does, yes.
Q. Did the Commission put in the final order and it put in the CPG that construction must be in accord with the plans and evidence submitted, did it not?
A. Or words to that effect, shall be in accordance with, or words to that effect, yes.
Q. So my question is, What process did the company engage in to take the plans and evidence it had submitted and transform them into the specifications for the project?
A. Process? Well, there was a whole project execution that involved final plans. It involved obtaining right-of-way. It involved reaching out to stakeholders. It involved hiring contractors. it Involved reviewing with contractors the plans and specifications involved, the, all of the contract documents that that we had with all of the contractors. It involved the management of those contractors, the, the, ensuring that those contractors were working effectively together. It involved hiring inspectors to review the work. It involved putting our own people in

the field to, to ensure that our contractors and our inspectors were doing the work that, that they were hired to do. It involved our receiving regular reports on the progress. It involved our, our reviewing the progress of the, of the project on a, on a regular basis. It involved a whole host of things. That's not a complete list. That's an indicative list.

Q. In your prefiled you talk about keeping gas flowing to help people reduce their carbon footprint. It's on Pages 9 and 10. And you refer to using renewable gas. What percent of the company's gas portfolio is renewable right now?

A. A very small percentage, not even a percent.

Q. Not even a percent?

A. Not yet. That's right.

ATTORNEY DUMONT: That's all I have. Thank you.

MR. RENDALL: Thank you, Mr. Dumont.

HEARING OFFICER TOUSLEY: Thank you, Mr. Dumont. Do the other parties have questions in light in Mr. Dumont's questions and the answers provided by Mr. Rendall? Mr. Guzman?

ATTORNEY GUZMAN: The Department has no questions. Thank you.

HEARING OFFICER TOUSLEY: Mr. Miller?

ATTORNEY MILLER: The Agency does not. Thank you.

HEARING OFFICER TOUSLEY: Okay. I have a few questions. We talked a little bit about the nonsubstantial change determination, or you talked about it with Mr. Dumont. What is a nonsubstantial change determination from your perspective?

MR. RENDALL: From my perspective, it is a, a request by the company for a confirmation from the Commission that the, that, that the, that a deviation that we either had made or propose to make was, did not require an amendment to the CPG.

HEARING OFFICER TOUSLEY: Okay. So it's, it's both prospective and retrospective? Because I know the, there were six. This case began with the six nonsubstantial change determination requests. The first five, as you noted, addressed changes in the route of the pipe because of different things that happened across the way, you know, along the way. Those were all prospective, weren't they?

MR. RENDALL: I believe that they were, yes.

HEARING OFFICER TOUSLEY: Why was this one retrospective? Why wasn't the determination made in September of 2016 or earlier when Mr. Bubolz said it wouldn't work here to seek a nonsubstantial change to,

to put the pipeline somewhere else?

MR. RENDALL: My recollection, Mr. Tousley, is that the, apart from whatever Mr. Bubolz has said, and I don't know specifically what he said, but, apart from what, what he said, is that the, our construction team believed at the time that they went into the, the swamp that they had a, a means and method that they, they hoped and expected to be able to achieve four feet of depth, and the, and the, once they had come out of that, that exercise and, and determined that, that they had not been able to do so, then that's when the issue, that's when the issue presented itself, Okay, what's, what's next here? The, the, the question was hypothetical prior to construction.

HEARING OFFICER TOUSLEY: Okay. I guess, as I understood it from Mr. Bubolz's testimony, he, as the field supervisor for Michels, was concerned that the location of the pipeline as projected and that as constructed eventually, was, was, the right-of-way was too narrow to address the, the wetness, the swamp issue in the Clay Plains Swamp, and he asked, Why can't we put it somewhere else? Does that, does that ring bells for you?

MR. RENDALL: I, actually, I wasn't, I wasn't privy to those conversations and, and, and wasn't aware

of them until fairly recently, but I, I the -- certainly, a, that would have been a major decision for us to have made at that time to reroute the project while we were in the midst of a construction season and, actually, in the, whatever it was, the sixth inning of the season to stop and say, Time out. Let's, let's engineer a reroute, present it to the Commission, and, and determine how to proceed. That would have been a, a, that would have been a very big deal for us and, no doubt, would have delayed progress on an ongoing construction project for many months.

HEARING OFFICER TOUSLEY: As had been the case with at least one, if not two, of the prior nonsubstantial change determinations where there was, not protracted, but there was litigation associated with the request to make the nonsubstantial change?

MR. RENDALL: Yes. And, and I, I, I recall that the, the nonsubstantial change requests, some of them took more work, were litigated more vigorously than others and, in some cases, were, involved significant time, time periods and significant distraction of resources, yes.

HEARING OFFICER TOUSLEY: Okay. You talked a lot about -- go ahead.

MR. RENDALL: I say "distraction" in the

sense of, of a, of a diversion of bandwidth to, to those matters, not, not to, to, to understate the significance or importance of the, of the process involved.

HEARING OFFICER TOUSLEY: Okay. I have participated in -- at least, I helped write the 7970 decision, and I have participated in Vermont Gas issues since I came to the Commission in 2013, and I remember when, you know, the change happened when, when there was the, the project reset in 2015 and, and how that occurred, and, frankly, I was, I was, I've, you know, I've spent a lot of time working with senior leadership in different settings and, and both in the military and in the civilian world, and, and it, I find it fascinating to see how leadership adapts to challenges and how well or how, what systematic or organizational changes they make to deal with those challenges.

You know, I participated in, you know, the, the Katrina response. I participated in a number of activities that required instantaneous leadership, and I thought, in some ways, that's what you stepped into in 2014 and 2015, or 2015 in particular, when, when the reset occurred.

What, what did -- how did you make yourself smart enough to do your job? How did you keep yourself

briefed?

MR. RENDALL: The, it went -- it was, it was, and continues to be, a, a work in progress, an ongoing learning experience. When the, when I walked in the door, I, I, I sat down with all of the individuals that were involved in the project at VGS, consultants, lawyers, project management, professionals who were contracted to the project, the company's leadership, the company's board of directors.

I, I reviewed volumes of materials at the time, including the, many of the materials -- I won't say all of them -- many of the materials relating to the, to the CPG. I reached out to other leaders in Vermont and elsewhere for advice and counsel about how best to proceed, and, and I made the determination at the time that the, that it was -- I made changes around, in my, in my leadership team to bring in expertise that, that I thought was important, because this wasn't something that, that I was going to be able to do without -- my role, my role as CEO is not something that I was going to be able to succeed in without both strong support and, and excellent advice and counsel.

And I did make the decision at the time that we, that we needed to, to make a, we needed to make a significant change in the way the project was being

undertaken. It was very clear to me when I arrived that the project was, was deeply struggling. It was struggling at almost every level.

It was struggling, we were struggling with our contractors. We were struggling with all of our contractors. We were struggling with internal, with internal, with, with our project management staff. We were struggling with the, with project governance. We were struggling with how best to, to receive and disseminate information, internally as well as externally, around the project. We were certainly struggling with our stakeholders and, and our being much more thoughtful about how to deal with the communities that were being impacted, the individuals that were being impacted by the project.

So it was a -- did I have a, a playbook, kind of a, a specific playbook about what, what action steps I should take when I arrived? No. To the contrary, I came in really with an open book and then developed the playbook in, over a period of, of weeks and months with a lot of help and, and, as you may recall, that involved, first, understanding; second, in December, saying we're going to, we're going to stop. That was really the first most important decision we made, stop. And then we did, we spent many months hearing from

professionals and, and evaluating how best next to proceed. Does that help?

HEARING OFFICER TOUSLEY: No. That, that, you know, I, I, unfortunately, I'm, I'm reminiscing about observing Admiral Thad Allen's response to the Katrina disaster in New Orleans and south Louisiana. Several years ago, I was, I was part of his staff. I helped support that, and I, I, and, as, you know, I suppose I aspired to do what he did, because I became an incident commander at some point later in my career in the military, and I appreciate that kind of guidance.

You know, what, what -- how, you know, how did you, as an individual, take on that responsibility and, and use the talent that you had to, to address the challenge that was before you? And you've talked a lot about your teams. I mean, what, what was your chain of command structure? How did you, how did you -- you know, let's get to the year of 2016, by which, you know, the reset had occurred. Construction is going pretty much in regular swing with, with the new team. What was that team, and how did it work?

MR. RENDALL: So we had a, we had a project structure both in terms of, of people and in terms of, in terms of governance. We had a, we had an executive

sponsor who was, as of 2016, John St. Hilaire. We had a project manager, which was, 2016, I can't remember whether it was Patrick Dailey or John Stamatov from PwC. We had a project management team that we had that. We had an extensive contract with PwC to provide us with project management, leadership, and support.

We had, we had assigned different aspects of the project to, to individuals, whether they be internal VGS individuals or contractors, but we had a defined organizational chart and chain of command, and, and we operated through that organizational chart, which we reviewed periodically, more than once a year, as I recall.

We, we had an executive steering committee, which you might analogize to an incident command team, a project steering committee that received monthly updates and reports from the, from the executive sponsor and the project management team. We reported monthly, every single month, to our board of directors on, on project status and across the, across the gamut of the project, construction activities, regulatory activities, stakeholder activities, schedule, costs, forecasts, and we, and we repeated.

And the, and we had, both formally and informally, we, we, I made a, a commitment to be, to be involved

without, without micromanaging the team, but I made regular field visits. I spent a lot of time in the construction trailer. I had a lot of conversations with the, with many of the, the people on the ground doing the work to keep my finger on the pulse of what was going on so that I felt like I was both visible to them and understanding what was going on.

HEARING OFFICER TOUSLEY: So did you have, like, a war room where you had, you know, the map and lines on it and where assets were and that kind of thing?

MR. RENDALL: The, the, we had a bunch of war rooms. So, so we had, yeah, we had some, we had some space at VGS that was, that was not 100 percent dedicated to the project, but that -- it, it morphed over time, actually. We rented some space in Williston, which you could call a war room, which had the maps up, and that's where we would meet. We eventually brought that, left that space and brought it back to, to VGS. We, there was, there was dedicated space in the, in the main construction management trailer at, at our staging facility in Williston where all the maps were available.

HEARING OFFICER TOUSLEY: Did you receive daily status reports?

MR. RENDALL: Not in a formal sense. I received, I received virtually daily status reports for a time probably through -- I can't remember if it went into 2016, but, once we were in the swing of construction in 2016, I would say that my status reports were, were more on a weekly basis and were, and so ranged from very formal -- very formal was once a month -- to very informal, which was, which was talking to our leaders every day, including John St. Hilaire, our, our executive sponsor, including the, the PwC project management leaders, John Stamatov and Pat Dailey, including talking, I'm sure, virtually every day with Eileen Simollardes, because we had a lot of regulatory work going on at the same time.

HEARING OFFICER TOUSLEY: So, if stuff was happening, you usually knew about it relatively, as you said, contemporaneously?

MR. RENDALL: Yes, I knew about it contemporaneously if it was happening and, certainly, if it presented a, a significant issue or concern, and we had plenty of significant issues and concerns. We had the, the four items that Mr. Dumont cross-examined me about, three that happened after I came, the, the harsh sunflower. We had the blasting. We had the, we had this, this debate with the, with, with the

Department's engineer on induced voltage, where we ultimately accepted a, a penalty and changed our procedures.

We had, we, we had no -- I will say that, that we, we had, we had a fire drill going on the case on, in the project pretty much continuously from the time I arrived until actually after the project finished, which I'm trying to remember when that Supreme Court decision came down on the, on the park, but we had protests. We had -- I mean, it, we had -- our bandwidth was -- we had lots of bandwidth, and our bandwidth was stretched continuously through the project construction period, that 3.5 years.

HEARING OFFICER TOUSLEY: And, and that was a long time. I mean, I'm trying to remember what I was doing in September of 2016, and, and, frankly, I can't remember precisely. I'm sure, if I looked at some documents, I could figure it out. But do you remember at, you know, at, in September 2016 when the work took place in the Clay Plains Swamp, what your routine was for participating in and engaging in information about pipeline construction?

MR. RENDALL: I, I, I, what I remember about 2016, about that period is that, is that construction was proceeding. I'm, I can't remember what else we had

going on at the time, 2016. Probably Gepragas Park was occupying most of my bandwidth at that point.

HEARING OFFICER TOUSLEY: It would make sense. It occupied a lot of mine too.

MR. RENDALL: Yeah. But I, I remember, as I said to Mr. Dumont, I remember this issue about the swamp arising. I remember the, being briefed on it. I remember that the, that the -- I remember being confident that, that, that we were okay at three feet. That's what I remember.

HEARING OFFICER TOUSLEY: And that didn't -- you thought that was a nonsubstantial change?

MR. RENDALL: Yes.

HEARING OFFICER TOUSLEY: Okay.

MR. RENDALL: And I still think so.

HEARING OFFICER TOUSLEY: Okay. But you didn't tell us about it until the next summer.

MR. RENDALL: We did not file our, make our filing until June, I guess, is the timeframe, yeah.

HEARING OFFICER TOUSLEY: Okay. And that was in a prospective change, nonsubstantial change determination request, rather than a retrospective one like the other ones were?

MR. RENDALL: I think it's the other way around. That was retrospective.

HEARING OFFICER TOUSLEY: That was retrospective.

MR. RENDALL: We did it. We want you to affirm it, yes.

HEARING OFFICER TOUSLEY: Okay. And, and that was prompted by the Department?

MR. RENDALL: Well, it was the, it was the -- I, I would say, from my perspective, the Department pushed, pushed it over the edge of, of the, of its, we got to make this filing. This is not something that we can, that we can, that we can wait to, to have someone else raise and, and challenge us on.

HEARING OFFICER TOUSLEY: Okay. Do you remember most of the people that you worked with during that period?

MR. RENDALL: With respect to the, to the Clay Plains Swamp?

HEARING OFFICER TOUSLEY: Yes.

MR. RENDALL: Yes. It would have been Mr. St. Hilaire, Ms. Simollardes, principally, Mr. St. Hilaire and Ms. Simollardes. I'm, I'm not recalling anyone else specifically who was --

HEARING OFFICER TOUSLEY: Was Mike Regan involved?

MR. RENDALL: I, not, not with me. I'm sure

he was involved with, with Mr. St. Hilaire, but not with me.

HEARING OFFICER TOUSLEY: Okay, okay. And do you know who Daryl Crandall is?

MR. RENDALL: No.

HEARING OFFICER TOUSLEY: No? Okay. They were folks who were more on the ground when things were happening in September of 2016 on the Clay Plains Swamp.

MR. RENDALL: Yes, yes. Well, Mike Regan was, he was on the ground every day, and I spent a lot of time with him over the time that he was there, mostly in the field at the, or in the trailer. Occasionally, be in the VGS offices, and we would confer on an informal basis, but he was, but Mike was not someone that I had any direct, I don't recall any direct engagement on with respect to the Clay Plains.

HEARING OFFICER TOUSLEY: Okay. Well, that makes sense. Do you remember a piece of heavy equipment sliding and sinking in the swamp that they had to pull out because it was so wet?

MR. RENDALL: I, I, I remember, as you're saying it, I remember that there were, that -- I remember there were issues around that the construction was a big mess out there was, that was my, that was

what I concluded is that construction was a, was a mess and a challenge out there when they were out there actually doing it.

HEARING OFFICER TOUSLEY: One of the things that we've talked about in this last couple days is the VELCO-VGS MOU. Are you familiar with that?

MR. RENDALL: Yes, but not conversant without having it in front of me.

HEARING OFFICER TOUSLEY: Okay.

MR. RENDALL: I would --

HEARING OFFICER TOUSLEY: Well, I just want to -- there's a phenomenon in it that it refers to regular iterative discussion between VGS and VELCO about final concerns that, that's reflected in the final order in 7970. Does, does that, does that help?

MR. RENDALL: Well, I, the, I recall the -- I understood the MOU to be what I would describe as a, a living document, that is, a document that, that, that, by agreement, required the parties to continue to confer to deal with, with any relevant details of, in the, in the project that, that impacted VELCO in the right-of-way.

HEARING OFFICER TOUSLEY: Yeah. My memory, you know, from September of 2013 was that VELCO was very protective of its right-of-way, that it, it didn't

want to share that space with you. Does that, is that an accurate --

MR. RENDALL: I wasn't, I wasn't around at time. I was at Green Mountain Power. I do have a recollection that, that, that there was a, a, some, some reluctance on VELCO's part to having the pipeline in the right-of-way.

HEARING OFFICER TOUSLEY: Right. I mean, the MOU was completed kind of very late in the process in 7970, and it was incomplete, and, and inasmuch as there weren't formal agreements between VELCO and VGS about the use of the right-of-way, was it going to be a lease? How much, if anything, would VELCO get paid by VGS for doing it? Those sorts of details had not yet been fleshed out.

Were those discussions still going on in 2015 and 2016 while construction was taking place in the right-of-way?

MR. RENDALL: I, I, I can't recall a specific timeframe. I do recall that the, that, that we had ongoing discussions with VELCO about the terms and conditions of the, of, of the, the arrangement that, the lease, the payment, whether it was going to, how it was going to be, whether it was going to be long-term lease or a periodic, short -- I, I recall that there

were, there were still many details to, to work out.

HEARING OFFICER TOUSLEY: Yeah. And then we, we talked, or you talked earlier about the, or Mr. Dumont brought up the, the discussion in June or in September itself, between, in September of 2016 itself, on the, the 20th, the 21st, and the 22nd about what VELCO thought was okay in the Clay Plains Swamp. Did you participate in those discussions?

MR. RENDALL: Not, not directly, no.

HEARING OFFICER TOUSLEY: Okay. So these were not leadership, executive leadership things? These were, you know, you had Mr. St. Hilaire, who was the executive manager. I'm guessing he's the one who initiated and engaged in those discussions.

MR. RENDALL: I, I believe that, that John was directly involved in those discussions. I, I had, from time to time, and still have, from time to time, a check-in with the, the CEO at VELCO Tom Dunn, and, while I don't specifically recall any discussions around this, I do recall having discussions with him that, that, in which, in which we would discuss and affirm the fact that our teams were working together, that it seemed to be going well, and that the, and that the, and that, that if, if we hit a roadblock, that one or the other of us would, would alert the other and we

would engage as appropriate, and, and we did not engage on, on this issue. In fact, we haven't engaged on any issue in specifics that I can recall.

HEARING OFFICER TOUSLEY: Okay. Thank you. I don't have any more questions right now. Do any of the other parties have questions in light of the questions that I asked and the answers Mr. Rendall asked? Mr. Dumont?

ATTORNEY DUMONT: I do not. Thank you.

HEARING OFFICER TOUSLEY: Mr. Guzman?

ATTORNEY GUZMAN: I do not. Thank you.

HEARING OFFICER TOUSLEY: Mr. Miller?

ATTORNEY MILLER: The Agency does not. Thank you.

HEARING OFFICER TOUSLEY: Mr. McClain, do you want to ask any more questions? Would you like to ask any questions of Mr. Rendall?

ATTORNEY McCLAIN: I lost my mouse again. No, I have no questions. Thank you very much.

HEARING OFFICER TOUSLEY: Okay. Thank you, Mr. Rendall. I want to thank you very much for your testimony and your service. You're excused.

MR. RENDALL: Thank you.

HEARING OFFICER TOUSLEY: Okay. I think where we are now, why don't we take a ten-minute break

and come back and talk about the events tomorrow?

ATTORNEY McCLAIN: Okay, thank you.

HEARING OFFICER TOUSLEY: So we'll come back at, let's say, 4:20.

ATTORNEY McCLAIN: Sounds perfect.

ATTORNEY DUMONT: Thanks.

(A recess was taken from 4:12 p.m. to 4:30 p.m.)

HEARING OFFICER TOUSLEY: We've just completed a scheduling discussion for the remainder of the proceeding, and we are adjourned for the day to start up tomorrow morning at 9:30. Thank you all.

(Whereupon at 4:29 p.m. the hearing was adjourned.)

C E R T I F I C A T E

I, Sunnie Donath, RPR, do hereby certify that I recorded by stenographic means the Evidentiary Hearing Re: Investigation pursuant to 30 V.S.A. Sections 30 and 209 regarding the alleged failure of Vermont Gas Systems, Inc. to comply with the certificate of public good in Docket 7970 by burying the pipeline at less than required depth in New Haven, Vermont, on September 2, 2020, beginning at 9:00 a.m.

I further certify that the foregoing testimony was taken by me stenographically and thereafter reduced to typewriting and the foregoing 211 pages are a transcript of the stenographic notes taken by me of the evidence and the proceedings to the best of my ability.

I further certify that I am not related to any of the parties thereto or their counsel, and I am in no way interested in the outcome of said cause.

Dated at Westminster, Vermont, this 5th day of September, 2020.

//Sunnie Donath, RPR