UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of: *
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MERRIMACK VALLEY RESIDENTIAL GAS *
FIRES AND EXPLOSIONS * Accident No.: PDLMR18003
SEPTEMBER 13, 2018 *
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Interview of: MARTIN KULIG

Northern Essex Community College
Lawrence, MA

Sunday,
September 16, 2018

APPEARANCES:

ROGER EVANS, Investigator in Charge
National Transportation Safety Board

JIM SOUTHWORTH, Investigator
National Transportation Safety Board

RICHARD WALLACE, Director, Pipeline Safety Division.
Massachusetts Department of Public Utilities

DAVID NELSON, Operations Manager
Columbia Gas

TOM TOBIN, Esq.
Wilson Elser Law Firm
(On behalf of Mr. Kulig)

I N D E X

I N T E R V I E W

(9:38 a.m.)

MR. EVANS: We're on the record with Martin Kulig.

Good morning. Today is September 16, 2018. It is now 9:38 a.m. My name is Roger Evans, and I'm an investigator with the National Transportation Safety Board out of Washington, D.C. We're at the Essex Community College in Lawrence, Massachusetts. This interview is being conducted as part of the investigation into South Lawrence explosion of multiple homes that occurred in Lawrence, Mass on September 13. This is Case Number PLD18, M as in Mike, R as in Romeo, 003.

This interview is being recorded and may be transcribed at a later date. A copy of the transcript will be provided to the interviewee for review prior to being entered into the public docket.

Mr. Kulig, you are permitted to have one other person present during the interview. This is a person of your choice -- supervisor, friend, family member or nobody at all. Please state for the record who you have selected to be present during this interview.

MR. KULIG: Tom Tobin.

MR. EVANS: Thank you. Mr. Tobin, will you please introduce yourself?

MR. TOBIN: Hi. My name is Tom Tobin. I'm an attorney with the Wilson Elser Law Firm.

MR. EVANS: Thank you. We'll go around the room starting with my left, and I would like you to introduce yourself with your name, your job title and your affiliation, if you're in an agency or with a company.

MR. WALLACE: Richard Wallace, director of pipeline safety division, Massachusetts Department of Public Utilities.

MR. EVANS: And please spell your name.

MR. WALLACE: W-A-L-L-A-C-E. First name Richard, R-I-C-H-A-R-D.

MR. NELSON: David Nelson, Columbia Gas. Operations manager for CMA.

MR. EVANS: And spell your name, please.

MR. NELSON: D-A-V-I-D, N-E-L-S-O-N.

MR. EVANS: Okay. And Mr. Kulig, can you please spell your name?

MR. KULIG: Martin Kulig, K-U-L-I-G. First name is M-A-R-T-I-N.

MR. EVANS: Okay, thank you.

INTERVIEW OF MARTIN KULIG

BY MR. EVANS:

Q. So what we want to delve into today is just some basic information about your position, about your affiliation with the company and, you know, what role you may have played in documents that made it to the field for this particular case, you know, for this work that was being done. And we'd like to start out with

you giving us some background. First off, background of your company information and your -- how long you've been with the company.

A. Sure.

Q. And your job position. And if you've had multiple positions along the way, we'd like to know what those positions were.

A. Okay. Well, actually, I'm on -- actually, I'm on a second tour with the company. I originally started with what was formerly Bay State Gas Company. I started working for them as a co-op student in 1984, January 1984. I was hired full-time as an engineer, an associate engineer, back in 1987. And I continued to work through the company within the engineering capacity until 2001, when I left the company. And I went into private consulting for a period of about 5 years.

I came back to Columbia Gas again in 2007, April of 2007. I don't have the exact date, but approximately 5 years ago, I was promoted from the level of field engineer to that of leader of field engineering. My responsibilities for the leader of field engineering are to oversee engineering projects in both the Springfield, Massachusetts area as well as the Lawrence, Massachusetts area.

Q. Okay. And your education background, please?

A. I have a Bachelor's of Science in mechanical engineering from Northeastern University, and I have a Master's of Science in engineering management from Western New England University.

Q. Okay. So do you have people that report to you right now?
A. Yes, I do.
Q. And how many reports do you have?
A. I have (indiscernible) --
Q. Excuse me.
A. Full-time employees, I have six full-time engineers reporting to me in the Springfield division, Springfield operating center. And I have three engineers reporting to me in the Lawrence operations center. I also have one additional co-op student who works for me.
Q. Okay. And just to give me a rough picture of the reporting path that you have, who do you report to?
A. I report to David Mueller, who is the manager of field engineering for Columbia Gas in Massachusetts. He oversees both the Springfield, Lawrence and Brockton operating territories.
Q. Okay. And the -- and Dave reports to a president or CEO or something?
A. Dave Mueller reports to director of engineering, named Kevin Swiger. And Kevin Swiger, I believe, is located in Pennsylvania. Canonsburg, Pennsylvania.
Q. Okay. Okay, so with your job, take us through a routine day, what you would be doing and -- there's probably no such thing as a routine day.
A. Yeah, that would be correct.
Q. Yeah.

A. Field engineering is -- ultimate responsibility is to provide support for our capital replacement program. So we oversee -- in Massachusetts we oversee -- this year, the goal was going to be about 58 miles of what we categorized as priority pipe replacement. That would be cast iron pipe, bare steel, non-cathodically protected coated steel.

So we're responsible for the identification of those projects, design of the replacement projects, as well as the estimating cost tracking and project management of those jobs as it relates to any questions that should arise from construction out in the field as the jobs are being performed, or any other situations that should arise relating to those jobs.

We also oversee operations in each one of those territories. So any operational concerns that may occur, any normal operating conditions or any concerns that the local operations center manager may have will be brought to the attention of field engineering to see how we can help support that group as well.

And then the third tier of what we do, we also provide support for new business applications to the company. So we also design, estimate and work with our sales department to oversee that.

Those are our primary functions. Of course we have a lot -- we do a lot of other things as well. Compliance work. Things like that.

Q. Okay. Let's now go from the contractors, the rep of a

Columbia person on scene. And you say -- let's say, let's just say we have two guys that are -- with shovels in their hands, or a vac system or whatever. They're getting down to something, and there's -- and normally, I understand, there's a Columbia person with --

A. Correct.

Q. And is that a standard that you follow all the time, that there, that --

A. Well, that -- the actual execution of the work is either performed by construction personnel in our company or operations personnel in the company. So I do not directly oversee any of that work.

Q. Okay. But the package that they have in their hand to do the work, that package is from you folks, right?

A. Yes, sir.

Q. Okay. And that package that is handed to them, can you kind of go through the process of how a package gets put together and --

A. Yes. There are a couple -- presuming we're going to be talking about a replacement project, okay. So it's -- that's totally different from a new business project.

Q. Let's talk about a replacement project.

A. Replacement project. Yeah. So we have ways of evaluating -- we have triggers that evaluate our -- to evaluate certain types of work. Road resurfacing, anytime a road is resurfaced, we evaluate

what the facilities are located under the road. We also do a risk evaluation. We use a program called Optimain to get a relative ranking of the leak -- that takes into account the leak history and other risk factors associated with any segment of pipe. We take all these factors together, and we develop a portfolio.

Once every 5 -- once a year, we submit a 5-year plan to the Department of Public Utilities. It's part of what we call a GSEP program. A GSEP program focuses on replacing what we call priority pipe. That is pipe that is leak-prone pipe, pipe we should be concerned about; older, aging infrastructure that fell into one of the categories I was just talking about.

Q. And I'm sorry to interrupt, but can -- if you use an acronym, can you tell us what --

A. GSEP.

Q. -- that acronym means?

MR. WALLACE: Gas System Enhancement Program.

MR. KULIG: Enhancement Program. Thank you.

MR. EVANS: Thank you. And if you talk in this room, you need to introduce yourself because the --

MR. WALLACE: I'm sorry. Richard Wallace just spoke.

MR. EVANS: Thank you. And that is Gas --

MR. KULIG: System.

MR. EVANS: -- System --

MR. WALLACE: Gas System Enhancement Program.

MR. EVANS: Okay.

BY MR. EVANS:

Q. Okay, so continue.

A. So that's the identification of projects. There'll be one of those -- something triggers us to decide to focus on a section of pipe that we're going to replace. So one of the responsibilities of my team and myself is to identify the best projects based on risk, based off of public improvement projects, based off all those scenarios. Once we do that, we will actually develop a preliminary design. Field engineering will develop a preliminary design to try to best address any priority pipe that's located within an area, whether it would be a high-risk concentration or whether it will be a public improvement project, to determine the scope of a project.

We do an initial estimate. We do an initial design. Once we go through that design process, we will meet with construction and do what we call a constructability review. So we'll meet with either leadership of our construction team. If it's an operations-driven project, something, say, Mr. Nelson here, they voiced concern about a piece of pipe, priority pipe, that they have concerns about, that may also trigger replacement. We will sit down with that team and go over the scope of the project and look for feedback from that team as well.

Okay. Now once that is done, we finalize the, we finalize the project plans that make -- when we project -- when we finalize a plan, we make sure that we take a look at all of the material

that's going to be installed and abandoned. We develop tie-in procedures, pressure testing procedures. We make sure environmental concerns are addressed. And we actually have a checklist to go down to make sure that the protocol has been followed as far as constructability reviews, reviews of crews in the field -- I mean, constructability reviews for the construction people so they understand the scope of the project.

And we will -- on the bigger projects, we will actually walk projects with the construction people. When I say the contractor, as well as company personnel, so everybody has a thorough understanding of what the project is going to be, the proposed project. It's very common at that point that concerns are addressed, and we will actually revise the -- revise, possibly, the scope of the project slightly, or we may just change some of the procedures associated with tie-in procedures, things like that.

Q. Okay. So how do you integrate the changes into your GPS system? You know, the data.

A. The data. Yeah. It's actually a work order management system that we use. When you say a GPS system, are you talking about our GIS system?

Q. The GIS. Excuse me.

A. GIS system. When the project is completed, the inspectors in the field write down any changes that have been made. They document everything, and it goes to what we call our capital

closeout team. It's a separate department. They are the people who are responsible for making sure all the pipe has been accounted for, both installed and abandonment.

They actually do do another review. They oversee, they oversee the pressure test to make sure it was sufficient, that there weren't any anomalies in the pressure test. If there were, occasionally we will actually send that back to the field and have pipe retested. It's very uncommon, but we do occasionally do that. And capital closeout will actually -- they are the final stop. They're the final quality control measure.

So they take all these documents. Everything that we have that is generated is recorded in what we call WMS docs. So electronically, all this information is scanned and uploaded, is to be part of the permanent record. Procedures, drawings, as-built drawings, pressure test documents, inspectors' names, material used, everything is in there.

Q. And do you -- do your technicians, as they go out, like, on leak calls and all that, do they have access in their truck to --

A. They have access to GIS.

Q. The GIS.

A. Yeah. So what the -- what happens is, in these records, the GIS records, we put around the system -- this is another thing the engineers do. They draw a polygon around it. So when the field technicians, inspectors, locators, anybody click on the GIS map, they will see a polygon. They can click on that polygon, and they

can determine from that whether it's proposed work that hasn't been completed or if it is work that has already been completed. And at which point, they can click on all the pertinent information as far as the location and the facilities and all the, all the equipment that was used in the field.

Q. Okay. So when you're preparing these packages for, you know, changes and things, do you use a -- I mean, I would trust you have a library of standards?

A. Yes, we do.

Q. Okay. And are those standards referenced on the drawings?

A. Yes, they are. Not on the drawings. On the procedures. On the written procedures, which are a part of the tie-in package. So they'll get a list of written procedures for a job, detailing what's going to be done on each specific portion of the job. And then you will -- the second page will detail -- it'll detail the actual gauge locations for certain tie-in points, things like that, valves to be closed, squeeze-offs to be used, bypasses, size of bypass, things like that. That drawing is detailed, but the cover page associated with that gives a list of all the most pertinent standards to be used for the construction.

Q. Okay. So describe to us how you would ensure that the Columbia rep and the people with the shovels in their hands are following the package.

A. Engineering releases the project to construction. Once again, I said they have what they call a constructability review.

At that point, we said that the engineers will go into the field, and they will visit these jobs. But they're not there constantly. They're spot visits. They go for field and visiting.

We have inspectors in the field, and it's really the responsibility in the NiSource organization, as we speak, the Columbia Gas organization, where construction oversees the implementation of those tie-in procedures. So engineering per se is not the one out there saying, you're not following this procedure because you squeezed here instead of squeezing there. If we see something that appears to be incorrect on a site visit, we may talk to the -- either the inspector on the job or the supervisor for the project. But we do not have hands-on -- field engineers do not have hands-on authority or responsibility for the work that is actually going on in the field.

Q. Okay, and let's talk about inspectors for a moment on a, on a replacement-type scope of work where they're going to be, you know, maybe perhaps replacing a piece of cast iron or whatever. Describe when you feel as though you need an inspector on the job versus not having an inspector on the job.

A. It's not really my position to determine when I think an inspector should be used. That's really the responsibility of construction. I can't say, I can't say exactly how that is actually identified.

Q. That's fine.

A. Nor do we specify that in our, in our written procedures.

Q. Okay. Let's talk about the piping in the neighborhood that we had the problem with. I mean, can we, for the record, say that all those projects that have been done in that area have been walked?
A. I have to look and -- there's a certain limit, what they call, for a constructability review. And I'm concerned. I might have to come back with that actual dollar figure. So say it's a 40-foot cast iron encroachment, which means somebody is digging in close proximity to our pipe. There's a state code that says, if the pipe is encroached upon -- they give you a very prescriptive description of what an encroachment is -- that pipe has to be replaced. Say it's a very small segment of pipe. The job may or may not be walked. The larger jobs are -- there's always a constructability review done. There is a sign-off sheet, and there's actually a quality control program that is reviewed on a monthly basis through our corporate office to make sure that there are sign-offs for those constructability reviews, that they are being done, they are being performed.
Q. So the constructability review is a review that is done based on the price of the project. If it's a big project, small project --
A. Scope of the project.
Q. Scoping. Yeah.
A. Yeah.
Q. Okay. Okay. So what you're basically saying is there are

small jobs that would not get a walkthrough because they're too small to even -- it's not economical, I guess, in a way.

A. It's not, it's not even economics. A lot of times, it might be a project that occurs in the middle of the night, or a very -- a piece of pipe they're going to tie in to. They might find it's in poor condition, and they replace a 40-foot segment of it. Procedures are written for the job, but there's -- the work's usually in motion before the engineering package is -- there has to be a second job order, but the project's already partially underway in one way or another. Maybe a maintenance job. They may be responding to a leak.

In a situation like that, there isn't time for the whole -- the project timeframe gets compressed. So although an engineer may go out into the field and probably does go out to the field, the documentation of that field visit and constructability review may or may not be there. If it becomes a, if it -- if the small maintenance job that originally may have become a 40-foot job becomes a 2000-foot job, yes, there'll be a constructability review. It'll be a much more formal process at that time.

Q. Okay. Can you talk about integrity management for a bit?

A. Okay. Well, our Optimain program -- distribution integrity management, I presume you're talking about?

Q. Right.

A. Yeah. So I am, I am a subject matter expert on the distribution integrity management team. I respond to some, I

respond to some questions regarding engineering-related issues, as well as maybe pressure regulation issues. But primarily, engineering-related issues.

Optimain is part of our integrity management program. It's a risk ranking program that takes into account many factors. Class locations. Takes into account leak history, break history, things like that. So from an integrity management point of view, that is one of the cornerstones of what we do.

We also identify active corrosion projects through that as well. So we'll meet with operations, and operations will -- we come up with a list based off the risk ranking and the leak history of the segment of pipe using Optimain. We will, we will review those projects, and we have a very -- I believe it's 15 months from the time of the identification of the active corrosion area to the point that work has to be done. So we get involved in that.

Although this isn't part of our DIM program -- distribution integrity management -- we do regularly meet with operations personnel as well to address any concerns that the people -- somebody, say, like Dave Nelson. His field operation leaders, his frontline leaders, if they see something that really concerns them, we actually have a mechanism where we will, we will work with those people and to try to also make those projects as part of our portfolio.

And one last thing we do is we evaluate district regulator

stations based on many factors: based off of capacity, based off of history as far as safety, based off of performance issues such as icing in the regulator pits or something, and down to the level of where we even have safety of the people working on the station as far as traffic concerns and things like that. So there's a whole risk ranking program associated just around district regulator stations for that matter as well.

Q. Okay, so let's talk about risk ranking just for a second. So you know, I could, I could sit in my car and I could say, if I don't wear my seatbelt today and I go 5 miles, the risk of having an accident may be low, but the -- you know, but my consequence could be pretty high. Right?

A. Yes. Yes.

Q. That's very simple.

A. And that's --

Q. Risk equals --

A. -- where the risk is. Yeah.

Q. Risk equals likelihood times consequence, right?

A. Correct.

Q. So if you use a program to do risk ranking, is the program have -- are you saying your risk ranking is by software, where you type in variables and it --

A. No, no, no. It takes the variables based off of our work order management system, off of our leak history, into a -- also taking into account, as you said, the risk of consequence area,

other is (indiscernible) --
Q. HCA, all those types of --
A. Yes. Yes. It takes all of that into account. It's not just -- what I'm trying to say is a risk ranking isn't just based off of that program alone. We deal -- we talk to operations. We can document those meetings. We meet with operations people just to almost vet out, does this make sense; does this make sense; and what are we missing?
Q. Right. What I'm getting at is that you're not -- your risk ranking technology you have in place is not boilerplate. It actually uses what's on your work order --
A. Yes.
Q. -- to come up with some sort of a -- and where the work's being done and all this other type --
A. Correct.
Q. Okay. Okay. Are you familiar with what happened at this accident?
A. Yes.
Q. And you know what happened, right?
A. Yes.
Q. And when this -- when you found out what happened, what was the first thought you had in your mind?
A. Well, as an engineer, I think it's important not to -- I shouldn't say -- okay, let me just -- are you saying when I received the phone call, or after I found out what the reason was

for the failure?
Q. No, I'm not talking about emotion.
A. Okay.
Q. I'm not talking about -- I mean, you know, everyone thinks NTSB investigators have this -- you know, we don't have any feelings sometimes, but --
A. No, no, no, it's --
Q. You know, and this -- when I heard about this accident, I was devastated. I was like, oh my god, this isn't happening.
A. Well, I'm asking what -- are you asking me did I -- did something come to mind where I knew what the problem was? Or are you saying after they told me, once we did some analysis, this is what we feel happened?
Q. No, what I'm, what I'm wondering is, did you automatically think that -- what part of what we do did not keep this from happening?
A. Yes.
Q. You did think that.
A. Yes.
Q. And have you come up with any sort of scenarios that -- I mean, what you're telling me, from what you've just discussed, right? There's a lot of programs you have in place, you know, to, kind of, prevent something like this from happening. I can -- I mean, I can see easily by going through what you just said, you know, your program is pretty sharp. I mean, it looks like a --

for how many people you have in your company, that -- this is a major -- kind of a big league program for a smaller company, is what I'm saying. You have all the parts and pieces to manage stuff like this: work order program, walkthrough, capital improvement plan that has, you know, risk assessment attached to it. You have all those pieces.

And what we're, what we're trying to find out is -- and we're not asking for probable cause. We're wondering if there is something that you saw in your system that, you know, perhaps, you know -- well, should we have walkthroughs on smaller jobs? Or should we have -- you know, that kind of thing.

A. Can we take a break?

Q. Well, if you don't know or -- if you, if you want to talk to your attorney, that's fine.

MR. TOBIN: This is Tom Tobin. I do find the question a little confusing, with all due respect.

MR. EVANS: Okay, let me --

MR. TOBIN: I'm not entirely sure what you're asking, but if the witness thinks he's sure and the conversation can continue, that's fine.

MR. EVANS: Okay, let me, let me just rephrase things. Obviously, high-pressure gas made its way to homes, correct?

MR. KULIG: Correct.

MR. EVANS: So for high-pressure gas to make its way to a residence that normally has inches of water column pressure and

now they have pounds of gas pressure, in your mind, you must have said, something didn't go right for this to happen.

MR. KULIG: Correct.

MR. EVANS: There was something along the lines of what occurred that -- you know, how did this happen? What did, what did -- what was the piece of the process that you folks could have done, you know, along the way to say -- if this was actually allowed to happen, was there something along what -- how we did this work in that neighborhood that was, you know, weak the way you, you know, addressed it? Or to prevent this in the future, what could we do to, you know, keep something like this from happening? Constructability, crews, inspection, quality control, documentation, whatever it may be. You know, that's kind of where I'm going.

MR. KULIG: Well, would a -- can we take a little bit of a break? I think --

MR. TOBIN: Is it okay to take a break?

MR. EVANS: Yeah, go ahead.

MR. TOBIN: So we'll go off the record?

MR. EVANS: Off the record.

(Off the record.)

(On the record.)

MR. EVANS: We're back on the record with Martin Kulig.

BY MR. EVANS:

Q. Martin, when this accident happened, I'm sure you had a lot

of emotion going through your mind and had a lot of, you know, wonderment and like how this happened kind of thing. But when you put all that to the -- aside and you think to yourself, being a technical person, knowing all about this situation, knowing about the piping in that community, and knowing that -- I would think you would know that at the time, from multiple explosions to have happened in a community, you would have to have high-pressure gas. You understood that; is that correct?

A. Yes, sir. Yes.

Q. You did understand that. Okay. So when you understood that that may have been what occurred in this environment, although we don't know factually just yet, but had that been the thing that happened, which was an over-pressurization where pounds of gas versus inches of water column made its way into a home, what was your first thought at what may have happened?

A. Okay. So there is three possibilities in that circumstance. And I received this phone call. And the, and there is -- the three possibilities to me were some type of incorrect tie-in, where two pipes of different operating pressures were connected together and procedures were not followed regarding gauges. The second possibility could have been some type of district regulator station, some supply pressure system failing feeding into the system. And the third thought could be a potential sabotage, which I considered very, very low at that point. But once again, you have -- in today's day and age, you have to consider that

possibility.

So that evening, I worked late talking to the people. I was in my Springfield office when the phone call came in. Immediately talked to my boss. I believe we worked till about 11 o'clock that night in the Springfield division. My boss, David Mueller, got in his car and drove up to the Lawrence division operating center. I drove up to the operations center. I got there about 7, a quarter to 7 in the morning, at which point people in the field, people -- construction personnel and engineering personnel, with a fairly high degree of certainty, were zeroing in on the failure of a district regulator station supplying high-pressure gas into the system. Higher pressure gas into the system. There were no final conclusions, but that initially became a very strong theory.

Q. But saying that we have two of these -- forget about sabotage for a minute. Let's say, in saying that we have two of these items that you could ponder about, when you thought about this accident, did you think about your system, your process, your quality control, your inspections? Did you think about all those things and did you kind of --

A. Because of our peer review system -- I'll be honest with you. If I was going to speculate, just from not seeing the drawings in front of me, not seeing the maps in front of me, I virtually -- I had a very high degree of certainty in my mind that it was two different systems that were tied together, which was not the case. So the -- in a ranking, I would have said different systems

connected together, pressure control failure, sabotage. That's how I ranked it with decreasing probability. By the time I came up to Lawrence on Friday morning, it was already pretty clearly understood that a failure had occurred as a result of the tie-in process. And you shouldn't even say "the tie-in process." The abandonment process.

Q. Okay. Thank you for that clarification.

A. Okay.

Q. Okay. Now that you said that, is there part of the work process that you see where there's a weakness?

A. We have a very, very good technical support team that -- and we call -- I'm trying to think of --

MR. KULIG: David Nelson, what is Ed Collins' team called? I'm just having a -- standards?

MR. NELSON: Is it okay to answer? Dave Nelson responding. Our gas standards group.

MR. KULIG: Yeah.

MR. NELSON: They review all standards. If there's any concerns, they will update them or do an analyzation of that through (indiscernible) company.

MR. KULIG: So somebody like myself will be a member of that group and have the discussion. But what I think should be done is the collective, the collective knowledge and experience of that team, I think, could probably come up with a much better solution than anything I can do just sitting here right now speculating

about --

MR. EVANS: So it could be at the standards level.

MR. KULIG: I believe it will be at the standards level.

MR. EVANS: Okay. I appreciate that. That's all the questions I had for right now.

Oh, by the way, for the record, Mr. -- introduce yourself.

MR. SOUTHWORTH: Jim Southworth, NTSB.

MR. EVANS: Spell your name, please.

MR. SOUTHWORTH: S-O-U-T-H-W-O-R-T-H. First name James, J-A-M-E-S.

MR. EVANS: Okay, thank you.

(Off the record.)

(On the record.)

MR. EVANS: Introduce yourself, please.

MR. WALLACE: Richard Wallace, W-A-L-L-A-C-E.

BY MR. WALLACE:

Q. Mr. Kulig, when you were developing your work package for a project, what type of information do you have at your access?

A. We have GIS data. We have the legacy work records. Legacy work records, GIS. I can't -- I'm not certain of the date it was instituted, but -- up in Lawrence, but prior to that, the legacy records of the system that we used before, engineers and construction personnel can refer to previous tie-ins that may or may not be included into the GIS system. We have pending leaks. We have work order, you know -- pending leaks. They can look at

any other proposed work in the area that shows up -- what I was talking about was that polygon. Any of the proposed and adjoining areas, parallel streets, nearby streets. All these things. I would say, fundamentally, that's most of it.

Q. In this particular incident, did you go back and take a look at the legacy records?

A. The engineer responsible for this project -- I personally did not, as far -- are you talking at the time of design?

Q. At the time of design.

A. Okay. Personally I did not. The engineers working on the records, I would have to double-check that. I don't, I don't look at each -- I approve the projects as far as making sure that pre-design job visits, pre-construction visits, peer reviews. These are the questions I ask. I do not go through and actually -- on every single project look at every single step of the process.

Q. So as part of your process, do you have a checklist for your engineers to follow?

A. Absolutely.

Q. Is the legacy records review part of that --

A. It is not specifically spelled out, no. It is not specifically spelled out.

Q. It is not. Okay. So in this particular case, do you know what the engineer relied on? Was it specifically --

A. No, I do not.

Q. -- the GIS?

MR. TOBIN: Wait for him to finish the questions before --
MR. KULIG: Oh, I'm sorry.
BY MR. WALLACE:
Q. Was it specifically the GIS records?
A. I do not know the answer to that.
Q. In other projects, have they traditionally gone back and checked the legacy records?
A. Many of them, yes. I can't say all of them. So that -- if something doesn't appear, if something appears questionable or if there's incomplete information on the GIS or there is information -- I would say incomplete information on GIS, that would allow them to make that decision. For instance, say there's a valve and they want to use the valve. They might go back to the legacy records, see when the valve was installed, what type of valve it was, if it's ever been used before. Things like that.
Q. If there are no legacy records available for a particular project, is that noted within the work package?
A. No, but the -- no, it is not. But the -- I want to just clarify that they do not go back and look at legacy records for every single job. Only when there's a question about it. But they will -- if we are so concerned about a project, we will do maybe a -- possibly a vacuum excavation or an exploratory investigation to see what we have in the field.
Q. You're responsible for all instrument regulation and --
A. No, sir.

Q. -- pressure regulation?
A. No, sir.
Q. That does not come out of your --
A. That comes out of a different team.
Q. That comes out of a different team.
A. Yes. We have, we have system operations. That is the name of our team, name of the group that is responsible for the operations and maintenance of regulator stations.
Q. Who's the leader of that group?
A. Leader is Jeff Croke, is his name. The manager is Manny Kuzeno (ph.).
Q. When you originally started your interview, you talked about your education.
A. Yes.
Q. Have you attended any pressure regulator training specifically for the type of regulators that you use within the system?
A. Yes.
Q. Is that through the manufacturer?
A. It has been both through the manufacturer and through our school that -- we have a training -- we had a training center that I attended in Columbus, Ohio.
Q. And that is -- who was that conducted by?
A. The one in Columbus, Ohio, I'm going to have to get back with the name of the gentleman.

Q. Is it conducted by a company --
A. Yes.
Q -- or a CMA or -- I'm sorry -- Columbia Gas individual?
A. A NiSource.
Q. A NiSource individual?
A. Yeah. Yes. But we do also get training from manufacturers' reps in the field as well.
Q. Are you required to have any operator qualifications, certifications?
A. Engineers are not required to have any operating qualifications. No. Because we do not come in direct contact, nor do we give direct oversight or supervision to telling crews in the field what to do.
Q. When you're doing your work package, designing your work package, do you specify any type of particular task that they would have to perform on a -- if it's a -- on a tie-over or -- in other words, do you require them -- do you specify in your work package to install gauges on either of the systems?
A. Absolutely.
Q. You do.
A. Yes, that --
Q. Do you require the use of gauges when you're working in conjunction with a district regulator station?
A. Yes.
Q. Do you have -- when you're making a tie-over, is it required

for the crew that is conducting that tie-over to have intimate contact with the control room?
A. When we're talking about -- we're talking about gas control? Is that what you're talking --
Q. Gas control. Yes. I'm sorry. Gas control.
A. If we feel it -- if it's a system that will impact, significantly impact gas control, yes, we are required to do that.
Q. But that's not required on any -- on every tie-over?
A. Not on every tie-over. But something that would significantly impact the system, where it may change the overview and the overall operation of something gas control either has control over or may see, will -- gas control will be involved in that.
Q. The individual that developed this work package, did that individual have an extensive experience, years of experience in doing this type of work?
A. The engineer responsible for that currently has approximately 4 years', 4 years' experience.
Q. Four years' experience?
A. The engineer who helped conduct the peer review of that -- of the tie-in packages and procedures has 5 years' -- over 5 years' experience. And the constructability review is done by construction leadership in Lawrence on a project such as that. I don't have the person's name on there, but I would highly suspect it was the supervisor in charge of construction, who has at least

10 years' experience. I'm guessing on the experience, but -- I probably shouldn't do that, but has significant experience.

Q. When you put out a work package, the crew goes out. Construction crew does the work. What type of information do they send back to you?

A. Typically they'll send back questions to us if something changes, like the sequence of tie-ins change or something like that or the actual, the actual process of tying in changes. Other than that, if the job, if the job is designed and goes well, goes according to plan, other than us being notified, we get -- we have weekly, we have weekly meetings -- wait one second.

We have weekly meetings with our construction team, contractors and schedulers so we get a status of what's going on on a job as far as the project progress. But if everything goes according to plan, when we release that job, other than an engineer doing a sight visit occasionally to make sure it's going according to plan, that -- other than that, it will go to our capital closeout group, where it'll be -- the records will be updated.

Q. Was this a third-party contractor that worked on this project?

A. Yes.

Q. Who is responsible for developing the as-built drawings for that project?

A. I'm going to have to talk to construction about that. I'm

not sure if it was an inhouse, I'm not sure if it was an inhouse inspector or a third-party inspector who did it. I can't answer that question right now.

Q. Do you -- when those come back, do you get those --

A. No, they --

Q. -- as-built drawings back to you?

A. No, sir. They go right to our capital closeout group and they're uploaded into GIS.

Q. So is it safe to say that, when those drawings go back to capital improvement, you don't have any knowledge of whether the system was constructed to the way you had designed it?

A. The crew, the crews in the field and the supervision in the field, the leadership in the field, should follow those procedures. And if they deviate those -- from those procedures, the process is to come back to engineering. You know, so otherwise, we would have to have an engineer standing there virtually all the time. Or to your point, those records would have to come back to engineering for a review. But that is not the process.

Q. So typically, there is no review of a project that is in as-built stage?

A. Not by engineering. Sorry to interrupt.

Q. So that does not come back to you to review. There's no -- is there safe to say there's also -- as part of that question, is it safe to say that there is no process in place for engineering

to say, okay, it's okay to pressurize this system, it's okay to turn this system over based on as-built drawings?
A. You would be correct with that statement. But I just would like to add that capital closeout is very well aware that -- they compare the proposed drawings to the as-built drawings. And if there is any discrepancy, then that would come back to engineering. But it -- engineering isn't the driver. Engineering would be the receiver at that point of the information.
Q. Do they have engineering background in that particular realm of capital closeout?
A. They have training. Some are, some are college graduate engineers. They all have significant training to perform that job duty. They're not design engineers, so -- some of them have more of a GIS background. But they all have training in what the, what the procedures are supposed to be. And once again, that's in a different group and I'm going to -- I would have to have somebody from that team really respond. It wouldn't really be appropriate for me to speculate about that.
Q. When you develop your work packages, aside from an engineering standpoint, is it done under a review of the federal codes under 49 CFR Part 192?
A. It is, it is -- yes. But more importantly, it's done under our company standards, which almost exclusively are more stringent than 49, 192 or 220 CFR.
Q. Does the capital improvement closeout, do they have that

knowledge of CFR 49?
A. I cannot answer that. It's a different team. I can't -- I have --
Q. That's all right.
A. I can't answer that.
MR. WALLACE: All right. Thank you. That's -- I don't think I have anything else.
MR. NELSON: Dave Nelson.
BY MR. NELSON:
Q. Marty, is there a checklist to create the folders that (indiscernible)?
A. Yes, sir.
Q. Is construction responsible to make sure everything on that checklist is correct or signed off on from engineering?
A. Yes.
Q. Is GIS our only mapping system where you can gain information?
A. Other than the archival records that were scanned or systems that were previous to GIS that are -- but GIS is our record -- it's our system that -- there's a term I'm trying to come up with. System of record, I believe, is the term they use. Something along those lines.
Q. I guess, are there other records of the regulator stations with more detail?
A. Yes.

Q. You commented small projects sometimes will be started without plans. Are these always emergencies?
A. If they're going to be started without engineering design plans, they would fall into the category of emergency work, yes.
Q. You made a comment that you believe it's 15 months. Are you 100% sure for the risk ranking?
A. Well, no. What that pertained to is active corrosion. Okay? The active corrosion list. And it's --
Q. Thank you for the correction. Are you 100% sure?
A. The wording of it is 15 -- yes. Yes, I am.
Q. Okay. Thank you.
A. I'm trying to remember the specific wording of that. It's very clear.
Q. If operations identifies a project that isn't on the Optimain, but they identify that needs to be done and they say it needs to be done, does it get done?
A. Yes.
Q. This was in regards to Mr. Wallace's question about, if we're not sure of what's in the ground, have we verified facilities in the ground before we execute either the plan and/or the job?
A. Yes, we have.
MR. NELSON: I have the name of the question of -- the person who was doing the training. I don't know if it's appropriate for me to answer that or not. For the regulator training that Mr. Wallace asked about.

MR. EVANS: Yeah, you can go ahead.
MR. NELSON: Mike Clark is our regulator person that trains vast majority of the company.
MR. WALLACE: Okay.
MR. NELSON: The question about the gauges and tie-over at the site of the incident, was that a low-pressure to low-pressure tie-in?
MR. KULIG: Yes, it was.
MR. NELSON: And last question is, is construction responsible for the -- to follow the construction and to verify that the construction of the plan that engineering sets out?
MR. KULIG: They are responsible to -- if they deviate from the plan, they are responsible to come back to engineering.
MR. NELSON: So they're responsible to follow it and/or notify you.
MR. KULIG: Yes.
MR. NELSON: That's all I have.
MR. EVANS: Okay. Roger Evans.
BY MR. EVANS:
Q. I want to make sure for the record that -- was this project on Optimain?
A. This project -- I talked about the three different drivers. I talked about -- I spoke about the risk factor, I talked about public improvement factors and I talked about operational factors. This was not because of Optimain, although it does have an

Optimain risk ranking score associated with it. This was really a public improvement project, part of a much larger water main replacement project within the city of Lawrence. They have a, they have a very, very large, extensive program replacing tens of thousands of feet of water main and relining water mains throughout the city. I kind of touched on a little bit cast iron encroachments. When they're digging within close proximity of cast iron, there is a standard -- a code in Massachusetts. I think it's 220 CFR 113. That gives a very specific, prescriptive plan of when pipe has to be replaced.

So what we try to do is, a lot of these projects, we preemptively go in and replace the pipe before a project starts. Say it's a sewer project or a water main project. The main driver for this project on South Union Street was a water street project -- was a water main project. And we had, in many locations, we had multiple cast iron mains. Most certainly was going to be encroached upon, and in an, in an effort to protect public safety, instead of waiting until they replaced the water main with the increased risk of damage or undermining the pipe or cracking the pipe, we try to get ahead of these projects and replace the pipe before their project starts.

Q. I see.

A. And that's what the -- that was the driver for this job.

Q. Okay. There is a configuration that our PHMSA guy has talked about quite a bit over two breakfasts so far. And we're kind of

baffled by it. It's where they put two caps on an 8-inch line and the -- and I'm not that familiar with it. But you know, the -- I understand the sensing line was tied into an abandoned line.

A. Correct.

Q. Can you explain the caps, the caps that were installed and, kind of, how your instruction could have indicated to tie in to an abandoned line with the sensing line?

A. This project didn't specifically say to tie in to a line. It was already tied into that line. So the line that was abandoned was abandoned -- and I'm going to give an approximate footage, because I didn't measure it off the map. Was about 1500 feet, more or less, down the road from where that regulator station was located. It wasn't immediately next to a -- I mean, relatively speaking, it wasn't immediately next to the regulator station. It was blocks away. So it wasn't like we were working within plain view of the regulator station, or the company wasn't. If the question is capping the pipe -- you were talking about --

Q. Yes.

A. -- why we do that?

Q. Well, now there's -- I wish I had the sketch with me. No, there's an odd configuration where there, where there was -- it was capped on one end and --

MR. EVANS: Did you see it?

MR. WALLACE: Yeah, I did. I did. So yeah, it appeared from their drawing --

MR. EVANS: Introduce yourself, please.

MR. WALLACE: Oh, I'm sorry. Richard Wallace speaking. It appeared that you had capped off the old cast iron line, and there was another line coming down from the side of the regulator and dashed off -- depicted as a dashed line. Made a 90-degree turn. And when it got to one of the mains that was in the vicinity of the abandoned line that had been -- a large cap put on the end of that, it had been capped off and then capped off on both sides. It appeared to be some type of an abandoned line, because I know under the regulations in Massachusetts, when you abandon a line, you need to cap both ends of it --

MR. KULIG: Correct.

MR. WALLACE: -- on both state regulation and federal regulation. So from the appearance of the drawing, it appeared that they did that in order to drop the new main in place.

MR. TOBIN: Is there a question?

MR. WALLACE: It is, sir.

MR. KULIG: Yeah.

BY MR. WALLACE:

Q. So do you know what those caps would be on --

A. No, there --

Q. I'm sorry. I'm sorry.

A. There was that station -- at one time, it was tied into another 3-inch low-pressure system that had been abandoned on a previous project. Not sure if that's the dashed line unless I

looked at the drawing right now. I would really have to see that drawing to answer that question with any degree of certainty.
Q. Yeah, because one of the capped lines went off into the bank across the way, so --
A. Yeah, that was, that was --
Q. And I did not see a smaller diameter drawing on -- line on the drawing.
A. Yeah, that was -- I believe that was a hand sketch that you were looking at, correct?
Q. Correct.
A. Yeah, so that was from a previous project. My understanding is that it was not to do with this specific project whatsoever. Okay? It was done in a previous year or previous project. That's my understanding. Okay?
Q. Okay.
A. I was mainly -- when I was reviewing this job intensely before I came in here, I was looking at those drawings and I asked that question. So that was the, that was the explanation given to me.
Q. Richard Wallace again. Do you know what that dashed line was?
A. I believe it was an abandoned 3-inch low-pressure line.
Q. The dashed line was an abandoned 3-inch.
A. Once again, I'm going by memory, okay? So this is -- I'm a little concerned about answering that just because --

Q. That's fine.
A. -- unless I see that drawing, I'm -- I just want to be sure.
MR. WALLACE: Okay. Thank you.
MR. KULIG: Okay
MR. EVANS: This is Roger Evans again. That's all I have.
MR. WALLACE: I don't have anything else. Richard Wallace speaking.
MR. NELSON: Dave Nelson. I have nothing else.
MR. EVANS: Okay, we're off the record.
(Whereupon, the interview was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	MERRIMACK VALLEY RESIDENTIAL GAS FIRES AND EXPLOSIONS SEPTEMBER 13, 2018 Interview of Martin Kulig
ACCIDENT NUMBER:	PLD18MR003
PLACE:	Lawrence, MA
DATE:	September 16, 2018

was held according to the record, and that this is the original, complete, true and accurate transcript which has been transcribed to the best of my skill and ability.

[redacted]

[redacted]

Eileen Gonzalez
Transcriber