UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Investigation of:	*	
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THE EXPLOSION OF APARTMENT BUILDING 8701 OF FLOWER BRANCH APARTMENTS IN SILVER SPRING, MARYLAND ON AUGUST 10, 2016	*	Accident No.: DCA16FP003

Interview of: MICHAEL WILLIAMS

NTSB Headquarters
Washington, D.C.

Tuesday,
January 31, 2017

APPEARANCES:

RAVI CHHATRE, Investigator in Charge
National Transportation Safety Board

ROGER EVANS, Senior Pipeline Investigator
National Transportation Safety Board

KALU KELLY EMEABA, Pipeline Investigator
National Transportation Safety Board

DOUG STAEBLER, Senior Vice President Operations
Washington Gas

STEVEN PRICE, Assistant Vice President for
System Operations
Washington Gas

SPENCER NICHOLS, Associate General Counsel
Washington Gas

LT. WILLIAM OLIN, Fire and Explosives Investigator
Montgomery County, Maryland

JOHN CLEMENTSON, Assistant Chief Engineer
Public Service Commission of Maryland

I N D E X

I N T E R V I E W

MR. CHHATRE: Good afternoon. Today is Tuesday, January 31st, 2017. We are currently at the NTSB Headquarters located at 490 L'Enfant Plaza East, S.W., Washington, D.C. We are meeting regarding the investigation of explosion of Building 8701, Flower Branch Apartments, Silver Spring, Maryland, that occurred on August 10, 2016.

My name is Ravi Chhatre. I'm with National Transportation Safety Board located in Washington, D.C., and I'm investigator in charge of this accident. The NTSB investigation number for this accident is DCA16FP003.

I would like to start by notifying everyone present that this -- in this room that we are recording this interview and we may transcribe it at a later date. Transcripts will be provided directly to the interviewee, and that will be to review and identify any typographical errors. The transcripts may be posted in NTSB's public docket.

Also, I would like to inform Mr. Mike Williams that you are permitted to have one other person present with you during the interview.

MR. WILLIAMS: Thank you.

MR. CHHATRE: This is a person of your choice, your supervisor, friend, family member or, if you choose, no one at all.

Please state for the record your full name, spelling of your

name, organization you work for and your title, business contact information such as mailing address, and whom you have chosen to be present with you during your interview.

MR. WILLIAMS: I'm Michael Arthur Williams. I work at Washington Gas at 11801 Nebel Street, Rockville, Maryland. I'm the aboveground construction supervisor. I select Mr. Spencer Nichols to be present with me. My contact information would be mwilliams@wasgas.com. Office phone number is [redacted].

MR. CHHATRE: Your office mailing address where we can send you the transcripts?

MR. WILLIAMS: My mailing address is 11801 Nebel Street, Rockville, 20852.

MR. CHHATRE: That's Washington Gas also?

MR. WILLIAMS: Washington Gas.

MR. CHHATRE: Thank you.

MR. WILLIAMS: In Rockville, Maryland.

MR. CHHATRE: Now I would like to go around the room and have each person introduce themselves. Please state your name, spelling of your name, your title, and the organization that you represent, also your business contact information. Starting from my left.

MR. EMEABA: Kalu Kelly Emeaba, K-a-l-u, K-e-l-l-y, E-m-e-a-b-a. I'm an NTSB investigator.

MR. NICHOLS: Spencer Nichols, Associate General Counsel, Washington Gas; snichols@washgas.com; [redacted].

MR. STAEBLER: Doug Staebler, Senior Vice President, Operations, Washington Gas; [redacted]. Office is in Springfield, Virginia. Phone number is [redacted].

MR. PRICE: Steven Price, Assistant VP for System Operations, Washington Gas. Same mailing address. My email is [redacted], and my phone number is [redacted].

LT. OLIN: William Olin, fire and explosives investigator for Montgomery County. Phone number is [redacted]. Email: william -- [redacted].

MR. CLEMENTSON: John Clementson, Assistant Chief Engineer, Public Service Commission of Maryland, [redacted].

MR. CHHATRE: Thank you. And this is Ravi, NTSB.

INTERVIEW OF MICHAEL WILLIAMS

BY MR. CHHATRE:

Q. Mr. Williams, just for the record, can you tell us your formal education?

MR. EVANS: Ravi?

MR. CHHATRE: I'm sorry, Roger. I'm sorry. Out of sight, out of mind.

MR. EVANS: That's okay.

MR. CHHATRE: Go ahead.

MR. EVANS: This is Roger Evans with the NTSB, senior investigator.

MR. CHHATRE: Thanks.

BY MR. CHHATRE:

Q. So, Mr. Williams, fir the record, please tell us any formal education, any informal classes, any training you have received from Washington Gas, and how long you have been with Washington Gas in your career.
A. I've been with Washington Gas 36 years. I have a high school diploma. I have a few classes with computers back in the early '70s. As far as classes go, I would virtually have to pull a record up of the training classes that we've gone through as far as appliance service, basic electric, advanced electric, regulators, installation of meters, rough-in construction, WSSC journeyman. Well, I'd actually have to write them down to --
Q. Okay. That's good enough. What is does WSSC stands for?
A. Washington Suburban Sanitation Commission, which is our -- where we get our licensing through as far as your journeyman card.
Q. Thank you. So with your career in Washington Gas, what are your current responsibilities and what were your responsibilities at the time of the accident?
A. I'm the aboveground construction supervisor at Northwest Station, which is about aboveground construction, anything that once the gas comes out the ground, I supervise the installation or whatever of the meters, meter racks. At the time of the explosion, my responsibilities were as aboveground construction supervisor out of Northwest Station, which the Silver Spring incident was in my area.
Q. As an aboveground construction supervisor what do you do? Do

you supervise people or is just a title?
A. No, I supervise people. I mean, obviously, the people that come through my class are considered construction techs, have 6 years minimum in the field. Then they go through a 2-year apprenticeship more or less to qualify for construction area. And once they come to me, obviously, they're -- they should be somewhat attuned to what our procedures are, what our OQs are, what the construction enables.

It's my job as the construction supervisor to oversee what jobs I think need more work, where they need safety, where we need some more involvement, whether we can or cannot handle a job if it seems to be too great.

Q. Now you mentioned something about rough-in crew. Can you just tell us what the rough-in crew means and what do they do?
A. Rough-in is the title of my construction technology or construction techs would actually be my -- the title of my techs. Rough-in is the rough-in work of the gas meters, the gas installations, monitoring certain regulator situations as far as large loads, building meter racks, installing meter racks.
Q. Are you also involved in laying the service lines and transmission lines --
A. No, sir.
Q. -- or you are not?
A. No, sir.
Q. So are you involved with your responsibility both multi-

family dwellings and single-family dwellings, or only --
A. Multi-family, single-family, yes, sir.
Q. Both. Okay. Now prior to being supervisor, what did you do?
A. I was a construction technician, rough-in construction technician.
Q. So you have done the work yourself?
A. I did the work for 25 years or so. Before that I was an appliance service technician for 5 or 6 years before that.
Q. With appliance service technician, did that involve water heaters, furnaces? Or what did that involve?
A. It involved pretty much every appliance that we now handle: water heaters, ranges, furnaces, electronic ignition or standing pilot, gas grills, gas lights.
Q. Were you involved in work at the building that got destroyed, Flower Branch Apartment 8701?
A. Was I what now?
Q. Were you ever involved in the rough-in of the meters, or --
A. Not at that building. I don't ever recall being at that building, 8701 Piney Branch, no.
Q. Did your crew get involved into roughing of that --
A. None of my crews have ever gone, to my knowledge, to that building. I've been a supervisor now for 4 years, 36 years in the field, and I don't ever recall my crew or anybody that's worked with me going into that particular building.
Q. So last 4 years -- now does your responsibility involve leak

survey and --
A. I do not do leak survey, no.
Q. Okay. So leak survey comes under whose jurisdiction?
A. I don't know whose jurisdiction leak survey comes under.
UNIDENTIFIED SPEAKER: Leak Survey Department --
MR. WILLIAMS: Yeah.
MR. CHHATRE: It's itself, okay.
UNIDENTIFIED SPEAKER: -- out of Utility Operations.
MR. CHHATRE: Okay.
BY MR. CHHATRE:
Q. So you were a supervisor for the last 4 years. None of your crew went into that building that exploded or the building that got destroyed next to it?
A. Correct. None of my crews have ever been in that building, uh-uh.
Q. So you --
A. Prior to the situation.
Q. Sure. Now, if there is a -- I guess correct me if I'm not using the right terminology, but if the meter is disconnected for whatever reason, who goes and reconnects the meter? Your crew does or somebody else does?
A. If a meter has been disconnected, the physical meter itself has been disconnected?
Q. Disconnected physically or by putting a disk, whatever the --

A. It would be the responsibility of the gas company. Contractors, plumbers, or whatever, are not supposed to take our meters down or change meters or whatever. That's ours.
Q. So have you done anything in that building for last 4 years? And I guess let me bring back up. Is that your responsibility to do that or it is not?
A. I don't understand what you're saying.
Q. Well, if I don't pay the gas bill.
A. Oh, you're talking about cut-off for bill --
Q. Yeah, yeah.
A. -- whatever, like a payment for bill. No, that does not come under my jurisdiction, no.
Q. Okay. And whose jurisdiction that will be? Do you know?
A. It could be the Credit Department. It could be a service tech. But that's -- those are small meters that really cannot come through.
Q. So you are -- are you mainly involved in just installing the new meters and regulators and that kind of stuff?
A. Large load. I --
Q. I don't understand exactly what you do.
A. My section installs not the smaller meters. I primarily work on large meter loads, larger than the individuals. If we have multi-meter racks, there was a time that we actually made and built the multi-meter racks. Now just because of manpower issues and -- those multi-meter racks are contracted out so they can be

welded, just because it's too many man-hours to build them. But larger meters, the meters that are involved in the apartment are what we refer to as 5AL or 425 meters, meters that are able to pass 250 cubic feet, 225 cubic feet. My department takes meters that are above, larger than and above is what I generally install, work on, maintenance, maintain, repair if somebody finds an issue like that.

Q. So tell me, what are the big meters or big customers that you get involved?

A. What are some of the big meters I get involved with?

Q. Give me an example like.

A. White House. That's one of the meters that I've been personally involved with. The West Wings, the East Wings, dealings to do with that. The University of Maryland is not really my department, but that's something we do. Holy Cross Hospital. Most hospitals, large load hospitals. I have about 95 or so large load meters. Georgetown University.

Q. Now multi-meter buildings like 7301 or the building that exploded, would that be too small for you to get involved or would that be --

A. For a service type order or service repair, yes, something like that is. Now if there's something discovered on that or somebody says, hey, we have found a leak or something like that, they would call my department -- or not so much call, an order would be generated. They would give it to the aboveground

construction crew to say, take a look at this, what needs to be -- do to make repairs. And it would be my decision to say this is what -- we either repair it, it's able to be repaired, or do we think we need to modify it and upgrade it to something better.

Q. And that kind of work you will do? You will not contract that out, or you will --

A. The repairs on it, no. No.

Q. Only replacement you will get involved?

A. On replacements --

Q. What are reasons they need to be replaced?

A. Load changes. If the load changes, the number of customers change. If you had a 5, 6, 8, 10-bar meter rack, and they're going to a single individual meter, that would be a reason that we'd change something like that, or if they're adding another unit, we'd see what we can do about adding another unit.

MR. STAEBLER: Ravi, do I --

MR. CHHATRE: Sure.

MR. STAEBLER: Can I --

MR. CHHATRE: Go ahead. Identify, identify yourself.

MR. STAEBLER: This is Doug Staebler, Washington Gas. I did want to clarify. So I think what Mike's talking about and you're asking is, like, there's one thing is the meters and the customer service part, and then there's the meter rack, which is the regulators and all the piping that would serve the meters. Mike's group would then -- not only did they originally build the rack,

then they would maintain the regulators and the piping piece of it. Individual meters that would be turned on or turned off is just normal service work in the rack.

MR. WILLIAMS: Correct.

MR. CHHATRE: I'm glad for the clarification. When you say meter rack, I thought you are talking about multi-meters being hooked.

MR. STAEBLER: Yes. So the rack would be really the piping network that holds all those meters. And then the meters themselves are just residential meters, and they can be changed out and turned on/turned off individually by a service tech.

MR. CHHATRE: Different group of people.

MR. STAEBLER: Right. If the entire rack was going to be maintained or something, work was going to be done where the gas had to be turned off the entire rack, changing of regulators, fixing a leak on the rack, that would then come through, right, Mike, through your --

MR. WILLIAMS: True. If you're talking about --

MR. STAEBLER: And correct me if I'm wrong.

MR. WILLIAMS: Yeah. The major, major rebuild of the -- where the service comes out the ground to the multiple-meter rack would be my department to upgrade, change out, whichever.

BY MR. CHHATRE:

Q. So your crew then, if a new construction happens or somehow the regulator gets damaged or repairs, and needs to be replaced,

would that be your crew then who does that?
A. Yeah. That would be my crew. That would be my crew.
Q. And who decides the meter or regulator that needs to be replaced? Your crew does or service technician does or who makes that decision?
A. That's a kind of an open question as to who -- we don't arbitrarily just replace regulators because we say, gee, it's there. Based on whether it passes specific tests, venting tests, whether it holds lock-up tests, whether the regular responds within the range that it's designated to service, if the regulator itself is adequate to cover the load that is as required on the rack. Certain standards have changed over the years. Certain numbers have changed as far as what our regulators we say will pass. We have a design day now that says the specific regulators pass a certain amount of gas. But there's a number of possibilities of why we would change a regulator.
Q. But that will be your crew or somebody else will be doing that?
A. Generally speaking it would be my crew. I mean, now if it's -- increased load, sure, we'd change the regulator. But that doesn't come from me. That comes from design and engineers as to what they say the regulator passes for what the load is for the pressures they need. And that all comes to me in a order that says this is the specifics that they want, and we install it as such.

Q. And like what I understand, Washington Gas has a policy to replace the mercury regulators. Would that be your crew doing it or somebody else?
A. My crew does it. I mean, there is -- I think Williams Meter Company crew also does mercury regulators, but it's my crews would do the --
Q. Replacement.
A. -- would do the replacements on mercury regulators, yes, sir.
Q. And which is the other crew you mentioned? You said meter -- you said your crew does it and somebody else will also do that?
A. A contract crew, Williams Meter Company crew. Same last name, no resemblance.
Q. Who do they report to? I mean, do they work through you, or --
A. They don't report to me. No, sir. They have their own department, own people, own everything.
Q. But who decides to contract with them versus you guys doing it?
A. Well, they don't -- I don't know personally. I don't know. I'm not in that end of the business as far as who do they report to, who gives them their --
Q. No, I mean, who decides to give to the contractor versus internally to you?
A. I don't -- I couldn't answer that. I don't know. I mean, when I get work, I don't say, gee, you know, this is my area, give

me all the work that's in Maryland and Montgomery County, whatever. That's above my involvement.
Q. Now who decides that a certain meter needs to be replaced? Forget about the load, I understand. If the meter is not functioning, meter fails for whatever reason, who makes that decision?
A. A small meter is not --
Q. Yes.
A. If you're talking about a 5AL or 425, that again doesn't come through my department to say, gee, there's meter failure. If a meter failed, it would be because there's a repetitively same reading on it. Meter readers would pick that up. Survey crews would pick that up.
Q. I'm sorry. I did say meter, I mean regulator. Yeah, I did say meter --
A. Okay.
Q. -- but I meant regulator.
A. If a regulator fails, that's again going to come from whomever was there prior to us getting there, saying that, you know, whatever the situation is, I'm on this address, we have a regulator failure. And what's a regulator failure mean? It's not operating properly. You're not getting the gas through it. It's broken. Generically speaking everybody uses the same term as failure, and it could be a number of reasons why gas won't pass through the regulator like it's supposed to. And we don't, in my

department rough-in construction, we don't try to discern, gee, this still looks like it's good to us. Our take on it is if we're there to do some work on it, replace it. And we'll replace it with the newest that we have that will carry the loads.

Q. So job order comes to you replace it, you just go and replace it?

A. Yes, sir.

Q. You won't check it, you won't question why?

A. If it's already -- if gas is off and broken, I'm not putting gas back on a line to see what it's going to do. No.

Q. Supposed somebody reports to you telling you to change the meter, who does that?

A. To change the meter?

Q. I'm -- regulator.

A. Regulator.

Q. Thanks.

A. Well, it could be from the service tech. It could be from a service tech that says I'm on this job; something's not working right, I'm not getting gas to the meter. Or it would have gone through our dispatch. Somebody would have called dispatch and said, hey, regulator's either not working properly or they're saying that they're not getting enough gas. For some reason, they don't know what the situation is, they'll call rough-in, and rough-in will go out and see what kind of pressures are on the service, see what kind of pressures are on the regulator, see if

it responds properly, see if it works to adequately carry the load.

Q. So rough-in crew will go and test the regulator before you replace it?

A. It depends. Not a mercury regulator, no. If you're talking about a spring-loaded regulator, yes. Spring-loaded regulator, we're going to say, okay, let's see what it's doing. That's provided we can isolate it downstream. We're not going to put gas on downstream of something. Or provided we can bypass something to test that regulator. Certain situations prevent us from saying, gee, let's take this gas right out of service and see what it's going to do.

Say a building like this, if we have the ability to bypass that regulator and test it, sure. But other than that, what we'll do is we'll put load tests on it and see simulated loads to say let's see what the pressure's set at, let's see what it's supposed to be set at; let's see how it responds to certain load tests. And if it falls within the guidelines and the vents are clear, hooked-up properly, they're the proper size, we're going to say, okay, it's good.

Q. But even a service technician can make that request to you that --

A. A service technician can make the request, yeah. A service technician can say, hey, bad regulator. He may or may not be right about that, though.

Q. And you guys go in then and check it out.
A. Yes, sir.
Q. Now in that process you are disconnecting that building or you can do this without interrupting the gas service?
A. Again it depends. If there's a possibility for us to bypass a meter rack -- we won't go in and turn three or four anything over three units, four units. We won't arbitrarily go in and turn off and interrupt somebody unless we've already made prior arrangements, say, okay, we can get in all three units or four units or however many it is to go back in to relight. But generally speaking we don't -- now if there's something that's an emergency, if there's something we have to do, we're going to do what we have to do to make things safe or to get things changed out, provided we can isolate the individual units.
Q. So what kind of alternate arrangements will allow you to do that?
A. I'm sorry?
Q. What kind of arrangements you have to have or I guess --
A. We'll either go to the property manager or we'll go to the building manager or the building engineer. If it's a condo association or something like that, we'll see whom we can get to, to make sure that we have somebody on-site that we can actually go to the property and say this is what we need to do, and this is how we're going to -- this is what we need to do to a regulator. But that's -- you know, we try to never turn gas off if we don't

have to.
Q. Now can you repair or replace a regulator without turning the gas off for multi-dwelling units?
A. We can. I mean, because there are certain multi-unit buildings that have battery style regulators. They're two regulators in line, and they were designed and sometimes our own designs will put them in for. If we have to work on a regulator, depending on the load at the time -- say if it's in the summertime that you don't have the heat load going, you just have ranges or whatever or maybe just water heaters or something, and one regulator is going to cover it, and we can isolate one section, we can do that.

Not every installation is installed like that. There are certain installations that have tees on top, Pogue alarms with the tees on top, standpipes on top that we used to be able to run a 2-inch hose with a bypass regulator to bypass the meter rack as we would call it, isolating the meter. Change things out, work on the regulator. It really kind of depends on the individual meter rack or build-up, whether we can or whether we can't bypass it.
Q. Now with the multi-dwelling units, again, so I guess that your crew is trained to diagnose the problems with the regulators?
A. Yes, sir.
Q. Is it internal training or does the regulator company provides the training or how does that work?
A. We go through classes at Washington Gas as far as our safety

OQ training, as we do, and we get retrained like for as far as mercury regulators once a year, where we go back to class and go through all the standards of OQ training as far as mercury regulators go, spring-loaded regulators.

Q. So your crew is OQ -- the job is OQ qualification required for that?

A. Yes, sir.

Q. That area of training is a part of --

A. Yes, sir.

Q. -- that OQ qualification? Now you said earlier that you don't do mercury regulators. Am I correct?

A. Install them, are you saying?

Q. Yes.

A. No, sir, we have -- I've been with the company over 36 years, and I've never personally been involved with installation of a mercury regulator.

Q. Can you remove or replace the mercury regulators?

A. Can I?

Q. Your crew, I mean.

A. My crew -- yeah, I'm management. Yeah, my crews can replace mercury regulators, yes, sir.

Q. I thought earlier you said something about mercury regulator you only do spring-loaded and not mercury. So that's why --

A. The spring-loaded is all we install. We don't install any mercury regulators, not in that --

Q. But your crew is trained to remove the mercury regulators?
A. Yes, sir.
Q. Replace those.
MR. CHHATRE: And that's all I have.
Kelly.
MR. EMEABA: Yeah.
BY MR. EMEABA:
Q. This is Kalu Kelly Emeaba. I would just ask a leading question based on your previous response.
A. Okay.
Q. Which you did mention talking about diagnosing regulators. Stand me -- I mean, correct me if I'm wrong. You mentioned that when technician was called in for regulator failures it could be anything, and your crew, you don't attempt to diagnose what happens to a mercury regulator but you do diagnose a spring regulator. Am I correct with that statement?
A. I'm not certain if you've got that whole picture in the proper sequence there. A service tech, I don't know the extent of their knowledge or what they are or whether or not it's actually a service tech that actually works on spring-loaded regulators. The call may come in as a no gas call for that matter. It may come in as a low pressure. It's not uncommon for a brand new business to say, gee, we have a regulator problem, and they come dispatched to me like that. So at that point in time, my crews will go out and say, okay, we want to maintain that our service is adequate; we

want to maintain that our regulator is sized properly, that the loads going through the regulator are adequate. But it -- what else am I missing here?

Q. No. Let me reframe it. If technicians call your crew telling you they have a regulator failure.

A. Okay.

Q. Okay. And you go to that location and it happens to be mercury regulator installed, installation, what do you do?

A. If I get called for a mercury regulator failure or they specifically see that it's a mercury regulator and say -- it's not uncommon for a service tech to say, mercury regulator, need to have it replaced. Okay, fine. Only request for me is to -- is it on or off? Are you leaving it on or off?

Now if the mercury regulator is operation fine, and it falls within the guidelines for the lock-up test, it's a good regulator to keep in line. But if my crews get there, and they say there's an issue or a problem with a mercury regulator, we do not put gas back on that regulator to simulate a load or otherwise. As far as I'm concerned, it's a mercury regulator; mercury regulators we want to pull out the field when we come across them. And when we come across them, my group replaces them.

Q. So it may be a yes or no question. When your crew responds to a mercury regulator failure, and if you go there and it happens to be mercury regulator, do you diagnose it to find out what the problem is or not?

A. No. No, because you're telling me it's a mercury regulator failure. Well, if the -- if I come on my job, my crews come on a job, and I see a mercury regulator, I'm changing the mercury regulator out.
Q. Okay. That's -- so the answer is no.
A. No. It's -- I mean, for several reasons. It's not worth the time for our crews to spend to say, yep, it's not locking up properly or it's not locking up within the guidelines, or, okay, it locks up anyway. I'm changing it anyway because it's a mercury regulator in the field, and that's the guidelines I have. If I come across a mercury regulator in the field, I'm changing it.
Q. As a result, there will be no documentation to note what happened to that -- why the mercury regulator fail?
A. There's nothing that you could ever do to ascertain why that regulator had a problem unless you were on-site at the time.
Q. Thank you. You mentioned, based on Ravi's question, that you never worked or your crew worked at 8701 or the adjacent building to it.
A. Yeah, the building that was involved with the explosion?
Q. Yes.
A. Not to my knowledge. I mean, prior to that date, no.
Q. Okay. From your knowledge, do you remember whether it's a helper or a supervisor, either you, your crew, did you work at other buildings in the Branch -- I mean, at Piney Branch Apartments?

A. As a helper and as a construction technician, and it had to have been years ago, I recall being on that property. Not that specific building.
Q. Yes.
A. But on that property back in the middle somewhere where there was a -- either a swivel leak or there was a -- I mean, working shift work and night work, and I remember we fixed a slight leak on a service line or something like that. But other than that, nothing for mercury regulator failures or -- I mean, I've been to that property once or twice in 30 some years that I can recall, that entire development.
Q. For inside located the meters or regulators as this, when you say service line, what and where do you categorize as a service line inside a building?
A. Service line is from the main to the service riser stopcock and up to -- service line would be up to ahead of the regulators that, you know, breaks the pressure down to a domestic pressure.
Q. That's what you term as service line?
A. That's what I consider a service line, yeah, service line is -- before my regulators is service pressure, so it's service line, whether it's below ground or above ground.
Q. That was -- what you're referring to is when you were a helper, correct, the work when you were a helper?
A. Well, a service line is still a service line whether a helper --

Q. No, I understand. You mention the work you did, and it was on a service line, correct?
A. Construction helper, yeah. I was a construction assistant helping another construction tech.
Q. Since you became the construction supervisor for aboveground pipes, can you recollect of any situation you or your crew, you have worked in any other building out of the 26 in the Piney Branch Apartment?
A. No. None of my crews prior to the nature of that -- you know, we've been in a few buildings after the situation but that was not a concern or customer concern. But prior to that, I don't recall a single order that I've ever had in that development.
Q. Thank you. Let me ask you another question just to learn more from you. Talking about mercury regulators, can you tell me the -- some of the failures that may be seen from a mercury regulator?
A. A failure from a regulator?
Q. Yes.
A. On its own or when somebody else has turned it on, turned it off, dabbled with it, tampered with it?
Q. Both.
A. I've never personally in 36 years walked up on a mercury regulator that failed by itself. In 36 years, I've never. The only times I have ever had involvement with a mercury regulator failure or a mercury regulator blowing or gas blowing out the vent

is from contract crews being somebody replacing the heater, water heater, whatever, something on their gas line, and they turned the regulator off ahead of the service or ahead of the regulator and turned it back on too rapidly. Now if they turned it on too rapidly, they're putting excess pressure upon that and mercury, being a liquid, would force its way out the vent. But not on its own.

Q. Please to help me, can you explain -- lead me through what you just said again with respect to the multi-dwelling units who have multi-meter?

A. I'm not sure I understand what you're --

Q. Talking about regulator failures. What you mentioned to me, you mention it failing because a technician maybe worked on a water heater and as a result they had to cut off the regulator and maybe turn it back on quickly and something happens. Okay. And that will appear to be a single-family home or something like that.

A. Single-family home, yeah. I mean, if -- nobody within the gas company that I've ever worked with or trained would go into a 13 or 14-unit building and arbitrarily turn a 14-unit building off so they could do any kind of repair anywhere. In fact, it's part of the procedures and policies that if any of my guys or any service technicians go in building more than three units, unless it's an immediate emergency, they're to contact me or another supervisor to see what can be done.

If it's an immediate situation, you know, we're going to, without regard for what it's going to take to get things lit, we'll turn the gas off. But other than that, if it's a safe condition or they see something that they're unfamiliar with, they'll call either myself or another supervisor, and we'll go out to make that call to say, okay, we can do this or we can do something else.

But none of my technicians nor has anybody been trained from my side turn a 13 or 14-unit building off, or even something more than 4 units because they had to work on a water heater.

Q. Thank you. So based on your experience and knowledge, can you describe to us or tell us some of the regulator failures you've seen in a multi-dwelling apartment? Mercury regulator failures that you have observed.

A. Again, other than responding to a blown mercury regulator because the contractor was replacing a furnace, and on-site that a plumber turned the gas on too fast and gas was just blowing out the vent, but it's not like I was waiting for something to happen or say, gee, what happened? All I know is the contractor was in on-site turning the gas on, and he turned it on too rapidly and forced the mercury out the vent line. But other than that, I've never been on a job that a mercury regulator just arbitrarily started failing.

Q. So when you say the contractor turned on the --

A. Service, the service line.

Q. -- service line very quickly, at what point? From the valve? From inside meter

A. Service line regulator, houseline stopcock. You turn on houseline stopcock, regulators to your houseline stopcock, you're not affecting the flow before that regulator. If you turn the gas off on the service line before that regulator -- service stopcock comes up to the bottom of a mercury regulator, that's what I say before the regulator.

Q. Oh, before the regulator.

A. Um-hum.

Q. Okay. Being the above-construction supervisor, and from already your response you are in charge of installing the meter racks and things like that even within multi-dwelling unit and so on, do your work also involve installing the aboveground vent lines and so on that goes with it?

A. Yes, sir. If it's an inside installation or whatever the requirements require, yeah, we'll vent it properly, um-hum.

Q. So for a service that has been in place or a service building, are you called to perform any vent line reconstruction or replacement of any kind?

A. Not unless somebody's busted off the screen nail or somebody's damaged something that we have to do other kind of work to that regulator itself. But, no, my crews don't arbitrarily go out to check and inspect domestic regulator loads.

Q. Vent lines?

A. Vent lines, no. That's not part of our --
Q. When you said somebody damaging it, is it from maybe your crew, your contractor, or --
A. Wouldn't be my crew or contractor, but I'm talking about if somebody's lawn service, for God's sakes, goes out and runs it over with a snow blower or something like that, and they run over and they run into it or snap -- a car hits a line or something and damages a line, something like that, yeah.
Q. Now from what you are describing, you're talking about a vent line outside the building?
A. Yes, sir.
Q. So do you have any work, your crew have work that involve part of the vent line inside the building?
A. If we're installing something or we're changing a regulator out, our crews would be the ones that would be saying, okay -- if we're taking gas off of something and putting gas on, we're going to make sure it's vented out properly. So, yeah, at that time we would run the gas lines out as far as vent lines go, um-hum.
Q. Does your work entail replacing it or just to open it and vent it and reconnect it? How does it work? What is the extent of your work inside on the vent line?
A. Really it depends on what I'm doing. If I'm in there to make some kind of repair, I don't arbitrarily replace the vent line. I'm going to test to make sure that it's clear. I'm going to test to make sure there's not -- doesn't have holes in it or leaks.

We'll do a pump test on it to see if it's blocked or obstructed. And then at that point in time, if it passes our testing, our lines are good.

Q. Sorry. So that I can understand it better, what kind of work do you do that will require you testing the vent line?

A. What kind of work do we do that would -- requires us to test a vent line? Anytime my crew goes out and does some kind of work on a vent line and I disconnect the vent line, I'm going to test to make sure that it's clear. If I have to change something out, then I have to reconnect to an underground vent line or even aboveground vent line, I'm going to check to make sure that the line is clear. Anytime my crews go out. Now I can't tell you what happens to somebody else's crews, but when my crews come out.

MR. EMEABA: Thank you so much. Appreciate it. That's it for now.

MR. CHHATRE: Roger. Roger?

MR. EVANS: Yes. I'm here.

MR. CHHATRE: Okay, go ahead, if you have questions.

BY MR. EVANS:

Q. This is Roger Evans, NTSB. I'm curious about one thing. Based on your conversation earlier with Kelly, when you said you don't arbitrarily go out and look for work, does that mean that -- I mean, is there a classification of work within your scope that is, we're going to go out and replace these because we know these things are old, they're bad, what have you, and you call it,

you know, maintenance work versus corrective work? Do you do that?

A. No, I don't -- I mean, I don't happen to have a book of addresses that says, gee, these are old gas lines or old gas regulators. Based on if there's a failure, if there's a new business that comes in, if something needs to be changed, if a customer calls for a concern, if somebody thinks they smelled gas and it generates an order to my department, I'll go out to do that. But other than that, I don't have a schedule that rotates around basically a million customers to say, gee, what looks old to me?

Q. Basically I'm basing that on some of your competition. They have programs in place to replace all mercury regulators. But Washington Gas doesn't have such a program?

A. That's not my call. It's what the policy is at the company. I'm aboveground construction. The guidelines they give me is what I'll follow.

Q. As far as you're concerned, have you ever seen anything like that, that says between now and the next 10 years we're going to be replacing all of our mercury regulator?

A. Repeat your question. What is it that you're asking me?

Q. Have you ever seen any blanket kind of statement from your management that says over the next X number of years we're going to be replacing mercury regulators?

A. Not personally, I've never seen any blanket policy that says,

okay, we're replacing everything that comes across mercury regulator. No, sir.
Q. Have you ever heard rumors of something like that through the years that mercury was going to be replaced and we're going to have to do them all, and -- has that ever been discussed in the past?
A. Yeah. There's always rumors about what we're going to do and how we're going to change in our operating procedures and whatever like that, but I don't hold stock in what a rumor is.
Q. I didn't mean to say rumor. I mean, they've never been discussed as being considered as removal for every single mercury regulator? That's never been discussed with Washington Gas, that's what you're saying, as far as you know?
A. I couldn't tell you what's transpired above my office, and me only being a --
Q. No, I mean, to you because you're the guy that would do the work.
A. Sure.
Q. Has this work ever been communicated to you, that scope of work?
A. No. The only --
Q. That's all I'm asking.
A. I hear what you're saying, and I'm trying to answer it the best I can. If our crew comes across a mercury regulator, we change it out, bottom line, based on age, based on its a mercury,

based on I don't know how many years ago, months ago, years ago, hey, if we come across mercury, we'd like to get this out the field. Is it practical to stop and take every single mercury regulator that's in the field out today? Negative.

So as they age, as we do work, we respond to the residences, we respond to the properties, as loads change and we need to increase stuff, as any of our service techs or contractors come across them, they put orders in the field for us to say, hey, we have a mercury regulator here. On our CAD or tablet sets we now have, information, there's a spot that says is there a mercury regulator? Yes or no? They check it, and an order is generally generated. If it falls within the guidelines at the time, it's not an immediate response. If it fails, if it doesn't meet the criteria at the time, yes, then we'll go out immediately and get the gas back on. If the gas is ever off for whatever reason and my crews go back out, they have to replace the meter, regulator or vent lines, yes, we replace it at that time.

Q. Let me make sure I understand because I heard you say earlier, you said a perfectly good operating mercury regulator would not be replaced. You're saying you only replace them if you've considered it to be an issue with that particular regulator.

A. No. I said if I come across it, I'm replacing it.

Q. If you find a mercury regulator, you're not necessarily going to replace it?

A. That's not what I said. I said if I come across a mercury regulator, I'm replacing it. I'm saying if a service tech goes out there, and I can't verify how many mercury regulators the service tech has seen, if it falls within the guidelines -- if it locks up properly, if it's giving the adequate pressure, they're going to put an order in to say, okay, hey, this needs to be changed, however, it falls within the criteria guidelines that meet the requirements, and it doesn't fall into an immediate just because it's a mercury regulator.

Q. So it's going to be on a list to be replaced sometime in the future, is basically what you're saying?

A. Yes, sir.

Q. The issue that you talked about earlier was quite interesting to me was when you spoke about the fact that a plumber perhaps opened a valve too quickly and blew out the mercury in a regulator. In your career, how many times -- I mean, is that something you would you say happens once a year, once a month or once every 2 years? Or is that something that happens a good bit?

A. I couldn't really verify how many times, how often that happens. I know that in the field in the 36 years or so I was exposed working on the construction side, I would say there's a half a dozen times, a handful of times, that a contractor had gone out, turned gas on ahead, creating an issue. But the gas was venting to the outside safely. It's not that it was venting blowing inside a home.

Q. Okay. When someone just says the phrase mercury regulators, and since you have so many hours and days and stuff in your career out in the field, do you have things that come to mind that automatically register in your brain that you know this particular situation is going to happen with a mercury regulator? Could you tell us what those items are, if you could?
A. If you're asking me if I'm aware of a situation that I deem dangerous or something that, gee, this really needs to be rectified immediately? If I come across something like that, I --
Q. I'm sorry if I wasn't clear. I'm just saying, generally speaking, when you -- before you became a supervisor and you were out in the field doing this kind of work --
A. Okay.
Q. -- if you came upon a mercury-type regulator, would you automatically have a clear mind of as to what could be going wrong with that particular regulator just based on your experience? Do you know it would do this, it would do that? Do you have -- did you have like this ready made list in your mind of what can go wrong with a mercury regulator?
A. No. I never looked at a regulator saying, gee, this could go wrong with it. I mean, if I came across a mercury regulator it was my view to change it out. It's not, gee, I better change this out because it's a mercury regulator because it could create some kind of issue or problem. I never looked at a job like that. I

mean, if I looked at a job and thought that there was an issue, I would rectify it now, personally.

Q. Okay. And your department doesn't do anything with the gas odor calls or anything like that, right?

A. No, sir.

MR. EVANS: That's all I have. Thank you.

MR. WILLIAMS: Yes, sir.

MR. CHHATRE: John.

MR. CLEMENTSON: Nothing.

LT. OLIN: William Olin, Montgomery County.

BY LT. OLIN:

Q. Do you know about when Washington Gas first started treating the mercury regulators as a hazmat issue?

A. Hazmat such as using Jerome meters to --

Q. Because of the mercury. I mean, that's --

A. Because I know we use Jerome meters to go out to make sure that there's no mercury present. Geez, I know it's been a number of years. How many years that is, I don't really know. I mean, I'd actually have to maybe call training or somebody to find out, hey, when did we start using our Jerome meters? And that would have been the first.

Q. Has there been any, I guess, thought or from Washington Gas that these pose a hazardous material situation?

A. I don't believe -- you know, it's hard to say what somebody else is thinking or what it poses like that, or whether -- I can't

believe anybody at my company or anybody, if they thought there was a potential for a problem that they'd say, ah, it's good enough for right now. I don't believe anybody in this company would do something like that, I -- at least I believe.

UNIDENTIFIED SPEAKER: Did you mean hazardous or environmental issues?

LT. OLIN: Yeah, yeah. Like --

UNIDENTIFIED SPEAKER: Mercury --

LT. OLIN: Yeah, mercury spills and what have you.

MR. WILLIAMS: I mean, as a kid, we played with mercury and, geez, we put it on quarters.

LT. OLIN: I understand.

MR. WILLIAMS: You'd get a free soda that way if you did it right, you know. I'd have never done that if I'd have known you could adjust it and --

UNIDENTIFIED SPEAKER: I just wanted to make sure you understood the question. He's asking environmental hazard.

MR. WILLIAMS: Environmentally? Until we got the Jerome meters, I don't know if I was really attuned to how dangerous it was. There again, we used to play with it, even as an adult. Made your stuff shiny.

MR. EMEABA: Okay. Doug.

MR. STAEBLER: Doug Staebler, Washington Gas.

BY MR. STAEBLER:

Q. Okay, Mike. So you mentioned training. So your group is

trained to remove the mercury regulators, replace the mercury regulators?
A. Yes, sir.
Q. And in the company, as far as the employees that would work on and remove a mercury regulator, it would just be --
A. My construction group.
Q. Right. And the training that you receive on a mercury regulator that makes it particular to your group, because Service Department can change out other regulators --
A. Correct.
Q. -- it's just the mercury regulator, and that training is based on? What's the purpose of that training or what qualifies?
A. To handle -- what qualifies our training is we have a piece of equipment, a Jerome meter, that specifically tests for the vaporization of the mercury. Because the hotter mercury gets the more it vaporizes. The vapors are where the danger comes into place, whether ingestion or in your blood or whatever. And we'll -- if a mercury regulator, we get on the scene of a mercury regulator, anything, we take our Jerome meters, which are calibrated daily, test in several areas to see do we have a specific reading.
Q. Right. So it's the mercury hazard and containing the mercury that you're really qualified and trained for versus just because it's a regulator?
A. Correct.

Q. Yes.
A. Yes, sir.
Q. So there is the knowledge of it being a mercury hazard?
A. Yes.
Q. Yes. And then you mentioned also, too, that we have contractors that are also trained and qualified --
A. Qualified with the equipment. Yes, sir.
Q. -- because of removing mercury.
A. Yes, sir.
Q. I'm trying to think of how to word this. Not that -- would it be a surprise to you that if we did have, as a company, a robust proactive replacement program that was directed through our contractors, that wouldn't affect you in your work? Your work would be --
A. No, sir.
Q. -- response and maintenance. So it is possible that the company could have a mercury regulator replacement program based out of another area other than yours?
A. I'd welcome it.
Q. Yes. Okay. And then you had mentioned about blowing mercury regulators, and I think I -- you said in your career, like has there been a situation or have you ever experienced a mercury regulator that basically displaced the mercury out of the cup and it was blowing, that occurred on its own without --
A. On its own, no. Thirty-six years, I've never been on a

mercury regulator that arbitrarily decided "I don't feel like working anymore."

Q. Right.

A. I've never been on one. Yeah, I know that seats, orifices, debris can get in lines, you can get dirt, whatever. If the rubber seat doesn't seat down 100 percent, you may get a weep, you may get an odor, but it's still going to seat down. I've never -- that's not going to affect a regulator to say "I don't feel like working anymore, I'm just going to relieve" or I'm going to blow out. Even if you forced the seat off of the orifice and let it blow, that mercury is still going to be in the cup. There's no reason for whatever, unless somebody has displaced the service pressure and -- or messed with it.

Q. Just to clear up, I think before we were talking about is that on, you know, especially like multi-family meter racks, if there's a gas odor or there's an operating issue, a customer calls, that would be dispatched to a service technician.

A. Generally speaking. Domestic size meters would go to -- 5AL, 425, those type loads would generally speaking go to a service tech.

Q. Right.

A. Or a leak responder to say what they feel. And based on what they feel or how they generate something back to the call center or in their orders would determine whether or not it comes to my department or not.

Q. Right. And if they got out to a situation and they thought it was an issue with the regulator, whether they -- it was blowing, whether it was weeping gas in a multi-family apartment, or they weren't getting the right pressure, they would then call you and your crew would come out --
A. Yes, sir.
Q. -- and work on those regulators?
A. Yes, sir.
Q. So that's your interface. You're not --
A. Yes, sir. Even new businesses. I have large load businesses right now that are calling for pressure issues, and they're spring-loaded regulators, nothing to do with mercury, and they're still calling for pressure issues that I go out and substantiate this is what I have, this is what the regulator does, these are the requirements, these are the acceptable pressure losses through the regulator, and they still have issues with the pressure. I still get those calls.
Q. Right.
A. So anything that has to do with primarily large loads. But, however, my involvement with smaller is service techs can't change them. That comes to my department.
Q. And then a mercury regulator, the difference between a mercury regulator and what we call a spring-loaded regulator would be -- and how it operates -- I'm just trying to get the -- a mercury regulator is also a spring-operated regulator. Pressure

is operated through --
A. Yeah, the pressure the --
Q. -- a diaphragmanous ring --
A. Yeah, the 1.5 ounces of mercury, whatever, in a mercury bulb is equivalent to 5.5 inches of pressure on the diaphragm of the regulator. Same as our spring -- and color codes are relatives to the manufacturer to say, gee, this specific regulator is designed to supply a working regulator pressure, 5.5 inches, 7 inches, 12 inches, whatever it happens to be.
Q. Right.
A. And then the release on the regulators have to correlate with whatever pressures are on the regulator itself.
Q. But I guess I'm looking at is that a mercury -- a regulator has maybe two functions. Primary function is to regulate pressure to the customer and through the flow of gas, and then also has a overpressure protection device release.
A. A release spring, yes, sir.
Q. So --
A. Domestic regulators are set for 14 inches, approximately a half a pound.
Q. But for operating the pressure delivery to a customer, does a mercury regulator operate the same as a spring-loaded regulator, just like a spring --
A. Yes, sir. It works the same.
Q. So the only difference would be the relief mechanism,

which the mercury regulator has a cup of mercury versus a spring-loaded relief --

A. Sure.

Q. I just think of -- you know, we keep talking about mercury regulators, mercury regulators. That's a term that's become part of the regulator because it --

A. Because it has mercury in it. Yes, sir.

Q. -- release valve has mercury, a little cup of mercury in it?

A. Yes, sir.

Q. But the regulator operates the same as any other regulator.

A. Pressure on top of the diaphragm -- more pressure put on the diaphragm to where it says I need to overcome the service pressure to give you the required pressure on the appliances.

MR. STAEBLER: Yeah, okay. No more questions.

MR. CHHATRE: Anybody else?

Go ahead.

BY LT. OLIN:

Q. Bill Olin. All right, I remembered my question. Dangerous when -- so when we were out in Springfield, we did the test on those regulators. The first mercury regulator that was tested failed.

A. Okay.

Q. So in your expertise, why did that fail going through the process?

A. Yeah, I mean, I was -- that was the same day I was on-site

with you guys out there?
Q. Um-hum.
A. You say it failed. It failed, it was relieving or it blew completely?
Q. It was relieving.
A. Relieving. The only thing that would make a regulator relieve like that would be dirt on the seat of the regulator that it couldn't sit down. Because you've got the regulator body itself. You've got the orifice, which limits the amount of gas flow or for volume downstream. You've got a shaft and a rubber seat. The rubber seat in a no-flow position or no-gas flow position, that rubber seat sits flat down on top of the orifice. Whether that orifice itself -- or that rubber seat had been used for how many years, the indenting of it like that may have not allowed it to seat 100 percent down on top of the orifice. Or there could have been some debris or oil or however that regulator was handled, I don't know. But if it was seeping or relieving like that, that's the only thing that would cause something like that.
BY MR. STAEBLER:
Q. Doug Staebler from Washington Gas. So we're talking about the regulator test that we did in the yard in Springfield.
A. Yes, sir.
Q. And the mercury regulators that we were testing were removed and put in buckets and handled. And when that happens the mercury

can --
A. Sure. The mercury can be flopped all through the regulator. I mean, it's, yeah --
Q. And then if you, when you go to reset the mercury if the level of mercury in the cup isn't the same, it isn't high enough, then --
A. Well, used to be a -- we used to, when we used to service mercury regulators, we had a mercury bulb, a little metal cup. I think it's an ounce and a half of mercury that was actually in that regulator, and you had a little mercury change-out kit. Mercury regulators were extremely easy to operate and to clean and function properly.
Q. So if there's not enough mercury in the cup, which would hold back the normal operating pressure of the --
A. It could relieve as well, yes, sir.
Q. Then it could relieve as well, then?
A. Yes, sir. Yes, sir, yeah.
Q. Okay.
A. I mean, regulators were designed specifically to say we need this much, we need this much mercury. We had pre-measured little vials that we used to pour into the mercury cups to put the mercury back in place once we serviced a regulator. Turn the seat over. Turn the spring over like that. Clean the orifice off. Put the thing back in service. Put the mercury back in the cup. Screw it back up. Turn the mercury regulator on slow, and then

make your adjustment to see what it did. And if you didn't have enough mercury in, yeah.

BY LT. OLIN:

Q. So in the course -- I'm sorry. Bill Olin. In the course of those tests that we did, we measured and weighed, and there were subsequent regulators that had more mercury in the cup.

A. Okay.

Q. Or, excuse me, less mercury in the cup, and yet the regulator passed. So that's why I was -- that was my direction of the question to you is just trying to --

A. Gee, why did one pass with a little bit less mercury than another one?

Q. Less mercury, yeah. So, so then --

A. The mechanics of that regulator were just tighter, maybe not as used as much. Maybe when it was taken out it was --

Q. Or --

A. -- it was handled quite a bit differently. Somebody took it out with kid gloves and said --

Q. Or still the dirt?

A. Or still the dirt, yes, sir.

Q. The dirt issue. Right.

A. Um-hum.

MR. CHHATRE: Any follow-up questions? Roger?

MR. EMEABA: He already --

MR. CHHATRE: Do you have any follow-up questions?

MR. EVANS: No, I don't.
MR. CHHATRE: Okay. Kelly.
MR. EMEABA: Just one more.
BY MR. EMEABA:
Q. Addressing what you already said. Beside turning off service gas line to a unit quickly --
A. You can turn it off fast. You can't turn it on fast. Turning it off is not going to affect that mercury whatsoever.
Q. But it's turning it on?
A. Turning it on.
Q. Yes. So thank you for that correction. Beside turning it on quickly, which according to you, caused the gas to blow --
A. Could -- yeah, um-hmm.
Q. Could cause the gas to blow if the mercury is gone.
A. Yes, sir.
Q. Okay. What else may lead to such situation?
A. To a situation of gas just blowing?
Q. Yes.
A. Nothing that I'm aware of. That gas would not that -- in 36 years I've never come across a regulator that just decided I don't want to work anymore and just started blowing and the mercury going up the vent line.
Q. Now you're talking about mercury regulators?
A. You're talking about mercury regulators?
Q. Yes.

A. Yeah. If you're talking about mercury, there's nothing that could make the mercury -- I mean, mercury is liquid metal. Other than a force great enough to push it up through a series of L's up and out a line, you know, it can't.
Q. When do spring regulator blow?
A. When do they blow?
Q. Yeah. What conditions?
A. Debris in the line. If somebody has worked on the lines ahead. Something's -- somebody has had the regulator apart, maybe didn't put a load ring back in place, it could relieve. It could blow. But spring regulators, again, don't usually blow. Most of our -- I don't recall any of our regulators that, gee, I've had a series of we have blowing regulators. Malfunctioning, maybe. Pressures change because of the conditions. Maybe the service pressure is elevated. Maybe there was work on the building. You know, without having a history of what transpired from the time of installation till now, there's too many variables that could --
Q. Still going in that line of thought, if you are called in for a regulator failure, which happens to be a spring-load regulator, from what you mention before, you look at it to find out what the problem is.
A. Yeah, I would -- spring-loaded regulator, sure. I'm going to investigate what a spring-loaded regulator is. What's wrong with it, um-hum.
Q. When you're done with the diagnosis, do you document why the

spring-load regulator failed?
A. Generally speaking. When I was in the field, yeah, depending upon what it was. If there was something on the seat, I would have marked in my comments clean seated regulator, debris on seat, set for the specific pressure that it's looking for, 5.5, 7 inches water column pressure, whatever like that. Checked lock-up load, made sure it was fine. Relit appliances, turned -- you know, service left okay.
Q. Thank you. Do your crew members currently respond to failures on spring-load regulators?
A. I don't have orders that are just spring-loaded failure regulators.
Q. Or issues that led to that?
A. I can't say that my crews have never responded to a regulator that failed or a regulator that needed to have service done to it. There again, there's a lot of jobs that come in that people say either no gas or low pressure or something along those lines, then my guys go out and make the adjustments. And my guys, I make sure that they -- there again, if I was sitting with every last one of them, tell you they could do everything right at the time, you know, I could verify it. But other than that, I instruct them, this is what you do. Be specific. This is the pressure I had. This is the pressure I got. Be specific about what you did so if somebody else has to go behind you, they know where to follow up or where there was an issue.

Q. Okay. If they come back -- I don't know if you do follow-up evaluation, and they let you know, confirm to you that, oh, the service call we went for or the issue happens to be the regulator and we were able to take care of it, do they document in their paperwork currently what they found out and what happened?
A. Generally speaking they do, yeah. We don't have paperwork, per se, but in our tablets in our comments and, you know, on the completion codes of an order they should, they should have that type of information in their documentation, what they found, what was wrong, what corrections they made. I mean, there again, people shortcut.
MR. EMEABA: Correct. Thank you so much.
BY MR. CHHATRE:
Q. Couple of questions from me. This is Ravi.
A. Sure.
Q. Let me ask you first a, I guess, preparatory question here. Are you comfortable answering technical questions on the mercury regulators? If not, then I won't ask those.
A. It depends what you're asking me as far as technical questions go. Tell me -- you tell me, I'll tell you.
Q. All right. Okay. Is a multi-family, multi-dwelling unit regulator any different than a single-family?
A. Not necessarily, no.
Q. Besides the, I guess, the (indiscernible) size and load and --

A. No. Unless you're talking about a Model 30, a large regulator or a small domestic regulator. I mean, because one regulator was, again, designed for -- you should be able to pass 1,000 cubic feet for the small, small Reynolds No. 1 Regulator.
Q. So, let's say, like 8701 Flower Branch Apartment, would those regulators be any different than the residential single-family?
A. No.
Q. No, there shouldn't be.
A. No.
Q. Okay. Now as far as the regulator internal mechanism goes, what happens if the diaphragm has a crack or fails? What will happen?
A. If a diaphragm is cracked or fails, you're going to have leak coming out the vent line.
Q. So it will go to the vent line? It will not go internally?
A. Not a diaphragm crack, uh-uh.
Q. Now the other side -- one side of the diaphragm is where you're venting out.
A. Inlet pressure/outlet pressure.
Q. And the other one is controlling pressure but it's going into the service line or customer line, or it is not?
A. Yeah.
MR. CHHATRE: If it helps -- I mean, if you have model here we can -- do you have model that you can show?
UNIDENTIFIED SPEAKER: Yeah, but it's not really

(indiscernible) --

MR. CHHATRE: All right.

UNIDENTIFIED SPEAKER: It's inside, yeah.

BY MR. CHHATRE:

Q. I guess, so you are saying it still will vent through the vent line, the line contacts?

A. Yes.

Q. Now is there a company M&O procedure that you know of that requires regulators be replaced? Like everything gets old and most components have a service life.

A. The only --

Q. Do you know is there a service life on the regulators or meters?

A. No. I'm not aware of any specific service life, 10 years, 20 years, 25 years, of a regulator. Our primary concern is does it meet requirements? Does it lock up properly? Does it meet the requirements for operation?

Q. So there's no life to have for certain years?

A. Not to my knowledge there's any kind of expiration date on a regulator.

Q. The reason I'm -- what about IR request -- I don't have the full, I guess, request here, but we have some information that they gave me, and it's telling me that roughly at least 150, 200 mercury regulators failed in 2015 and close to again 200 in 2016?

A. 200 in the system?

Q. Yeah.
A. Okay.
Q. But, I mean, now you are telling me that you never heard of mercury regulators failing. So who will be replacing these regulators?
A. Failing -- you're saying fail, you're saying they just blew all by themselves, or they just didn't meet the requirements?
Q. To me fail is -- no, to me fail is not meeting, is not --
A. Well, because if something doesn't lock up, if something doesn't lock up within a specific requirement -- because 2 inches over set pressure is what we say we're going to lock up --
Q. Right.
A. -- our standard no flow pressure. 5.5-inch is standard pressure for a domestic load. If the regulator goes over 7.5 -- saying it's not uncommon for a mercury regulator, say, gee, it's -- I'm locking up or no flow load 8 inches. Requirement for us is it's failed the lock-up test, we're taking it out at the field. So are you putting in that failure test, because there's something --
Q. To me fail and no fail is go or no go. I mean, if it doesn't meet the requirements you have --
A. True. True.
Q. -- it fails, does it not?
A. No, that -- 100 percent. If it doesn't fall within the guidelines as far as a lock-up test goes, sure it's a failure.

There again, terminology. Failure to me -- you say, gee, a mercury regulator failed. To me that says, oh, we had gas blowing out of it somewhere. But then again that's --
Q. Well, the regulator I have is a regulator leaking from the body connection, is that a failure?
A. It's an abnormal operating condition, so I -- you know, a failure of the regulator? You're --
Q. It's not functioning as it's supposed to be, right?
A. If it's leaking out the body?
Q. Yeah.
A. Well, failure of that regulator to me would be it's not providing the pressure needed to run the equipment. If you're saying it's leaking on it or something like that, and you put that in a failure category, sure.
Q. So which category you will put that thing in then? If the regulator body is leaking, which category you put that in?
A. If a regulator -- you're talking about the body around the seam or you're talking about where it screws in --
Q. That's what I mean. Am I correct?
A. You tell me.
UNIDENTIFIED SPEAKER: Yeah. I'm not sure if they're referring to inlet and outlet fittings could be leaking or --
BY MR. CHHATRE:
Q. You see the regulator leaking, leaking from body/connections are all pressure protections engaged and venting?

A. If you're talking about leaking, then you could be talking about a nipple leaking where it screws into the body.

UNIDENTIFIED SPEAKER: Yeah.

MR. WILLIAMS: You know, that's what that sounds like.

UNIDENTIFIED SPEAKER: Yeah, so that seems like it could be -- that's saying --

MR. CHHATRE: So leaking from body. Or connections.

UNIDENTIFIED SPEAKER: Or a fitting or the vent.

MR. CHHATRE: Or connections, or connections. It could be both.

BY MR. CHHATRE:

Q. But I mean, what I'm saying, to me, a layman and not having 36 years of experience with these things, but --

A. Yeah. Well, the body of the regulator, the body of the regulator is the actual hard core pipe going through inlet and outlet, body of the regulator. Head of the regulator is the piece that attaches to the body of the regulator. So if they're referring to the leaking of the body of the regulator, you know, subject to it's leaking on the inlet side threads, outlet side threads --

Q. Obviously, your form that you are supposed to fill in is not making any differentiation in that, right? So, I mean, the way I viewed this form that Washington Gas treats, no matter whether the body is leaking or connection is leaking, it's not functioning properly, and to me that's a failure. So what you are saying is

you don't consider that as a failure?
A. Well, my terminology and yours might not be the same. I come across from --
Q. That's what I'm trying to understand --
A. Yeah.
Q. -- if it means in terms of what you consider failure. The regulator has to just blow?
A. I just -- no, not blow. What I consider a failure is it doesn't fall within the guidelines of set pressure. If I can't set that regulator -- if it's leaking, I don't refer to that as a failure. You may -- your terminology may say, oh, it's a failure because it's leaking. That's not my terminology.
Q. Would you leave that regulator in service?
A. No. I'd never leave a leak on any kind of regulator.
Q. Now I'm confusing with the terminology. I don't want to parse the words here, but now confused.
A. You're asking two different things though.
Q. To me if something is not working --
A. Right.
Q. -- as it is designed to, it fails.
A. No. I'm just saying my --
Q. But you are saying that is not Washington Gas definition?
A. That's not what I'm saying. What I'm saying is I would not use the terminology as that's a failure on a regulator. What I'm saying is if that regulator's leaking and I can't fix it, I'm

going to replace it. But in my terminology, that's not a failure of the regulator. That's a failure of a fitting. If a regulator is leaking on the seam, sure. Do I use the term, oh, that regulator's failed? No, sir. I say it doesn't meet my criteria, so I replace it.

Q. Well, maybe I guess it looks like Washington Gas doesn't have a proper definition for failure. I'm just trying to (indiscernible), I'm trying to --

MR. STAEBLER: Yeah, so -- yeah, so let's --

MR. CHHATRE: For my report, I'm just trying to use the correct terminology.

MR. STAEBLER: And I'll go back, you know, subject to check. This is Doug Staebler with Washington Gas.

MR. CHHATRE: And we talk that later. I just want to make sure that we --

MR. STAEBLER: Yeah, and I would say we have -- you know, and we do have a program, and we have to replace the mercury regulators in our system because of the mercury contamination issue and venting and leaking mercury. So we have specific employees, and which is in Mike's group, in our rough-in crew, that are trained to change or remove a mercury regulator because of the potential of spilling the mercury out of the regulator. There's a specific way we do that and how we handle it, how we document it and how we dispose of those regulators. We also have outside contractor crews that are trained to do the same thing.

So I would say in here if we have a leak, if the inlets to the regulator, the piping that screws into the regulator, if that's leaking or the outlet piping is leaking someplace, because it's a mercury regulator, you'd have to remove that to take the pipe out and re-pipe it in --

MR. WILLIAMS: Yes, sir.

MR. STAEBLER: -- you're going to have a special crew because no one else is going to handle it. We would then take it out, dispose of it, and put a new regulator in. If it was a spring-loaded regulator, a service tech would go on a single-family house, shut the regulator off --

MR. WILLIAMS: Sure.

MR. STAEBLER: -- back the pipe out, re-dope the pipe.

MR. WILLIAMS: Re-dope the pipe.

MR. STAEBLER: Send it back in --

MR. WILLIAMS: Replace the nipple, whatever whatever they need to do.

MR. STAEBLER: -- and fix the leak and leave. So that's why a leaking -- a leak would come into a mercury reg that wouldn't necessarily come into another regulator.

MR. CHHATRE: See, what my concern, Doug, is --

MR. STAEBLER: Yeah.

MR. CHHATRE: -- you know, bear with me on this one. But to me if everybody's definition is different, if Washington Gas does not have a uniform definition for the crew to use, some of this

data will be completely skewed. If, for example, he doesn't perceive that as a regulator failure, you may not -- when I ask for the regulator failures it may not get entered in here, and that's big concern to me.

MR. STAEBLER: Yeah. So what happens --

MR. CHHATRE: So my question here is, I guess --

MR. STAEBLER: Yeah, so what happens --

MR. CHHATRE: -- do you have a universal definition or not?

MR. STAEBLER: Yeah. So what happens on our records, and I forgot the numbers -- it's 613 or something like that. So they would go in and basically code it that says I replaced a mercury regulator.

MR. WILLIAMS: 315 code.

MR. STAEBLER: 315 code, there it is. It's a 315. So, and that's like the data request you have, it says, okay, we go in now to the system and say give me all the 315s, and that's any mercury regulator replaced. And it's like, okay, why was it replaced? I have to read the comments. And that's filled in, in the comments section. Maybe it's not filled in at all, and it was -- someone wrote it was leaking, which could be, you know, it was venting, it was a leak someplace. It could say, hey, the body was leaking, the vent was leaking, it was leaking, you know, change program, something else that -- so it comes into just the way our records are today, it's a comment in the comments section that's based on whoever did the job and what they -- if they want to fill that in

and what they filled in. We do not require -- I don't think we have any requirements or we hadn't -- you know, and even today a requirement to have a specific documented reason why the regulators --

MR. CHHATRE: May I request the form that the people are supposed to fill in, a copy of that form? Do you have one --

MR. STAEBLER: Sure, yeah.

MR. CHHATRE: Unless you already provided that. I mean, I --

MR. STAEBLER: Yeah. I think those CAD records are them, right?

MR. SPENCER: I believe so. But the form may look different from the printed-out version. So there's a form that our techs use on CAD where they narratively either put in the details Doug was just talking about or they don't. And it might vary from tech to tech.

MR. CHHATRE: But that's what I want to find out. I mean, to me, and I don't make a big deal out of this thing, but I want to make sure that the form is going to capture actually all the data. If it's only in comments section, and somebody decides not to fill in --

UNIDENTIFIED SPEAKER: Right.

MR. CHHATRE: -- you may have no record at all in the data you are giving me as to how many mercury regulators failed. Do you see what I'm saying? If there is no comment --

UNIDENTIFIED SPEAKER: Right.

MR. CHHATRE: There is no comment, actually I decide, I elect not to fill it.

UNIDENTIFIED SPEAKER: Or you fill it, and you fill it for up to this point and not up -- you know, not two more sentences (indiscernible) --

MR. CHHATRE: And so I just need to look at that form and see if maybe the whole --

UNIDENTIFIED SPEAKER: Sure.

MR. CHHATRE: We see -- want to make sure that I understand this thing correctly because -- that's the only reason I want to get this form because I thought there were failures, so --

UNIDENTIFIED SPEAKER: So we'll send you a couple of exemplars that represent what's reflected and --

MR. CHHATRE: No, I just need maybe even a -- maybe a couple of filled forms or even a blank form would be fine because --

UNIDENTIFIED SPEAKER: Okay.

MR. CHHATRE: -- these are requirements on somebody, then I want to find out who --

UNIDENTIFIED SPEAKER: I think we would still be -- we have just changed over our dispatch system.

MR. CHHATRE: No, no, I want everything that is in effect at the time of accident.

UNIDENTIFIED SPEAKER: Right. I understand. So I'm just, I'm just telling you that we've just changed that over.

MR. CHHATRE: No, I understand.

UNIDENTIFIED SPEAKER: Our computer system just changed, so --

MR. CHHATRE: Right. I understand. Because, I mean, we want to know --

UNIDENTIFIED SPEAKER: So hopefully we can still get it. I'm not -- if it's a screenshot from our CAD system, the CAD system's screens changed. I don't know how we'd get the old one back.

MR. CHHATRE: Your recordkeeping has been a big issue with NTSB, that's a very big issue within NTSB. That recordkeeping and -- because if the records are not accurate, nothing reflects accurate. So it's a big concern. So I just want to make sure --

UNIDENTIFIED SPEAKER: If we're required to keep that type of information, right.

MR. CHHATRE: Right, right. So -- okay. And that's all I really have. No more questions about --

UNIDENTIFIED SPEAKER: And I'd --

MR. EVANS: Ravi, can I, can I --

MR. CHHATRE: Okay.

MR. EVANS: Ravi, can I ask a --

MR. CHHATRE: Yeah, go ahead, Roger.

BY MR. EVANS:

Q. I'm confused about one thing. I just heard a gentleman talk about there being a program that says we have a program to replace. And we're talking to Mr. Williams, and Mr. Williams says he doesn't know of such program and his group is the group that

does the replacements. Am I missing something?

UNIDENTIFIED SPEAKER: I could be the gentleman that said it or is Mr. Williams --

MR. CHHATRE: No. Mr. Williams said he is not aware of replacing regulators.

MR. WILLIAMS: I don't have a standing policy that says you're going to replace every single regulator you come across. I do not have a written policy that states that to me.

MR. CHHATRE: Is that -- Roger?

MR. STAEBLER: Yeah. And Roger, this is Doug Staebler.

MR. EVANS: Yeah, but is there (indiscernible). Go ahead.

MR. STAEBLER: Yeah. This is Doug Staebler from Washington Gas. Yeah, we do have a program. If you look at Ravi's replacement, there's thousands of regulators we replace every year on a proactive basis, and that's -- most of it's, as Mr. Williams stated, a tech might go out and record that there was a mercury regulator there. It would come back on our list. We might contact the customer and schedule one of our contractor removal crews to go out to there and remove it. We also do most of them following our replacement program. So as our replacement programs, which are mostly concentrated on the same years these were installed, are out there, we have a contractor out there with them and as they encounter these mercury regulators, we take them out of service because of the mercury.

MR. EVANS: Okay, sounds good.

MR. STAEBLER: Yes.

MR. EVANS: That's fine. Thank you. Just a question for Michael there.

BY MR. EVANS:

Q. Mr. Williams have you ever had any knowledge or known of this to happen, where a leather diaphragm failed on a mercury regulator?

A. A mercury regulator just failing, to say it's blowing to the atmosphere or it's not operating properly? What --

Q. No. Where the diaphragm, a diaphragm failure?

A. I personally have not. I don't recall a mercury regulator with a leather diaphragm saying, geez, it popped, it blew, it broke; I've got gas blowing. No, sir. I don't -- I couldn't be specific on something like that.

Q. Okay. So next question: Have you ever had an occasion where your service techs came back and said, we had line pressure in the complex, like in the apartment building or what have you, where actual -- the line pressure made it to the home, as to the inches of (indiscernible)?

A. Not my techs personally, have I ever had anybody said, geez, I've got line pressure inside. My construction techs -- I mean, if they got to something there was an issue, they would rectify it. And I'm sure they would have said, hey, we've got service pressure or line pressure inside -- none, none of my guys have ever run across something like that.

MR. EVANS: Okay, thank you. Appreciate it.

MR. WILLIAMS: Sure.

MR. EVANS: That's all for me.

MR. CHHATRE: Okay. If not, thank you everyone for coming.

MR. WILLIAMS: Thanks for having me.

MR. CHHATRE: Both waiting and answering all the questions, both. I think waiting for (indiscernible) more thanks.

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: THE EXPLOSION OF APARTMENT BUILDING 8701 OF FLOWER BRANCH APARTMENTS IN SILVER SPRING, MARYLAND ON AUGUST 10, 2016
Interview of Michael Williams

ACCIDENT NUMBER: DCA16FP003

PLACE: Washington, D.C.

DATE: January 31, 2017

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.

_____
Katherine Motley
Transcriber