UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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

Interview of: EDWIN ALLEN JACKSON

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

DOUGLAS STAEBLER, Senior Vice President Systems Operations
Washington Gas

STEVEN PRICE, Assistant Vice President
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SPENCER NICHOLS, Associate General Counsel
Washington Gas

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: On the record. Good afternoon. Today is Tuesday, January 31st, 2017. We are currently at 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 the investigator in charge of this accident. The NTSB investigation number for this accident is DCA16FP003.

I would like to start by notifying everyone present 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 for review and identifying any typographical errors. The transcripts may be posted in NTSB's public docket.

Also, I'd like to inform Mr. Ed Jackson that you are permitted to have one other person present with you during the interview. 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 the interview.

MR. JACKSON: Okay. My name is Edwin Allen Jackson. I work

for Washington Gas at the Forestville Station. The address for that is 4000 Forestville Road, Forestville, Maryland 20747. I am being represented today by Mr. Spencer Nichols. I am the supervisor for the meter and regulator section.

MR. CHHATRE: Thank you. 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, and your business contact information, starting from my left.

MR. EMEABA: My name is 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, [redacted].

MR. STAEBLER: I'm Douglas Staebler, Senior Vice President of Operations for Washington Gas; [redacted] is the email. The address, the office in Springfield, Virginia. Phone number is [redacted].

MR. PRICE: I'm Steven Price, Assistant VP for System Operations, Washington Gas. My email is [redacted]. My telephone number is [redacted].

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

MR. CLEMENTSON: John Clementson, Assistant Chief Engineer,

Public Service Commission of Maryland, [redacted].

MR. CHHATRE: Roger? Hey, Roger.

MR. EVANS: Yeah, Roger Evans. Roger Evans, Senior Investigator, NTSB.

MR. CHHATRE: Thank you.

INTERVIEW OF EDWIN ALLEN JACKSON

BY MR. CHHATRE:

Q. Mr. Jackson, for the record, just tell us any formal, informal education, your work history.

A. Okay. I have some college. I went to Prince George's County Community College for engineering. I went to the University of Maryland for engineering, 3 years completed there. I've worked for the Naval Service Weapons Center as an engineering technician for 7 years before coming to Washington Gas. I was an assistant to start, then I became a service technician, then a construction technician, and now I am a supervisor for the group. I did not give my phone number and I'd like to do that. My number is [redacted].

Q. And how long you have been with Washington Gas?

A. It will be 32 years in February.

Q. So can you tell us your duty as -- you said you were a service technician, construction technician; is that right?

A. Yeah, service technician and then a construction technician.

Q. And then you are supervisor now?

A. Yes.

Q. Tell us your duty as a supervisor. What are your responsibilities?
A. Okay. I have seven crews that do what we call the rough-in work, which is install the meters and the regulators, the meter buildups. We run house line when we change over services from, usually from the inside to the outside. And one other thing is that I'm also the WSSC master gas fitter for the company.
Q. Okay. And the crew is one person or two-people crew?
A. It's usually a two-person crew unless we have heavy-duty work, and then sometimes it's more.
Q. Okay. So as supervisor, do you direct their work or you just assign the work?
A. I do both. I set them up with the jobs, giving them -- dispatching the work, I should say.
Q. Okay.
A. And then I discuss the work with them, what needs to be done, the material and things that they'll need for the job, and then they go out. If they have questions, they will call me. I'll follow up with that, giving them the additional information they may need. And then periodically, I go out and follow up with -- make sure that the job is being done correctly, spot check sort of.
Q. So you actually do spot check by being at the site and watching their work or you just --
A. I will sometimes watch them while they're working. Sometimes

I will go after they've completed the job to see whether it's done properly or not.

Q. So tell us, what is the difference between service technician and, I guess, construction technician?

A. The service technician usually deals with the smaller meters as far as installing them, turning the gas on, and sometimes relighting the pilots and things to the appliances to give the customer gas. Sometimes they'll do leak checks if they're called out for that. And of course, they do the regular checks on every job for leaks.

The construction tech does the, usually the heavier duty, larger meter buildups. Sometimes they do the regular meter buildups, also, but they'll do the heavier jobs. They'll tie in services. Sometimes they'll work with a welder with some of the contractors and things out there to get the job done as far as tying in the house line and things like that.

Q. So are you familiar with the, I guess the meters or regulators involved in the 8701, the building that exploded?

A. I'm not familiar with it other than basically what I've seen on television or hearsay sort of.

Q. Okay, but you have never been --

A. I've never been in a formal meeting about it.

Q. Okay. You never have been on the scene either?

A. I have not. I've had crews that have been support group from outside, you know, buildings surrounding it, but never on the

scene.
Q. On the scene. Okay. And what kind of training Washington Gas gives the service technicians and the construction technicians?
A. Would you run that again?
Q. What kind of training -- how does a person become a service technician?
A. Service technician? There are a couple of ways. They usually come in either as a helper or as an assistant depending on their level of previous work related to what we do. And then they'll work under a service technician, and then sometimes a construction technician, for a period of time. They'll also get training as they go along, and they have a series of tests and things that they have to pass. And then if they are successful with that, then they are usually cleared by a supervisor, who observes their work. And if it's approved, then when there's openings they become service technicians.
Q. Okay. And how does the person transfer from service technician to construction technician?
A. Okay. We have a progression that we work with. And if there's the senior people and they've qualified for the construction tech job, they go to additional schooling for education on that. And they are also, again, cleared by the supervisor, and of course, training passes them, and then when there's openings for the construction tech, they become

construction techs.
Q. Are these OQ qualified jobs, service technician or construction technician?
A. Yes, they are OQ.
Q. Both are?
A. Yes.
Q. And whose responsibility it is to keep their, I guess, title correct?
A. To keep them current?
Q. Yeah, yeah, is supervisor responsible or the person or --
A. Yeah. In large part, it's both training and the supervisor. They go back for refresher courses with the OQs, and some of the OQs are given by the supervisor. And then, of course, we observe them out in the field to make sure that they're maintaining those standards.
Q. So as far as residential and multifamily units like the one on August, the apartment complex, if you would, who will be working on those buildings for meters and regulators, installation or the maintenance?
A. Okay, at this time or back at --
Q. No, back at the time of the accident.
A. I don't -- oh, at the time of the accident?
Q. Right.
A. Okay. There's two groups. There's the rough-in group with the contractors that do some of that work, installing multi-meter

racks. And then there's also our group, the meters and reg group, that also does that same work.

Q. Okay. And you are with meters and regulators group?

A. Yes.

Q. What other things meters and regulator group does besides installing the meters and regulators, anything else?

A. Oh, they're qualified to do the service work also. So we also cover that portion of it when needed. We install not only residential but commercial and industrial-size racks, too. So we do have plenty of that work.

Q. And how do you get the work? Who assigns the work to -- I mean, you assign the work to your crew.

A. Yes.

Q. But who gives the work to you?

A. It comes from multiple sources. Customer service will create some. Marketing will create some. Credit will send some of the work to us. And some of the underground contractors will call us in and we'll get work from them as far as, basically, running house lines or putting meter buildups in when they're putting in new services or replacing services for whatever reason.

Q. And just for the record here, meter build up means what?

A. The meter build up is the service is usually already stubbed up, the house line, sometime it's inside the house or outside the house, and what we'll do is put the -- if it's a low-pressure system, we just put a meter rack -- I mean, a meter buildup in and

tie in the house line. If it's a medium pressure setup, then we will put a regulator and a meter bar, and then tie in the house line, basically.

Q. So essentially you will install the meter and the regulators? When you say buildup, you are talking about the piping?

A. The piping, yeah. And if they're ready for gas, we will also install the meter and introduce gas to the building.

Q. And you say you also are for the service. Service meaning complaint for odor, complaint for what? What is the service -- you said you also do the service, not only the installation but also the service?

A. Yeah. Right.

Q. Am I correct?

A. Yes.

Q. So what does service involve or entail?

A. Well, it basically entails doing the smaller meters, the residential stuff, some small commercial stuff that we'll do. And they also will run on leak orders. If we get a leak in and the service group is tied up or they need additional assistance, then the rough-in group will fill in.

Q. When you say leak, are you talking about like leak surveys or other --

A. Well, there are some leak surveys that we follow up on. But the ones that I was speaking of are the ones that the customer or the fire department have called in, and we go out and investigate

that.
Q. An odor complaint, then; is that correct?
A. Yes, odor complaint or a hissing noise or something like that that they relate to a gas issues.
Q. And you said you work through service technician and a construction technician yourself?
A. Yes, both jobs.
Q. So on the -- in your experience, do you work at all on mercury regulators?
A. Yes.
Q. Have you seen any failures on mercury regulators?
A. Yes, sometimes they will fail. It's sort of unusual because the mercury regulator was a pretty good regulator as far as holding up over time.
Q. And how will you know a regulator has failed?
A. Usually, you will get some weeping at what we call the vent. If the regulator has failed to some degree, then gas will get past the orifice and increase the pressure and it can cause the regulator to what we cal bleed through the vent. And you'll get an odor and the customer will call that odor in or, if we're doing a survey, we'll catch it at that time that the odor is coming through there; then we'll check it and see if it's related back to the mercury regulator as being the issue on that.
Q. And under those circumstances, will you be replacing, repairing the regulator, or you have to call somebody?

A. In the time of the explosion, we basically were replacing them. If it was -- if the group that replaced it, which is my group, wasn't available and the regulator was still operating properly, then we did put it in operation and then put an order in to have it changed at a later date.

Q. Okay. So walk me through regulator failures. What kind of failures you have seen over the years? You have 33 years, so --

A. The main one that I've seen over the years was the disc. The disc is a rubber disc that pushes up against the orifice. And sometimes you'd either get some trash or something, a little pebble or something would come through and stop the disc from pressing completely against the orifice to shut off the flow of gas, which would increase the pressure and then, eventually, set the vent off with gas to vent to the outside. The other thing is if --

Q. When you are saying the seat, you are talking about the orifice and --

A. And the rubber disc.

Q. Rubber disc. The rubber disc or (indiscernible) whatever the case may be. Okay.

A. Yes. Yeah, the rubber disc. Sometimes the rubber disc, with age, would harden a little bit and it wouldn't seat properly. And back in the day, you used to be able to flip the disc and use the other side of it and it would work fine for many more years.

Q. But could you access --

A. But we don't do that now.
Q. Could you access the disc?
A. Back in the day, yes. We don't access it anymore.
Q. Anymore. Okay.
A. No.
Q. What other failure most you have seen of regulators?
A. Sometimes I guess the mercury level would be a little low, and a lot of times it was a test to -- that mercury might dissipate over time, and sometimes it wouldn't go to what it was set for. You know, it might release a little bit sooner than the pressure that it was, you know, originally designed for. It might leak, sometimes it might have leaks around the threads or something like that, and rather than trying to service it out since they were up in age, we would go ahead and change them out, put spring regulators in.
Q. What else?
A. There was a little pin in there, a little clip that you use to hold the disc in place. Sometimes that pin would break.
Q. Like that mechanism, it would push --
A. It's a little clip. I think --
Q. Yeah, it would -- that's what I like about this show and tell.
A. The silver clip.
UNIDENTIFIED SPEAKER: This is the rubber disc over here.
MR. CHHATRE: Right.

UNIDENTIFIED SPEAKER: And you can see there's a little cotter pin there that you could pull out, the disc would come out. You put it back and you push the cotter pin and that holds that --

MR. JACKSON: Cotter pin would be a better word for it, yeah. And sometimes that would break or bend where it wouldn't fit in there properly. If you had another one on the truck, you would put another one in. But rather than service it, in today's world we go ahead and change it out.

BY MR. CHHATRE:

Q. But in the old days, you could have "repaired it," quote/unquote?

A. That's correct.

Q. Okay. What else can go wrong?

A. I think that's pretty much it. We never really had any problems with adjusting it. The pressures were pretty well set with the regulator. Like I said, it was a pretty reliable regulator for the -- especially the amount of years that it was in use.

Q. What about the diaphragm that operates?

A. I've heard others -- I've never had or experienced that the diaphragm was the problem on it except for where it leaks around where the bolts are that hold it together. That's the only time I've experienced that.

Q. Now, with the regulator failing, will you be seeing the gas coming out of this flange here?

A. Yes. We would normally put soap around it and, of course, it would bubble up and we'd know that -- and we'd try and seal it, initially --
Q. By tightening it, or --
A. Try tightening it, and sometimes that would work. But in today's world, again, we wouldn't do that, we'd just go ahead and change it out.
Q. So in which of these failures, the house pipe or service -- residential inside piping, I don't know what term you all use, service piping?
UNIDENTIFIED SPEAKER: House line.
MR. JACKSON: Yeah, house piping.
BY MR. CHHATRE:
Q. Customer piping. Which of these failures would lead to a higher pressure on the customer's side?
A. Which of the failures?
Q. Or none of the failures will lead to the higher pressure on the customer's side?
A. Well, I know --
Q. I think earlier (indiscernible) --
A. I know if the orifice doesn't close completely that you would see some higher presser on there, but that's the only thing. I never really went through the telltale of finding out exactly what caused the pressure to increase. But I know if the disc did not sit properly, that you would get higher pressure through it.

Q. On the customer side?
A. Yeah, to some extent.
Q. Right.
A. It wasn't usually much but it was to some extent.
Q. What about the diaphragm failing? I know you said you haven't seen one, but would that cause the customer pressure going up?
A. I really wouldn't know. I couldn't tell you.
Q. Now, regulator, if I understood correctly, when you go and you see the regulator is not holding, keeping the range that you are supposed to, or it's not functioning properly, how will you test that? I mean, you go in, there's an odor, gas is coming out of the vent -- say the gas is coming out of the vent --
A. Yeah. We have what we call a U-gauge that we would put onto where the meter buildup is, or some other opening that was downstream, and we would use that to check the pressure that was going through the regulator.
Q. Downstream of the regulator?
A. Downstream of the regulator.
Q. And will you do anything to the vent line to see if the vent line is blocked?
A. Yeah, if we would --
Q. I mean, you would have to do the (indiscernible) regulator for that.
A. Anytime we serviced or replaced the regulator, yes, we always

checked the vent line to make sure that it was clear. And there was also a screen at the end of the vent line. We always made sure that that was nice and clear, too. And we would pressure test if it was an underground vent line to make sure that there weren't openings where the piping had failed. So we would, you know, we would pressure test it that way.

Q. To work on the vent line, would you ever disconnect the regulator from the system, or you don't have to?

A. Disconnect the regulator? No.

Q. The vent line is attached to the regulator, right?

A. Yeah.

Q. So if you had to work on the vent line --

A. There were unions before and after the regulator. So anytime we had to do anything with the regulator, we would take the unions loose and dispose --

Q. Move the regulator?

A. Well, no. And again, in today's world, all we did was bag it, the whole regulator, at that point, and carry it out of the house. And then come back in after we had discarded that and then put a new regulator in, spring-loaded regulator.

Q. And then connect the coupling?

A. And reconnect the couplings. Usually, it would be new couplings.

Q. Now, as far as the multi-family dwelling goes, like 3, 4, 5 apartments, or 10 apartments, and you had to replace a meter or

reconnect the meter for whatever reason, a meter is already there but you have to reconnect the meter, would you have to check something at the regulator so that regulator and vent pipe, the coupling has to be removed or disconnected?

A. Yeah, we would check, of course, for any leaks. Like I said, we checked the vent to make sure that was clear. We would check the pressures that the new regulator was putting out to make sure it was within our specifications. I mean, sometimes we didn't have to take gas off of the rack itself in multi-meter setups because we could tank, either tank it from one of our tank trucks or there was a bypass on the service where we could feed the rack without having to turn it off. But if we did have to turn it off, then we turned each one of the meters off and made sure we did the regular checks with each meter and each house line to make sure everything was good.

Q. Maybe I did not state my question correctly. You already have a meter, everything is working fine -- and I'll give you an example. I did not pay Washington Gas, Washington Gas comes in and disconnects my gas service at the meter by putting a disc.

A. Um-hum, for billing purposes.

Q. Yeah, and then the new customer comes in or I finally scoff enough money and pay you guys and you guys would reconnect now, right?

A. Um-hum. Yes.

Q. So you come in, you remove the disc from your meter, connect

my meter. Now at that time, do you have to do anything to the regulator, like disconnecting the coupling to the vent line to check pressure? Do you have to do anything to the regulator at that time?

A. Yeah.

Q. Nothing is being replaced regulator-wise. You are just reconnecting me at the meter.

A. At the one meter. Yeah.

Q. Do you have to do any testing, anything at the regulator at that point?

A. Yeah. Well, in the occasions where we -- well, not occasions. Most times we would check to make sure that the pressure was still good through that one meter, which would mean that the whole rack would be seeing the same pressure. The only thing you couldn't check was for lockup if you had gas still already on the system. You couldn't check for lockup, but as far as checking to make sure that the pressures were right, you'd do that with the U-gauge.

Q. Okay. But do you have to work on the regulator for any reason on that?

A. Only if the pressures weren't where they're supposed to be with the spring-loaded regulator that you put in. You might would adjust it some.

Q. No, you did not change my regulator.

A. You mean on a mercury?

Q. It's a multi-family dwelling. I have a regulator. The whole system is working fine. One customer was disconnected for whatever reason by Washington Gas and you are now going in to reconnect that customer. So you are only working on meters. Am I correct so far?
A. For the most part, yes. But, I mean, if the pressure wasn't right, then when you put the U-gauge on there, then you may have to make an adjustment.
Q. And where do you make that adjustment?
A. Just as -- on the mercury regulator, on top. You would take the top off and you would make usually a very slight adjustment there with the appropriate tool to turn it.
Q. Okay. But that's all you do?
A. That's basically --
Q. You don't have to disconnect the regulator with the coupling going to the vent line?
A. No.
Q. You don't have to?
A. No. Well -- no, only if you really -- the only time you had to do that was if you did something with the vent line. Let's say you had to extend it or you had to -- you knew there was an issue, maybe something that was stopped up or something like that where you could physically see it on the outside, then yes, you might would touch the regulator and make sure that it's open, there's nothing blocking it.

Q. And you can do that without disconnecting the customers, can you or can you not?
A. You can, yes. There's no gas on there unless the regulator is failing.
Q. Right. Right. So you can disconnect the coupling and do whatever testing you need to do to the vent line?
A. On the vent line.
Q. You can? Okay. Now any of the work you do, do you have to fill a form, Washington Gas requires you to fill a form?
A. Yes. Well, basically, what you do is check that -- you have checkmarks, basically, that you would check to say that everything was okay, and whatever pressures that you were seeing, you would write those pressure down.
Q. So will there be a column or a window that says coupling disconnected, vent line checked?
A. Usually, it was just vent line was okay. If it was okay --
Q. But there is a column that says vent line okay?
A. Yes.
Q. And that means somebody has to disconnect the coupling and check that?
A. That's means they -- well --
Q. Otherwise, how will you know?
A. No, it was -- if you didn't observe any problem with it, you know, you didn't see any stoppage or anything like that because you did look up in it, you always test it with your machine to

make sure it wasn't weeping or anything like that, then you checked that it was okay.

Q. But then your regulator is okay. How do you know the vent line is okay? I mean, I'm just trying to understand. Your technician goes in for an odor call, let's just say.

A. For an odor?

Q. For odor.

A. Okay.

Q. He goes in, and he checks everything and either he finds something, that the meter bushing is gone or whatever the thing is, he fixes it. Are you also expected to look at other things when you are down there, or you're not?

A. Anytime you touch the regulator, you have to check the vent line. Anytime you touch the regulator for any reason, yes.

Q. So even for an adjustment, like you said, you have to check the vent line?

A. You would check the vent line.

Q. And to check the vent line, you have to disconnect the regulator?

A. Not the regulator, the vent line.

Q. Okay. But how do you check the vent line unless you unhook the coupling?

A. There was a union. There was a coupling.

Q. Yeah. Yeah. The gas is still going to the customer.

A. Right.

Q. But you still had to deal with the coupling for you do anything?
A. Um-hum, yes, to loosen up, yeah.
Q. And what, I guess what situations require you to touch the regulator if you are going for odor complaint or connecting service or whatever? I mean, I don't know all the different calls you get. Under what circumstances or what situations would require a technician to do something to the regulator?
A. Only if there was something going on with the regulator when you observed it, or if you got weeping on the outside, or you had a leak at the regulator itself or something like that, then you would check to make sure everything was right with it.
Q. So for any work you do at a customer's facility or property, anything you do, you have to make some kind of a note for the company form or --
A. Yeah, it was on the computer and you basically just -- it was just a checkmark that you checked the vent and everything was okay with it.
Q. Okay.
A. And what you do, if there was something going on with it, you would put remarks saying whatever it is that you did.
Q. Okay. And do you know what happens after you fill the form and --
A. No.
Q. What did you do with the form? Where did the form go?

A. No, it was on the computer, so --
Q. Okay. Well, computer recently, probably, but were there any forms at all anytime or --
A. Just -- no.
Q. Paper trail-wise.
A. For the most part, no, unless it was property damage or something like that, you might have --
Q. Okay. So on the computer you enter --
A. Yeah, you entered the information on the computer.
Q. And then what happens to the information?
A. I do not know. I do not know. I know it goes back into the system. And it could be looked at by others, but I don't know who those people were, unless it -- you know, unless it was a supervisor who was checking your work or something like that to see if you did the work properly.
Q. So once you fill that thing, you never know what happens?
A. Not as a technician.
Q. Okay. So as a supervisor, do you know what happens?
A. You can check to see whether, you know, there was some remarks in there that was telling you what he did. Yeah, you can do that. But that's basically what you do.
Q. What I'm trying to understand is does the system require anybody in the Washington Gas system to look at the forms that are being filled?
A. I don't know.

Q. You do not know?
A. I don't know.
Q. So nobody told you that this is what happens to these forms?
A. That's correct.
Q. Okay. The last question for me is, so which situations will require the customer's side of the piping to see high pressure, if anything? I'm not saying there is, but --
A. What could cause that?
Q. Is there any situation where regulator failure will cause the customer's side of the piping seeing high pressure? The reason I'm asking you this, probably, is because 33 years is a lot of experience and you have gone through all stages, I guess, or steps before you became supervisor.
A. Yeah. Yeah.
Q. So with all your experience today -- I'm not just asking it now. I'm just saying --
A. Right. Okay. The only thing, I mean, the regulators can only handle a certain amount of pressure. If there was a overpressurization of the system, then it's possible downstream that you would see additional pressure. If the regulator failed, you could see some additional pressure downstream.
Q. But what kind of failure? That's what I was really asking. What kind of regulator failure would --
A. Well, like, say if the disc did not seat properly on the orifice. Or if the orifice had been changed over the years and

they didn't seal the orifice back up properly, you might see a little additional, but it's usually a pretty miniscule amount of gas that would get past the orifice. You say about the diaphragm. I really can't speak on the diaphragm part of it, but you know --

Q. If the diaphragm fails, you do not know the (indiscernible).

A. Yeah.

Q. So it's (indiscernible).

A. To me, it's always been the seat or something --

Q. Sure. No, I understand.

A. -- that caused it to fail that I could visually see.

Q. Right. Okay. I got a (indiscernible) I'm just trying to understand why these components can fail. I mean, I'm thinking, you know, the diaphragm can fail also, so wouldn't that cause the pressure.

A. Okay.

Q. That's all for me. Thank you so much for answering all the questions.

A. Oh, sure. Sure. Thank you.

MR. CHHATRE: Kelly?

BY MR. EMEABA:

Q. Yeah, Kalu Kelly Emeaba. Just a few questions following through with what you already answered. We talked about a turn-off and turn-on period for the customer. If your technicians go out -- if you go out there to turn back a customer on, I want you to lead me through, step by step, what you need to do in order to

turn on a customer. First of all, turn off a customer, turn on a customer.

A. Turn off and then turn on?

Q. Yes, what do you do?

A. Okay, you're talking about an individual customer?

Q. Yes. No, in a multi-dwelling unit.

A. In a multi dwelling?

Q. Yes, sir.

A. Okay.

UNIDENTIFIED SPEAKER: But you're just turning off one of those customers?

MR. EMEABA: One of the customers, yes.

MR. JACKSON: Okay. If it was a customer leaving or a billing situation, we would turn the meter off. The meter shutoff valve at the meter, turn that off. This is a residential meter, so you would loosen the swivels, make sure that the rubber discs that are in the meters were good, but you would take the one out and put what we call a plastic disc in underneath that swivel, and then push the meter back up and tighten the swivel nut back on it and get a reading off of it, check it for leaks, and then you would move on.

When you come back to turn it on, you would again make sure that the shutoff valve is off, in the off position, and then you would loosen up the swivel nuts, place two new washers on both sides of the inlet and the outlet of the meter, tighten the swivel

nuts back up. And what we did was bleed the meter slightly, and that would mean leaving the outlet swivel cracked a little bit to allow any air that may have developed to get out of the system, and then you would tighten everything down.

I take it back. You would check it, or at least I did -- I don't know whether everybody did or not, but I would check it with the U-gauge to make sure that the pressure on the regulator, if it was a high-pressure system, and I'm not sure whether you're asking that or not. But if it was a high-pressure system --

BY MR. EMEABA:

Q. That was my next question.

A. -- I would check the pressures to make sure it was within specs. And then tighten the meter up, release a little bit to allow the air out of the system, tighten it back down, check for leaks. And then, also, at that point check whether any gas is being used.

I am missing a step, because you -- I'm standing at the meter buildup, but what you first have to do is go into the customer's home and make sure that everything is off.

Q. Okay. I'm just talking about where you are located.

A. Where I'm at. Okay. And I was kind of picturing that, too. But, yeah, your first thing is you knock to make sure the customer is there and you get in and access so that you can shut the valves off so that if you turn the gas on, there's no gas moving in the customer's home. And then you would go back and do the steps that

I just spoke of at the meter buildup. And then you would check the dial on the meters that have dials and see whether there's any movement there for a period of time. And if there's no movement, then you have what we call a tight house line, and then you can proceed from there and go relight the appliances for the customer.
Q. Okay. Thank you so much for that. I really appreciate that. The step you just mentioned, which is moving the swivel and then you actually have to add washers before you install back the meter, and as you mentioned prior to that, which is your own routine, and hopefully everybody does the same thing, you actually install a U-gauge. The U-gauge, do you put it on the inlet?
A. Inlet side, yes.
Q. Inlet side?
A. Um-hum.
Q. Okay. And when you put it, the essence is to see the pressure that is coming, correct?
A. Yes.
Q. Okay. So at any time, you know, it being a multi-dwelling as it is and you are turning on back a customer, you put in the U-gauge and you find out that the -- for instance, for a 7 inch of water column and you're using your U-gauge to check the pressure, what do you expect?
A. I expect to see 7 inches of water column. If I put a little load on it, it will drop some, but if it drops significantly, then it may be telling me that I'm going to have some other issues

before it gets to the meter.
Q. Okay. So --
A. But, you know, very seldom on a multi-meter buildup, because you would have already had complaints about that if that was the issue.
Q. Okay. So if that becomes the case, what do you do from there? If the pressure is low.
A. If the pressure is low?
Q. Yes, lower than the 7-inch, very drastically or very much lower, what do you do?
A. Well, with a regulator or without a regulator?
Q. With a -- I mean --
A. With a regulator in place?
Q. Yeah, for a multi-dwelling unit.
A. Okay. Then I would check the regulator to make sure that it's operating properly. I would check the swivel.
Q. For a mercury regulator?
A. Well, one thing you have to check is to make sure there's not a problem with the shutoff valve that you're utilizing. You know, sometimes a valve could crack or something like that and that might be restricting, why you're getting a smaller amount of pressure at the inlet of the swivel.
Q. So what do you do with that, crack it open? Or how do you take care of that?
A. Well, with experience, you can pretty much tell whether

there's gas flowing through the line properly or not. You can spin it. Those valves usually turn 360. So you can turn it all the way through to make sure it's not grease or something like that that's gotten in the line that might be slowing down the flow.

Usually, there's somewhere else you can check pressure. You can check it there to see whether there's an issue. Might be another open meter that the customer has moved out or something that you can check there. You can check the service. There's usually somewhere in the service you can make sure that the high pressure is coming in properly, it's not something kinked somewhere or some digging or something that took place on the outside, you know, that might have crimped the line or something like that.

Q. Okay. So still walk me back a little bit. If in this process you find that the cup valve or meter valve is bad, not allowing pressure to come down into the meter, what do you do at that point?

A. Unfortunately, if there's -- in that situation, if the manifold is all one for all of the meters, then you have to cut the gas off and change out that shutoff valve.

Q. To the entire building, correct?

A. Yes.

Q. Okay. So if that cup valve is fine, it's good, maybe you turn it and you see that you believe it's open, there is no

problem, you conclude there is no problem, however the pressure was still up, what do you do?

A. Like I said, I would try to check at another point. It's possible that it could be a defect in the fittings or something like that. That's very unusual, also, but it's possible. So you'd go back to the regulator and find another point to see whether you're still having that problem that's still downstream of the regulator, and then you just kind of work your way back.

Q. Okay. So the regulator is more or less to open it up a little bit more to see if you have pressure or not? When you go to the regulator point?

A. No, you're just checking the pressures at that point. You don't adjust the regulator or anything at that point. You want to make sure everything is clear first before you start adjusting it.

Q. How do you do that, please?

A. That's what I'm saying, a lot of times on these racks there's additional places where you can check. And if you're getting good gas at that point, then you know that it's going to be after the regulator. The regulator is not the issue. It's going to be downstream of that. It's a open pipe, so usually you don't have any problem with the open pipes or the L's or anything like that. So usually you go back, usually it's the shutoff valve that's causing the issue.

Q. The main shutoff valve coming to the building?

A. The individual valve going to wherever you checked and found

the low pressure at.
Q. Okay. Okay. And while you were responding, you did mention the fact that if you touch the regulator, you also have to, you know, kind of work -- disconnect and reconnect, test the vent line. Can you elaborate more to me?
A. On that, I can really only speak on the construction part of it because we are the construction group and we have the stuff to replace it. We will check the vent line because we have stuff -- in case it's a mercury regulator or something, we have stuff that we could change that out. So we will check it and make sure that it's open on the one end, and then also on the other end where the screen is.
Q. I know you are in both construction and service, correct?
A. Um-hum.
Q. So just on the service angle of it, which is just no more than a service visit.
A. Yeah. I can only -- the only part I can speak on the service is really way back, because I really don't deal with the service part of it in my position now. I'm more the construction part of it. And like I said, we would -- because we have everything there, we would do the additional check.
MR. EMEABA: All right. Thank you so much.
MR. CHHATRE: Roger, any questions?
MR. EVANS: Just a few.
MR. CHHATRE: Okay.

BY MR. EVANS:

Q. Just a few. It's been interesting listening to you there, Edwin. You seem to be fairly well versed in all these little tiny facets of regulators in your job. I'm just curious about a couple things. In the older days, I guess, when you had these mercury regulators, was there just one style of mercury regulator that the company was using or were there other model numbers?

A. Yeah, there were other models and there were other sizes. There wasn't just one size. You'd have a residential size and commercial size, and then sometimes an industrial size.

Q. But they were -- like, what would you term the apartment complex? What would that be, an industrial size?

A. No, actually, that would be -- well, I don't know what was actually there. I'd be guessing if I said what type of regulator was there because I have not been on that jobsite.

Q. Okay. Okay. That's fine.

A. The regulator we have here is a residential size, and it can be used for some commercial.

Q. I see. Generally, among the staff, I mean, when they hear about a regulator -- and I've read quite a bit about these mercury regulators and heard quite a bit about them, and they actually have a pretty good reputation through the years and people are pretty proud of the fact that they've lasted so many decades and they're still out there and they're still being used.

But as far as, you know, on your side of the business, if

there is a mercury regulator versus a conventional regulator out there, did your guys look at that any different as far as, you know, the confidence level of the piece of equipment, you know, standing up to what it needs to do?

A. No, if that mercury regulator is meeting the standards, then we don't see a whole lot of difference there with the exception of the age and that, you know, that it is becoming older. While we're there and we're capable of changing them out, we will go ahead and change them out for that, just for that basic reason, but we have confidence in the regulator.

Q. Okay. I'm just trying to get my hands around something here. As far as your construction side of the business, plus there's the odor guys that go out to the calls -- I guess an odor guy would be called a service tech; is that right?

A. Yes. For the most part, yes.

Q. Yeah. Is there a lot of demarcation between the service tech and the construction guys? Like, would you ever expect to get a call from someone that goes to -- that had gone to this particular complex, you know, for advice or for, hey, can you send someone out here? Would that ever happen in your -- with the way your structure is put together?

A. Yes. Anytime the service technician is not 100-percent sure of himself, we always encourage them to call a supervisor, either the service supervisor or the construction supervisor to confirm what it is.

Q. Okay. And so if there is a situation, let's say, just say for instance there was a problem child out there with regard to odors, you know, gas odors, at the same location, and these have been going on for weeks, is there any kind of a pecking order that says thou shalt call construction when you have this many issues with odors that have not been solved by the service guys?
A. Not really. Like I said, it's usually the call goes in to the supervisor so that they can explain what they have there. And if they do limit it or narrow it down to something that we could change out to eliminate the multiple calls, then in that case, yeah, we might go out there and change out that piece just to -- sometimes you do it to satisfy the customer even though you don't know for sure that that might be the particular -- the problem. But we have to assess everything. We assess everything to make sure that everything is working properly.
Q. So, you know, in listening to you talk about the --you analyze and go about work as far as troubleshooting, very articulate with what steps you would take. Do you have the confidence that your skill set is out there among all of your people, they have a similar expertise in being able to troubleshoot? Just like you were talking about where you checked this and you checked that, is that typical in your group, in your construction group that those gentlemen, or women or whatever, would have that same level of expertise to be able to troubleshoot something?

A. Yes, I would say that my group does follow -- I can't say 100 percent because I'm not with them 100 percent of the time, but the majority of the time, yes, they would follow -- we discuss the issues that we run into every morning and deal with any issues that come up, and we talk about it as a group.

Q. Just saying that, would you expect that the service techs have a similar level of expertise as your construction guys?

A. In some phases. I mean, we have different levels. We got residential, you have commercial, you have industrial, and then you have people that have been there for only a few years, and you have some that have been there like me, 30 plus years. So there might be some history there that the more experienced people might have overtop of the younger people. But for the most part, everybody is on the same level or at least willing to call and talk to somebody if there is any issues out there that they're not 100-percent sure of.

Q. Well, I guess what I'm getting at is, based on what you've told us today, would you expect service technicians to be at that same level of expertise and be able to do the regulator troubleshooting and to go through the steps to be able to see where things might be going awry?

A. Only at the residential level. I mean, we do have new people that eventually come out and, of course, you have to keep a closer eye to make sure they're following everything. But the service technicians really don't deal with the larger commercial and

industrial equipment out there except for checking for leaks. So that would come back to the meters and regulator group.

Q. Okay. But there's no -- well, before I go on, as far as your work and the way you do your -- manage your people, do you require a checklist for them to follow, to go through, follow the checklist, document what they did, and then write it up in a work order, you know, what they did for the day or at that particular problem? Is that part of your culture that you require?

A. Yeah, it's not, per se, a checklist that they have to go through every step. Like I said, we do discuss everything. I do watch them to make sure that they're covering everything, and then I do ask for them to explain what they've done out on the job in the remarks section so that I have a good feeling of what went on in that particular job.

Q. Okay. But as far as you know, there's nothing in writing that says that a person out on a team, let's say, that's on a multiple-odor call, you know, location, there's nothing out there that basically says that he should go higher and contact X, Y, Z for advice on -- if he hadn't solved it?

I mean, like if a person walks up to the -- like in this case, a person walked up to the scene and says, geez, I don't smell gas but, you know -- and this is the fourth odor complaint tonight. I go there and I don't smell gas. Rather than just walk away and say, well, I couldn’t find it, there's nothing in writing that says, okay, it's time to call the big gun guys and get them

over here and see what they can find? There's nothing out there like that, that you know of?
A. I'm not sure about in writing, but, yeah, we always encourage the guys to, if they run into a problem job, that they should be calling the supervisor, either their supervisor or the shift supervisor or the on-call supervisor, to help them walk through the situation. And sometimes if it's --
Q. And people -- go ahead.
A. And sometimes, you know, we will go out to those jobs if we feel that there's a need for us to make sure that we remedy this issue. And that could be just because, you know, because of a customer complaint more so than if we feel that there's -- if we feel there's an issue, we go out anyhow, but a lot of times it's just to talk to the customer to reassure them. And sometimes we'll even go through the steps ourselves just to reassure the customer. But for the most part, I do feel comfortable with the service technicians and the construction technicians that they've been trained well enough to do the job properly.
Q. And do you commonly get calls from the service techs where you actually deploy people out to the scene and say here's your guy to help you figure this one out? I mean, that happens from time to time?
A. Yes. And we do encourage it with the new people, you know, to call. You know, the new people haven't seen everything that's out there. So if they see something, even though they know the

basic steps that they're supposed to walk through, if they don't feel 100-percent confident or it's a trouble issue, then we do encourage them to call so that we can walk it through with them also.

Q. Okay. And the way your system is set up, do you consider the service guys customers just like your paying customers are? Are they -- your service people, when you have to go and help them, are they considered just like a customer for you, where you are going to help that person -- I mean, are they called customers by chance?

A. The service technicians?

Q. Yes.

A. Is that what you're speaking of? To me, they're just as important as the customers. You work with these guys for years and, yeah, I do, I feel an attachment to make sure that they're working safely out there and if they have any questions, that we do whatever we can to help them through it.

Q. Okay. And in your work, do you commonly evacuate buildings because the situation is, you know, in dire straits and it's time to get people out? Is that part of your protocols?

A. I wouldn't say commonly. That's been a rare occurrence that we felt that things were so bad that we needed to evacuate a building.

Q. And do you ever work with the fire department on something like that?

A. Oh, yes, very closely. If the fire department is on the job, that's the first person that we're talking with before we approach the job so that we know what is expected of each other.
Q. And do you commonly call the fire department to assist you with the evacuation of tenants?
A. Well, it's been very few that I've had to deal with as far as evacuations, so it's kind of hard to measure that.
Q. Okay.
A. But, yeah, we'll call the fire department for things like access and things like that. But, usually, if things are that bad, the fire department is usually there before we get there.
Q. Okay. One question I have for you going back to the mechanics of a regulator. I mean, most of the time that you have people working on this equipment, are they by themselves or someone else is with them, or usually by themselves? How does that work?
A. With the service group, usually the service group is working by themselves unless it's night. The midnight shift will normally will have a second or assistant with them. A lot of times that's for parking issues and other things that might come up or just because it's night work. But for the most part, the service group works by themselves. The rough-in or meter reg crew usually is a two-man truck.
Q. And what type of time frame is it that a person becomes independent in your firm, that says, okay, you are ready to roll,

you can go it on your own and you can do the service work, or do this work, this construction work?

A. Well, I mean, there are some time limits on it, but for the most part, we don't send anybody out until they've passed all the classes and have been approved by the supervisor that they can do the work.

Q. Now, what typically -- I mean, is that 2 weeks, 2 months, 2 years? Any kind of a range you could provide?

A. I would say it's 2 years, for the most part. It's usually 18 months of combined working with other technicians and training before they complete their classes and are allowed to work with the supervisor to be cleared to do the work. And then, of course, there has to be an opening for them to move up to that technician position.

Q. And as far as this --

MR. EVANS: In fact, Ravi, you can correct me here if I'm wrong.

BY MR. EVANS:

Q. Were there work orders that your crew had done in this complex? I haven't seen any evidence myself but I'm just curious. I didn't see the docs if they came in or if they were requested. But, Edwin, were you actually sending people out to this scene in the last 4 or 5 years to do work?

A. To this particular building?

Q. Yes.

A. No. That's not in my territory. Not that we don't cross territories from time to time, but we had never been to that building. And during the explosion, we only went out there as a backup crew for the surrounding area.
Q. Okay. Well, thank you very much. You've been very helpful and it's been a pleasure listening to how articulate you are with your work. So appreciate it. Thank you very much.
A. Thank you.
MR. CHHATRE: More questions?
BY LT. OLIN:
Q. Bill Olin, Montgomery County. So you were talking about back in the day, and I've heard some other guys talk about that. When you stopped making these repairs to regulators, can you sort of approximate when that was? I mean, are we talking 10 years ago, 15 years ago?
A. Well, it wasn't a carte blanche thing, it was almost like a station-to-station thing that they just stopped working on it, I guess as they saw that it was time to move on to the newer styles, or if there were issues in that particular station, that they started changing. But I would guess probably 12 years ago, something like that.
Q. And do you recall a time when you all as a group or as a department swapped out the vent L's? We heard somebody else say that there was -- do you --
A. You mean screen the L's?

Q. Yeah, the screen L's.
A. That we would swap them out?
Q. For a better product or something?
A. Yeah. Yeah. Yeah. The screen L's, there was a better product out there, and then sometimes we would, you know, if we worked on that particular thing, we would put the newer type. I believe it held up better.
Q. And when was that? Do you know approximately when?
A. That happened over time. That wasn't a carte blanche where we went and changed them all out or anything.
Q. Do you know when maybe it started?
A. Twenty-five years ago.
Q. Okay.
A. I mean, somewhere in that ballpark.
Q. And when you do something like that type of work, is there a requirement that you then test that line after you've actually done work to it?
A. You make sure it was clear. If it was an underground line, then you did a pressure test on it.
Q. A pressure test? Okay.
LT. OLIN: That's all I've got.
MR. CHHATRE: Okay.
BY MR. STAEBLER:
Q. Doug Staebler, Washington Gas. So you had mentioned about, and I guess there were questions about leak response. I guess a

service tech -- I know you're not a service tech, but just thinking like kind of what do you go through, what would a service tech go through as an odor complaint, and then maybe go to if you can't find the odor complaint, or can't find the odor, or what information do you even have when you get out there if you're the third or fourth call from that customer? Do you have that information with you that you know this is the third time there's been an odor call and how would you proceed with that?

A. Yeah. Well, there's a number of things. It depends on the equipment and everything that's out there. But with the basic residential equipment, you would -- after you made your initial look and you didn't find a gas leak or anything like that, you would turn the equipment on, the appliances on and make sure to check that the burners were burning properly.

You know, there's other things that would cause you to have a little gas odor that would not necessarily be a leak. Or the burners weren't coming on properly, so you would get gas first and then maybe, after a few seconds, you might would get it to ignite. So you would get a little bit of gas odor that way. So you would check the equipment to make sure it's not a gas leak but a gas issue because the equipment is not working properly.

We also have equipment that checks for gas and makes sure that it eliminates other things that aren't gas, you know, because there's a lot of things that smell like rotten eggs, which our gas, you know, smells like. So we do check to make sure that, you

know, that we have a real gas issue and not a sewer issue or something like that. I don't know whether I'm specifically answering everything with that, but --

You know, you could even go back to the meter and shut the meter off and test the house line -- make sure that everything, the appliances and things are off and check the house line with the meter to see if there's any loss of gas through that, and then go back and relight and again check everything to make sure everything is working properly.

Q. And then, also, I think we talked about, you know, if a service tech is out there and has questions, you know, about calling up to the construction group, but they also would have their own supervisors and experienced service techs that they'd also rely on for help, too, I would imagine?

A. Rely on, yeah. Yeah. Yeah. But, normally, they would call either the service supervisor or the construction supervisor to verify, you know, with our years of experience, because most of us do have quite a few years of experience.

Q. Okay. And then we talked about, you know, adjusting a regulator or working on a regulator, and I just want to clear up, you know, that terminology and what you're referring to. So in a multi-meter rack that would have two mercury regulators or two regulators in parallel vented outside. If a service tech comes in and is doing a turn-on and detects that the pressure isn't where it should be for setting, would that service tech go and start to

adjust those two regulators or would they call for rough-in to come, your group?
A. Mercury regulators?
Q. Yeah.
A. Yeah, unless -- if they're way out of whack, they're going to turn them off if there's an issue, but for the most part, yeah, they would call rough-in rather than try and do any type of service of those. And we would come out there and replace it with a spring-loaded regulator.
Q. Right. Okay. So they wouldn't work on those regulators, the service tech, or the vent line?
A. No, the service guys would not.
Q. Yeah. And then, you know, we talked about checking the vent line, you know, and I guess the service department wasn't going to do it, but if you're out there doing a pressure adjustment where you didn't shut the gas off to the regulators or take a regulator out of service, would you still then disconnect the vent line and do a clearance test on the vent line if you were just doing a pressure adjustment on the regulator?
A. A minor adjustment, no, we wouldn't. If it was a big difference, something that would raise your candor [sic] as to something else might be going on, then we would probably do further checks.
Q. I'm trying to think whether there's something --
A. Yeah.

Q. -- three things I was going to follow up on.

UNIDENTIFIED SPEAKER: You're old too.

MR. JACKSON: Yes.

MR. STAEBLER: What?

UNIDENTIFIED SPEAKER: You're old too.

MR. STAEBLER: I know.

MR. JACKSON: Yeah.

MR. STAEBLER: Time they're going to swap me out.

MR. CHHATRE: What do you -- I'm trying to figure out the word too. I mean, I don't mind if you just call him old. I'm okay with that.

UNIDENTIFIED SPEAKER: You were out of the room but I had a question and I couldn't remember it and I said it's old age.

MR. CHHATRE: Yeah, any questions?

MR. PRICE: Can I ask just a clarifying question?

MR. CHHATRE: Identify.

MR. PRICE: Steve Price with Washington Gas. To Roger, your questions have centered a couple times on multiple odor calls, and I guess, you know, we can ask more questions about leak investigation if that's helpful to the NTSB, but I'm wondering, is there a reason that those questions are being asked other than just general response on leak investigation? Is there a reason out of this case that is driving questions about multiple odor calls?

MR. CHHATRE: Do you remember, it was Roger's questions?

MR. PRICE: It was Roger's questions, yeah.

MR. CHHATRE: Yeah, Roger, you want to address that?

MR. EVANS: Yes.

MR. CHHATRE: The questions (indiscernible) the question is for you.

MR. EVANS: Yes. And keep in mind that I'm working on three other cases and I've had limited exposure. I was not on the scene for this particular case. But I read a good bit of the -- I read all of the ATF transcripts, you know, I read every one of them. I think there's -- I forget how many. There's a stack of them.

MR. CHHATRE: There are tons of those, yeah.

MR. EVANS: Yeah, it took me a couple weeks to go through them all. And I kept on seeing that in the past there were complaints of gas odor in the building. And what I don't get from those interviews is I don't get that these were responded to. I was just -- you know, my questions are around the logic of, okay, if they've made a bunch of complaints about gas odors, they must have called them in, although I have not seen that in writing, that these gas leaks were called in all the time. There's a ton of them.

MR. PRICE: Yeah, I believe the case is they weren't, but --

MR. EVANS: In the interviews where they talk about these -- there being quite a few times that the -- even one of the pieces of evidence -- well, not a piece of evidence, but I saw a -- and I know it's not a -- in our line or work, it's kind of like you

can't take it to the bank, but there was an interview done on the news with a lady who walks down the street every day of her life to walk her dog and she says every time I walk right by this area I smell gas, every day.

Now, she probably, because she doesn't live there, she probably didn't make a complaint. But the fact remains that the interviews support the fact that there were multiple times that people smelled gas. There's no ands, ifs or buts about that. Where we don't have substantiated evidence is to say that these -- you know, there were multiple calls. Now I haven't seen those documents to support that. So I don't know how many times you folks were called at all about, you know, about the odors in this area. All I know is there were multiple odors in this area, and I would think that if someone had come back several times, they would go through some sort of a protocol, a list or something to say, hey, I checked this, I checked that. You know, you're trying to isolate the problem. So that's where my questions are coming from. I hope that clears it up.

MR. PRICE: Right. Right. No, it does clear it up.

And, Ravi, correct me if I'm wrong, but -- if you think I'm wrong, but we are familiar from this investigation with residents suggesting that they smelled multiple odors of gas, but that was not reflected in the records of Washington Gas being called with multiple odors of gas. So that's why I was picking up on your question.

Because we did not have -- this is not a situation from our perspective and from our records that shows we were called to that apartment complex or to that apartment building from multiple odors of gas. That just did not happen. And that has not been an issue in this investigation. Our odor response or our leak investigation response, that has not been an issue up to now, to my knowledge. If the NTSB is aware of something that we're not, that's why I was hoping to get clarification on that.

MR. EVANS: Okay. Hey, Ravi, have we contacted the fire department to see if they were contacted to come and investigate odor smells in this area?

MR. CHHATRE: Yes, I --

LT. OLIN: Roger, I'm here, Bill Olin from Montgomery County. And what we found -- I'm intimately familiar with all those interviews as I did a whole bunch of them. The people that reported those odors reported -- typically reported them back to the -- called the management company or the management office to report those.

The most recent gas, report of gas that resulted in a 911 call was on July 25th, and which Montgomery County responded out and investigated. There was a report of gas on Arliss Street, 8707 or -9, while we were out there actually conducting the investigation after the accident. But those reports and those interviews saying that they smelled gas, the people basically notified the management company. So that's why there is no report

to Washington Gas or there is no call for 911 response.

MR. EVANS: Okay. Thank you very much for that.

LT. OLIN: Not a problem.

MR. CHHATRE: Okay. Any follow-up questions, anybody?

(No response)

BY MR. CHHATRE

Q. I have a couple of questions for you.

A. Sure.

Q. Do you know if there is a protocol procedure or standard operating practice that says after so many years the meters -- and I'm not just talking about spring-loaded or mercury, any.

UNIDENTIFIED SPEAKER: The regulators?

MR. JACKSON: The regulators?

BY MR. CHHATRE:

Q. Any regulators. I keep doing that. I don't know why I'm doing it.

UNIDENTIFIED SPEAKER: We have to check your (indiscernible).

MR. CHHATRE: Yeah. I'm glad you are not -- you are correct, so --

BY MR. CHHATRE:

Q. Now, any regulators needs to be replaced?

A. There's no set date that I know of that a particular type of regulator has to be changed.

Q. Okay. So there's no guideline that says after 15 years, 20 years, 10 years, you shall replace?

A. Well, with the mercury regulators, I believe something was sent out that we will now change out mercury regulators if we work on them.
Q. Right. Right.
A. But no.
Q. No. Okay.
A. Yeah.
Q. Okay. I guess last question was a pressure adjustment, you said if the technician is not getting on the U-tube, not getting enough pressure, then he will have to go, he or she will have to go and adjust the regulator to get --
A. Yeah.
Q. Did hear it correct?
A. I guess, you know, some of us like to be exact, and if it's not -- let's say the load should be 5-5 and it's 5-3, you know, we would like to be exact so we might adjust it just a slight bit.
Q. So how do you do that on the regulator?
A. In this particular regulator, you would take the top off.
Q. Top off meaning that off?
A. Yes.
Q. When you say top off -- I heard you. I didn't know that, you know, you are talking about this top off or this top off.
A. Yeah. Yeah. There is a slot there.
Q. Okay.
A. You would use a little special tool that works both slots and

just turn it.
Q. So you don't have to do anything else with the regulator at that point. Okay.
A. Right.
Q. That helps. Other than that, I really have on other questions. Thank you so much for spending time, waiting outside and being patient with us.
A. Thank you.
MR. EVANS: One more question? Ravi, one more question?
MR. CHHATRE: Okay. Go ahead.
BY MR. EVANS:
Q. Yes. Edwin, I want to know if there's -- this is kind of reaching but I'm just want to hear what the answer to this is. The adjustment that can be done on a regulator, especially this vintage of regulator, could someone, let's just say on their own, adjust this regulator under just some sort of, like, vandalism kind of thing where they just say I'm going to tighten this screw all the way down and see what happens?
A. Yeah. Yeah, it's possible.
Q. And if they were to do that, what type of an outcome would happen?
A. As far as the outcome, I don't know because I've never screwed one all the way down to find out. But, yeah, it can -- it's just a matter of taking the top off and with a screwdriver or something like that you could turn it. It would increase the

pressure is all I can say. It definitely would increase the pressure, or reduce the pressure if you screw it out.

UNIDENTIFIED SPEAKER: Aren't the springs set for a range, like a max range? So you're not taking inches of water column and jacking up the pounds, correct? So it's basically on a range.

MR. JACKSON: It depends on the spring.

UNIDENTIFIED SPEAKER: Because regulators have different colors and things.

MR. JACKSON: Yeah, residential you don't have that issue, commercial, yeah, you can change it quite a bit.

MR. CHHATRE: All right, if not, thanks for coming.

MR. JACKSON: Thank you. Appreciate it.

MR. CHHATRE: 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 Edwin Allen Jackson
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.

_____
Lisa Fuerstenberg
Transcriber