BEFORE THE PUBLIC SERVICE COMMISSION
STATE OF MISSOURI

ORIGINAL

IN THE MATTER OF	)
MISSOURI-AMERICAN WATER	) Case No. WR-2010-0131
COMPANY'S REQUEST FOR	) Consolidated
AUTHORITY TO IMPLEMENT A	)
GENERAL RATE INCREASE FOR	)
WATER SERVICE PROVIDED IN	) March 9, 2010
MISSOURI SERVICE AREA	) Jefferson City, Missouri

DIRECT TESTIMONY OF
KEVIN KELLY (VIA TELEPHONE)
ON BEHALF OF
ST. LOUIS AREA FIRE SPRINKLER ASSOCIATION

a witness, produced, sworn and examined on the 9th day of March 2010, between the hours of 8:00 a.m. and 6:00 p.m. of that day, at the 2117 Green Meadow Drive, in the City of Jefferson, County of Cole, before

Tammy F. Ballew
Certified Court Reporter No. 563
CAPITAL CITY COURT REPORTING
Jefferson City * The Lake * Columbia
573-761-4350 * 573-365-5226 * 573-445-4142

within and for the State of Missouri, in the above-entitled cause, on the part of the St. Louis Area Fire Sprinkler Association, taken pursuant to notice.

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A P P E A R A N C E S

FOR THE ST. LOUIS FIRE SPRINKLER ASSOCIATION:

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SIGNATURE INSTRUCTIONS:

Signature Waived.

EXHIBIT INSTRUCTIONS:

FSA Deposition Exhibits 1 and 2 are attached to the transcript.

I N D E X

E X H I B I T S

KEVIN KELLY, having first been duly sworn, testified as follows:

DIRECT EXAMINATION BY MR. ALLEN:

Q. Would you state your name for the record?

A. My name is Kevin Kelly.

Q. And, Mr. Kelly, where do you live?

A. I live at 190 Pirog Road in Pine Bush, New York.

Q. Now, Mr. Kelly, my name is Terry Allen and I represent the St. Louis Area Fire Sprinkler Association, and do you understand the purpose of the -- the purpose of this today is to solicit direct testimony from you on behalf of the St. Louis Area Fire Sprinkler Association in a matter of Missouri-American Water Company's request for authority to implement a general rate increase for water service provided in the Missouri service area in WR-2010-0131, which has been consolidated with some of their other issues?

A. Yes, that's what I understand.

Q. Okay. What is your business, if you will?

A. I am a fire protection engineer.

Q. Okay. And I understand that you have a degree in fire protection engineering?

A. That's correct.

Q. And where did you obtain your degree?

A. The University of Maryland.

Q. Is that in College Park, Maryland?

A. Correct.

Q. And was that in 1993?

A. Yes, it was.

Q. And the degree is a Bachelor of Science?

A. Yes, it is.

(FSA DEPOSITION EXHIBIT NO. 2 WAS MARKED FOR IDENTIFICATION BY THE COURT REPORTER.)

BY MR. ALLEN:

Q. Now, Mr. Kelly, at my request you provided me with a curriculum vitae, or your resume, and I have marked that as Exhibit 2 and you have a copy of it in front of you. It's two pages. Is this your resume marked as FSA Exhibit 2 (indicating)?

A. Yes, I have a copy in front of me.

Q. Okay. And this details your fire protection experience, your fire protection capabilities, your fire protection projects, your employment, your education, your committees and organizations, past and present, the fact that you have been an instructor and a lecturer with regard to certain fire matters, including installation of fire sprinkler systems. It also details your publications and presentations and your professional memberships; is that correct?

A. That is correct.

Q. And by designation, you have a designation of P.E., P.C. What are those designations?

A. P.E. stands for Professional Engineer and P.C. is what I had to incorporate my consulting company as it -- P.C. stands for, I believe --

Q. Professional Corporation?

A. -- Professional Corporation, correct.

Q. Okay.

A. Since I said I had a license, I had to be under a P.C.

Q. Okay. Now, as I indicated to you earlier, this is your direct testimony. You are under oath. Do you understand that?

A. I do.

Q. So your testimony is sworn; is that correct?

A. That's correct.

Q. And I think, initially, or at least before this direct testimony, you were made aware of this tariff filing in this particular case, were you not?

A. I was aware of it.

Q. Okay. Now, in talking to you before in preparation for this testimony, there was an acronym, AWWA, what is that?

A. That's the American Water Works Association.

Q. What precisely is that association?

A. It's the not-for-profit trade association that services or provides service to the water department or the water industry. They have seminars and training programs and publications and --

Q. And that's been throughout the United States?

A. That's correct.

Q. Okay. And what role have you played with regard to that organization?

A. I'm involved with the fire protection committee. I am the chair of the fire protection committee for AWWA.

Q. Okay. And what is the -- what does the acronym NFPA stand for?

A. The National Fire Protection Association.

Q. And what is the significance of that association in terms of this case?

A. NFPA is the not-for-profit trade association for the fire industry, or the fire protection industry as a whole, and they also have seminars, training, and probably most important, they produce publications like fire codes and standards for fire protection.

Q. And the standards, are they significant in terms of fire sprinkler systems?

A. Absolutely.

Q. Okay. In this case is there a concern that the taps of American Water for fire -- for a private fire sprinkler system in a family residence may not comply with NFPA requirements?

A. There is a concern that it may not be in full compliance, but NFPA does allow some -- I guess, should I say, they recognize that the codes and standards are adopted at local levels, but --

Q. Okay. Are there certain standards that should apply in this case?

A. Yes. NFPA 13D.

Q. Okay. And where would we find that standard if we were to look for it; is it on the internet, is it a publication or what?

A. It's a standard for installing sprinklers in one- and two-family dwellings and it is available at NFPA.org.

Q. Okay.

A. I do believe that they have a version that can be viewed and at a minimum it can be purchased from them. And I also have a copy of it myself.

Q. Okay. And I think you have provided me with a copy of that standard, have you not, as I recall?

A. Yes.

Q. Okay. In terms of the taps for the fire --

private fire sprinkler systems in family residences in this case -- in Missouri -- are there any specific standards -- and I'm talking about the detail of those standards that should apply to these residences.

A. NFPA 13D has recommended installation for tap-in to a fire protection system to a dwelling.

Q. And can you enlighten us specifically on what some of those standards are that should be applied in this case?

A. Yeah. NFPA 13D provides three options. In fact, out of all the documents that deal with fire sprinkler tap-ins for one- and two-family dwellings, this is the only document I've found that provides recommendations for a tap-in. And they have three options, one is preferred and the other two are acceptable.

The preferred one is a single cap coming off the city main, it goes into the dwelling and then splits to the domestic water and then another line splits to the fire protection system.

The two acceptable ones, one acceptable version is a single tap coming into the house, but the meter is on both the fire -- it's on the line that's before the split of the sprinkler and the domestic.

And then the third acceptable arrangement is

two taps, one for the domestic and one for the sprinkler system where the meter is on the domestic only.

The preferred arrangement, the benefit to that is that if a single -- there's a single control valve that can shut off both the fire protection and the domestic water. There's no way to shut off the fire protection system without shutting off the domestic water, and this is a built-in reliability -- or should I say, it adds reliability to the fire protection system because if someone shuts their water off to fix their sprinkler system, they've also shut off their shower and sink and toilet and things like that. So they are going to hurry up and get that thing fixed so that they can turn the water back on.

Where if you have -- well, it is an acceptable arrangement, but if you have two taps, you have the ability to shut off the sprinkler system and it could stay off without any -- without the same reliability of the preferred arrangement with only the single-control valve that shuts both systems off.

Q. Okay. So the rules and regulations of Missouri-American Water in this case comply with NFPA 13D and these -- the preferred and/or the option type of tap-ins?

A. Well, the quick answer is yes. I guess the longer answer is Missouri has a building code that is legally enforceable and through that building code and fire code it will reference an edition of NFPA 13D. So that edition of NFPA 13D through the building code or fire code reference makes it mandated if a community is going to be installing sprinklers in one- and two-family dwellings.

The -- I'm not sure what edition they reference, but the '99 and the 2002 to 2007 and 2010 all have this same preferred and two acceptable -- the three suggestions for tapping into the city water main.

Q. Does the AWWA have a policy statement with regard to residential private fire sprinkler systems?

A. Yes, they do. In fact, it's one of the responsibilities of my committee. The Fire Protection Committee reviews it every three to five years. I actually have a copy of it in front of me.

Q. Could you read that, please?

A. And let's see here -- it's the -- let's see, this is a residential fire sprinkler policy statement that was adopted by the Board of Directors February 4, 1996 and it was reaffirmed on June 13, 2004, and it states, The American Water Works Association recognizes the increasing use of

residential use of fire sprinklers and encourages that they be designed by licensed or accredited professionals and installed by licensed fire sprinkler contractors or properly trained personnel. The design of the system requires communication with the utilities so that available water pressures and flow to the residential fire system can be determined and the design can meet the utility's requirement.

Q. Why is that important in this case?

A. I always find that the policy statement -- any policy statement from a non-self-serving group like the not-for-profit trade association of AWWA, it becomes important when a community or water department wants to start something like residential sprinklers and they need a policy statement to, I guess, oversee that entire concept.

So I find that this is important in that it sort of lays out a very loose road map of what you could do to start a residential fire sprinkler system in a community and the policy statement is simple enough, but yet it hits the key points of, make sure it's installed correctly, designed correctly, and communicate with the utility so that you are meeting both the fire protection needs and the utility's needs. So you get a pretty good road map of what you should

do.

Q. And is that -- is NFPA 13D consistent with that policy statement?

A. Yes, actually, they require that it's installed by a properly trained person. And I do believe NFPA 13D also mentions to communicate with your water utility with issues such as backflow, or tap-in or meters or anything that would involve them, so they do parallel each other.

Q. In the residence where there's a private residence and a private fire sprinkler system, does it also describe in NFPA 13D the size of the taps for these residences?

A. It doesn't specifically state a size that you have to do, but they do have information in there that would -- to do hydraulic calculations to make sure that it was large enough to handle the demand of the sprinkler system. So through that process, it will recommend a minimum size that that line needs to be.

I'm going to go on memory, but I think they have a meter friction loss table in the annex and the friction loss through a small meter, like a five-eighths meter, would not be sufficient because you would lose too much pressure, so three-quarters or one inch is what they recommend.

I'm scanning through it quickly to see if it's -- I scanned through the '99 and I didn't see it in there quickly, but there is a reference to making sure you take into account the friction loss of a meter backflow, gate valve, check valve, anything in the way of water. So with its reference to finding the friction loss of a meter, you could find that data on the fact that a five-eighths meter just loses too much pressure to make this sprinkler system effective. You just can't jam that much water through a five-eighths meter.

Q. So should such issues as this be left to the discretion of American Water -- Missouri-American Water, or should they be -- I don't want to say mandated, but should their rules and regulations take into account the recommendations of NFPA 13D with regard to the size of these connections?

A. It would have to to make the system work properly, and the fact that the policy statement mentions that you have to design the system, communicate with the utility about the available water pressure and flow to the residential fire system. So AWWA eludes to it in their policy statement that you have to make sure it will work as designed.

Q. Should there be important differences in the

metering of commercial versus residential systems of -- when I say systems, fire sprinkler systems?

A. Two schools of thought on this.

Q. Okay.

A. NFPA 13D basically has the philosophy that if it's good enough for plumbing for the house, it's good enough for the sprinkler system. So whatever you need to legally tap into the city water into your home, that will comply with NFPA 13D, so NFPA 13D doesn't require anything special, it just has to be big enough to handle the flow.

Q. Okay.

A. But there is an effort in AWWA with the meter manufacturers, they have a residential fire meter and it somewhat mimics the commercial fire meter which has -- it's a little more stringent than a domestic meter. I guess the main difference is that it has a screen in front of it -- it's either four or six times the diameter -- to be able to block some sediment so it doesn't go into the meter.

And then it also has a blocked rotor -- meter motor test. I may not be saying it exactly right, but the main effort is that if you have some sediment go in there and it blocks the meter from reading how much water went through, you are still going to get water

into your sprinkler system.

So the residential fire meter is a product that's out there and most of the manufacturers of meters have a version of it and there is an AWWA committee, a meter committee, that is working on a standard for that type of meter. But in the meantime, Underwriter's Laboratory has developed criteria for a residential fire meter and I do believe there is a couple of -- last year I knew there was a couple of meter manufacturers who have complied with that UL requirement.

There is -- as I sit in -- I'm not on the meter committee, but I do participate with them and I am on the Task Group. I'm a member of the Task Group for the residential fire meter document and as I listen to water purveyors who are involved with these committees, some of them are concerned that if they are going to be putting a meter on a fire protection line, that they would prefer to have one that is designed for that.

So I'm thinking that AWWA, not officially, but at least in discussion, has looked into a meter that is specifically designed for fire protection sprinkler systems where NFPA 13D takes on the attitude that if it's good enough for plumbing, it's good enough

for our sprinklers. And there is validity to both.

In my personal opinion, I think NFPA 13D has the right idea in keeping the costs down, and if you use the meter for your regular water that you use for drinking and cleaning, if it doesn't work, you are going to do something about it quickly, like, the next day. So it keeps your -- there isn't much of a concern having a regular domestic meter. They've been working for many, many years and I don't see any problem with using that type of meter for a fire sprinkler system nor does the 13D Committee.

Q. So do you need an extra meter for the sprinkler system itself, is that what you're saying, or you don't need an extra meter?

A. In NFPA 13D there is only one acceptable arrangement that has a meter upon the sprinkler system and that's the second option which it's a single tap coming into the house with a meter and then it splits, one to the fire sprinkler and then one to the domestic.

Q. Okay.

A. It's an acceptable arrangement. The preferred arrangement splits in the house, but the meter is on the domestic only and the fire protection system does not have a meter.

Q. And that's the less costly?

A. I don't think it's less costly because you still have a meter, it's just where you install the meter.

Q. Okay.

A. But the third option is a dual-line system and they specifically do not show a meter on the designated fire sprinkler line.

Q. And that's acceptable?

A. That's acceptable so we don't -- as a general philosophy, we want to try to keep as many devices out of the fire protection line as possible just due to the fact that things fail and if they're not in the way of the water, then you're pretty sure you're going to get water to your sprinkler system. And the fire sprinkler system doesn't really use water in an effort for it to be metered like you would a regular use of domestic water where it needs to be metered so that the water department can know how much water you are using. But a sprinkler system is kind of a one-shot deal where --

Q. And, again, are you talking specifically about residential?

A. Yes.

Q. Okay. Are there any differences in rates for homes that are sprinkled as opposed to homes that

aren't sprinkled?

A. It varies across the nation depending on the community, but there is -- well, in some cases, can water departments charge for fire sprinkler acts and having that water available to them.

Q. Okay.

A. And some communities -- I believe it's the whole State of Kentucky, have made it -- I don't know if it's law, but they have -- all the water departments in the State of Kentucky do not -- can't have a standby fee.

Q. And let's talk about standby fees specifically. What are standby fees?

A. A standby fee is something the water department charges to a customer who has a sprinkler system, or a fire protection system, and it's supposed to offset the cost that it would take for the water department to have that water ready to go at any time, 24 hours a day, 365 days a year.

Even if you're not using that water, there is an associated cost with the fact that they have to have the water under pressure and pipes there and in working condition. Usually that's reserved for a commercial system since they use quite a bit of water and they need more flow and pressure to work. A standby fee is

something that some communities put on a sprinkler system for the reason -- as I stated, so the water's there on standby, ready to go.

Q. Should -- in your opinion, should the owner of a residence be required to pay a standby fee?

A. A residential sprinkler system should not have a standby fee.

Q. Why not?

A. It discourages the installation of the system. The main reason is that in the event of a fire of a sprinkled home, you are using less water, where if you have -- and let's say that home with the sprinkler system, let's say they were paying a standby fee, then if you have another home that doesn't have a sprinkler system, they don't have to pay a standby fee, yet when the fire department comes to use water to fight the fire which will be a larger fire than in a sprinklered building, they are going to take it from the hydrant which ultimately is taking it from the water department and there is no charge.

So you are actually penalizing the person who is providing a better level of fire protection with a very economical use of the water. And it should be the other way around. There should be a fee on the structures that do not have, or a home that does not

have a sprinkler system since they will ultimately use more water and probably use more -- take more money probably in the long run to be able to control that fire or put water on that fire anyway.

Q. And are there studies that show the benefits of the private sprinkler systems in a residence in terms of what you just talked about, usage and conservation?

A. There's -- Scottsdale, Arizona has been a zero threshold sprinkler community for over 20 years. The 10-year report had good statistics in it and I still reference it when I teach. It's around, I think, three -- 299 or 300 gallons is the average water used in a sprinklered home and I believe it's 3,000 gallons that would be used on an unsprinklered home by the fire department. So there's a pretty substantial savings in water in a sprinklered home as compared to a nonsprinklered home. And that statistic is in the Scottsdale report.

Q. Okay. You referenced the 10-year study in Scottsdale and there's also a 15-year study?

A. I believe there's a 15-year update and I think there is a 20-year update. I don't know if the 15- and 20-year are complete studies on their own, but they basically have supplemented the 10-year

report.

Q. Do you consider those reports to be authoritative?

A. Yes. I think that the report is -- it shows what a community would do -- would be like, or the water used over a pretty good amount of time and I think a community that hasn't had sprinklers zero -- and when I say zero threshold sprinkler, it means pretty much every building that is built will have a sprinkler system including one- and two-family dwellings. It gives a community who's thinking of doing this an idea of, like, hey here's a community that's done it for 20 years and here's some of their numbers.

So it's -- there are other sprinkler communities in the United States, but there has not been as many that have put together a complete number of statistics and study of their system like Scottsdale has. So Scottsdale tends to be one that people lean to because it's available.

Q. Now, you had mentioned a minute ago that owners of residents who do not have fire sprinkler systems, they are not charged a standby fee; is that correct?

A. That's correct.

Q. Okay. And in charging a homeowner a standby fee, or a standby meter charge based on the fact that the residence is equipped with a residential fire sprinkler system, does that penalize or discriminate against people who are being water-conservation minded because they have a fire sprinkler system?

A. Yes, they are absolutely being penalized for providing a higher level of fire protection that uses water economically. That's the problem with the standby fee in residential systems.

Q. In your judgment, would such standby fees or other extra charges for having such private fire sprinkler systems in a residence discourage the public from purchasing such systems?

A. It would, especially if it was voluntary. A new homeowner probably would not if the water department is going to charge them a lot of money. And if they are mandated by the fire code or the building code, then it's a lot of extra money that is penalizing the homeowner who is providing a higher level of fire protection and less water usage.

Q. Okay. Then from your information concerning the Scottsdale Study and your experience and education and teaching and everything you've done in this area, should a utility be required to implement the NFPA and

AWWA standards for connections?

A. The NFPA standards are usually legally enforced by being adopted, or being referenced, through the building code or fire code. The AWWA manuals and standards tend to be less enforced and more as recommendation.

But I will say they are the best documents out there and they are developed by a large group of professionals who know the issues. So if a water utility or community chose not to use the AWWA documents, there are very few other documents that parallel them and they would have to have a very good reason to vary from the AWWA documents.

Q. You reference the Scottsdale studies, do those studies support the concept that standby fees are a hindrance to providing better fire service that saves lives and protects property?

A. Not specifically, but if I'm not mistaken Scottsdale doesn't have standby fees, so . . .

Q. Okay.

A. It's a nonissue for that community.

Q. But from your perspective, do such fees act as a hindrance to providing better fire service through, you know, installing private sprinkler systems?

A. It would hinder fire protection if it stops someone from putting in a sprinkler system, that's for sure.

Q. Then you were talking about Kentucky. What goes on in Kentucky with regard to standby fees?

A. The whole State of Kentucky made it -- let's see -- I'm looking at a document called The Water Purveyor's Guide to Sprinklers in One- and Two-Family Dwellings, and in here there are some communities who have some incentives for sprinklers, so I'm reading this bullet from that.

Q. Okay. Thank you. Go ahead.

A. The Kentucky Public Service Commission ordered all utilities that currently assess a minimum monthly bill for fire protection services to file a new rate structure and to eliminate standby fees.

Q. And do you know why they did that or what their thinking was? Do you have that information?

A. Yes, I do. I was -- I paid close attention when this was going through. It basically was done for the same reasons we talked about; the fact that standby fees penalize homeowners who are providing a higher level of fire protection and a more economical use of water. So they eliminated them and rightly so.

Q. And to encourage people -- families to

install fire sprinkler systems, is it your understanding that even some -- there's an ISO mitigation insurance concept for one- and two-family developments that encourages people to basically install these systems? Are you familiar with that?

A. I am familiar with the ISO rating for a community.

Q. Would you give us -- you know, why is that significant or why would that be important here?

A. In real simple terms, the ISO rating schedule kind of gives you a snapshot of how safe your community is from fire. So it will look at the fire department and their manning, their equipment, their response time, do they have enough trucks, do they have enough fire houses for the hazards in that community, and they have a scorecard of sorts that they can score how well the fire department is. That's one issue.

And then the other issue is the water in the community. Basically, the water -- the water distribution system -- they do fire-flow tests from the hydrant to make sure that the hydrants can flow enough water in the event of a fire and if they all pass, they get a good score and if some fail, then you get a not so good score.

So they basically look at the ability of that

community to be able to put water on a fire. And with that rating insurance for that whole community can -- they use that to set the insurance rate, and obviously if a community has questionable or bad fire protection, either through water not available or the fire service not totally functional, then they offset that by increasing the insurance for that community.

And on the other side of the coin, if you have a good fire department that's well manned and capable and your water mains and your hydrants are acceptable and provide enough water, well then, your insurance can go down. But important in the ISO rating schedule is they give a pretty substantial deduction for homes or any building with a sprinkler system.

You can reduce the amount of water that's needed to flow from that hydrant and that ultimately will lower your insurance for that community basically because you are providing the fire protection in the form of a sprinkler system. So you get a credit for that rather than having to take that water from a hydrant and put in through a fire truck and put it on the fire.

Q. Okay. So I take it that -- is it your view that Missouri-American Water should not be permitted to charge standby fees?

A. They should not do standby fees for one- and two-family dwellings. The general attitude in the Fire Protection Committee -- not the Fire Protection, but just in the fire protection community at large, I guess, and my work on a lot of committees that deal with this, is the water department should charge what it costs.

It's okay to charge for the meter, charge for the tap-in, charge for the lines, whatever the material costs to make that tap-in happen, it's okay to charge that, because that's real cost. But they shouldn't provide or put a stand by fee in because of the reasons I mentioned earlier.

Q. Okay. Are there any other thoughts you have with regards to this case that we haven't covered that you'd like to speak to in your testimony?

A. Just a minute here -- lots of things out in front of me. There is one issue that I would like to hit on is the separation of commercial and residential sprinkler systems.

Q. Okay. Would you tell us what that concern is and what you think should be done?

A. Well, there are two different systems, two different documents, two different schools of thought, two different goals. The commercial sprinkler system

is designed to control the fire long enough for the fire department to get there. That type of system will provide life safety.

It also provides property protection which is much harder to do than actually save a life because the sprinkler system is very effective at that, but if you're trying to save a structure, it takes a lot of sprinklers in the building and a lot more water. So the commercial systems tend to be much larger.

A lot of times they are their own dedicated line because they are larger than the domestic line, and that basically being the description of a commercial system, where the residential system is a very economical sprinkler system meant to save lives. It will provide property protection but it's not the ultimate goal of that system.

And I'm going to mention this lightly, I guess, you could have a sprinklered home with a 13D system and it basically buys you enough time to get out -- to live -- to be able to get out. It keeps the fire from getting so hot and dangerous that it gives you time to escape. But a 13D system you could still have the house burn down in some cases, but it would provide the occupants enough time to escape, and in a community that has a good fire department, it gives

them enough time to get there.

So the fact that I say that it could burn down and that's okay is not always really our goal, but the 13D system is a -- it uses much smaller pipe, much less water, it's very economical where you don't need sprinklers throughout the entire structure because you're not necessarily trying to save the structure as much as you are trying to save the people in there. You know, saving the lives is the critical goal of the 13D system. With the separation of commercial and residential -- and I just basically gave you a background on why they are different -- but I'm not the only one who thinks that way.

The AWWA has different documents for residential and commercial. The policy statement is on residential it's not on commercial, so there's a separation there. The meters have a separate document for commercial meters where they are working on a residential meter document which is separate. And then even NFPA separates the commercial and residential systems. They have two separate standards, two separate sets of hydraulic calculations, different requirements, there's less stringent rules for some of the listing.

As I mentioned, you could use plumbing

devices for the tap-in for a 13D sprinkler system. You don't need a fire -- a UL rated fire pump necessarily, you could use a plumbing pump, so it's economical. And so I think that the fact there's a separation between commercial and residential by AWWA and NFPA and just by the material of putting the two systems together and the goals of the two systems are separate, that it kind of leads to the fact that a water department should have separate rules for commercial versus residential since the professionals who give recommendations on installing these systems separate the two.

Q. And the rules for residential, in your judgment, should they be consistent with the NFPA standards?

A. Yes.

Q. Okay.

A. I believe the residential -- the one- and two-family dwellings should follow NFPA 13D. That's the best document out there that gives you information on installing.

Q. And what should the commercial conform to? Just -- does it have a different standard then? Is that what you are --

A. Yes, it's NFPA 13.

Q. Okay. Okay. It sets out the different

standards in other words?

A. Yes. And then there's a third one for four-story apartment -- are you still there?

Q. Yeah.

A. I hit a button on the phone. Sorry.

Q. And is that in 13 also?

A. No. There's NFPA 13R.

Q. Okay.

A. I would best describe that as NFPA 13 provides sprinkler protection throughout the entire structure. As I mentioned it has property protection as one of its goals for a commercial building. It's actually for all types of buildings. NFPA 13D is specifically for one- and two-family dwellings, and it's an economical standard to give the homeowner a little bit of relaxation of the normal standard of NFPA 13 so that they can install it economically. NFPA 13R kind of falls in between those two. It provides life safety. It provides some property protection, and it puts sprinklers in most of the areas, but not as much as NFPA 13.

Q. Okay. Is there anything else that we haven't covered that you'd like to speak to today?

A. I have some notes that I'm looking at quickly. No, I'm looking through my notes. I think we

have hit all the points that I had written down in preparing for this.

Q. Okay. Then, Mr. Kelly, you understand that this will be your direct testimony before the Missouri Public Service Commission in the case that I referenced at the beginning?

A. Yes, that's what I understood.

Q. And you understand that you may be called to testify in terms of cross-examination -- some direct, some cross-examination, and that may be by phone since you are in New York; is that right?

A. That's what I understood. That's correct.

Q. You would prefer to have it by phone, I think?

A. If we can do it by phone, it's reasonable.

Q. Okay.

A. If we absolutely had to have me in person, I'm sure we could figure something out. But if we could do it by phone, I think that's fine.

Q. Okay. And if you were called to testify in remembering what you've talked about here today, would your testimony be the same as it -- as when we have the hearing as it is today?

A. Yes, everything I spoke about was out of my head, so it would be the same.

Q. Okay.

A. Unless I didn't have the documents -- I quoted some things directly from documents.

Q. Sure.

A. But -- so I would have to be able to re-quote --

Q. And, therefore, what you said today is true and correct to the best of your belief under oath, right?

A. Absolutely.

MR. ALLEN: Okay. Well, thank you very much and I'll talk to you later, Mr. Kelly.

THE WITNESS: Okay. Thank you.

(SIGNATURE WAIVED.)

C E R T I F I C A T E

STATE OF MISSOURI)
) ss
COUNTY OF HOWARD)

I, Tammy F. Ballew, Certified Court Reporter of the firm of Capital City Court Reporting, 210 East High Street, Suite 110, Jefferson City, Missouri 65101 do hereby certify that pursuant to notice there came before me telephonically,

KEVIN KELLY,

at the 2117 Green Meadow Drive, in the City of Jefferson, County of Cole, who was first sworn by me to testify the whole truth of his knowledge concerning the matter in controversy aforesaid; that he was examined, and his examination then and there was recorded by stenomask verbatim recording and afterwards transcribed and is fully and correctly set forth in the foregoing pages; and the witness and counsel waived presentment of this deposition to the witness, by me, and that the reading and signing of this deposition was waived, and is herewith returned.

I further certify that I am neither attorney or counsel for, nor related to, nor employed by any of the parties to this action in which this deposition is taken; and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in this action.

IN WITNESS WHEREOF, I have hereunto set my hand this 19th day of March, 2010.

Tammy F. Ballew, CCR
CAPITAL CITY COURT REPORTING

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KEVIN KELLY, P.E. P.C. Fire Protection Engineering Consultant
190 Pirog Rd. Pine Bush, NY 12566•(914) 656-2725•Fax(845) 744-66910 •Email Kevin@kellype.com

CURRICULUM VITAE

KEVIN J. KELLY

PROFESSIONAL LICENSURE/ACTIVE REGISTRATION:
NEW YORK: 2004, Professional Engineer No. 081615-1
(Fire Protection Engineering)

Fire Protection Experience
Managed various fire protection projects and provided consulting services to clients. Involved with the development of model building and fire codes. Answered over 1000 technical questions, written numerous articles and gave multiple presentations related to fire protection.

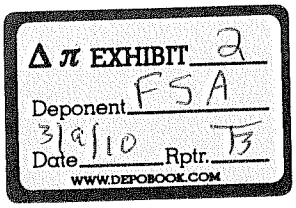
Currently a member of the Pine Bush, NY Volunteer Fire Department for over 18 years. During that time he was appointed as the Fire Department Safety Officer, elected as Vice President and as a Lieutenant. He was also responsible for managing the construction of fire apparatus at Sutphen East Corp. Mr. Kelly was a Captain in the U.S. Army Reserves, Army Corps of Engineers.

FIRE PROTECTION CAPABILITES
- Design and Analysis of Fire Protection Systems
- Compliance with ICC Codes and NFPA Standards
- Life Safety Code Applications
- Special Occupancy Standards
- Fire Flow, Access, Water Supply Evaluation and System Design
- Shop Drawing and Hydraulic Calculations
- Existing Building Fire and Life Safety Evaluations
- General Fire Protection Consulting

FIRE PROTECTION PROJECTS
- Municipal Fire Flow test for expansion of village.
- Assisted in the design of the fire suppression system for a 225 story building in Dubai, UAE.
- Provided fire protection and life safety review services for various occupancies in New York City.
- Designed booster tanks, pumps and plumbing layouts for fire apparatus.
- Designed petroleum distribution and storage system layouts.
- Assisted in UL certification for kitchen and gas station suppression systems.

EMPLOYMENT

April 2008 – Present	**KEVIN KELLY, P.E. P.C.** President / Fire Protection Engineer
February 2007 – March 2008	**Schrimer Engineering** Senior Fire Protection Engineer
September 2000-Febuary 2007	**National Fire Sprinkler Association, Inc.** Manager of Codes
July 1998- September 2000	**Sutphen East Corp.** Project Engineer
February 1989 – June 2003	**Army Reserves, A/854 Engineer Battalion** Captain, Executive Officer
May 1995-June 1998	**Luzon Environmental** Project Engineer
August 1994-March 1995	**Pyrochem, Inc.** Junior Engineer
March 1986- Present	**Pine Bush Volunteer Fire Department**



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EDUCATION

BS, Fire Protection Engineering, University of Maryland, College Park MD, 1993

COMMITTEES AND ORGANIZATIONS PAST & PRESENT

National Fire Protection Association (NFPA)

- NFPA 1, Uniform Fire Code
- NFPA 14, Standard for the Installation of Standpipes
- NFPA 24, Standard for the Installation of Private Fire Service Mains
- NFPA 101, Life Safety Code, Technical Correlating Committee (TCC)
- NFPA 5000, Building Construction and Safety Code, TCC
- NFPA 101/5000 Technical Committee (TC) on Assembly Occupancies
- NFPA 101/5000 Technical Committee on Educational and Day-Care Occupancies
- NFPA 101/5000 Technical Committee on Detention and Correctional Occupancies
- NFPA 101/5000 Technical Committee on Building Service and Fire Protection Equipment
- Served on the Board of Directors for the Building Fire Safety Systems Section

International Code Council (ICC)

- ICC Industry Advisory Committee
- ICC Study Group on Building Height and Areas for the Code Technology Committee
- Actively participated in the ICC's model code development process

American Water Works Association (AWWA)

- Chair of the AWWA Fire Protection Committee
- Cross Connection Control Committee
- Task Group on Residential Fire Meters

National Association of Corrosion Engineers (NACE)

- Participated with committees to control Microbiological Influenced Corrosion (MIC)

National Institute for Certification of Engineering Technicians (NICET)

- Committee to upgrade certification program for Sprinkler Layout Technicians

INSTRUCTOR & LECTURER

NFPA 13, Installation of Sprinklers Systems (2008)
NFSA Layout Technician Training Course (2008)
NFSA Advance Technician Training Seminar (2008)
NFSA Inspection and Testing Training Seminar (2008)

PUBLICATIONS & PRESENTATIONS

"Sprinklers in a Cold Environment", PM Magazine, May 2008
"Sprinklers in Garages", Sprinkler Quarterly
"Managing the Code", Sprinkler Quarterly
"Trade Ups", Sprinkler Quarterly
"Water Department Costs", Sprinkler Quarterly
"Retrofit Requirements in Existing Buildings", Sprinkler Quarterly
"Preparing for Residential Sprinklers", Sprinkler Quarterly
"Sprinkler Reduce the Cost of Developing a Site", Sprinkler Quarterly
"How effective is a passive system", Sprinkler Quarterly
"Sprinklers and Balanced Fire Protection", Sprinkler Quarterly

Professional Memberships

NFPA (National Fire Protection Association)
NFSA (National Sprinkler Association)
SFPE (Society of Fire Protection Engineers)
ICC (International Code Council)
AWWA (American Water Works Association)