BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Communications Workers of America

for a Public, On-the-Record Commission

Investigation of the Safety, Adequacy, and : Docket No. P-2015-2509336

Reasonableness of Service Provided by Verizon

Pennsylvania, LLC :

DIRECT TESTIMONY OF JAMES J. GARDLER ON BEHALF OF COMMUNICATIONS WORKERS OF AMERICA

Dated: September 29, 2016

- 1 Q. Please state your name and business address.
- 2 A. My name is James Gardler. My business address is Communications Workers of
- 3 America ("CWA") Local 13000, 2124 Race Street, Philadelphia, PA 19103.
- 4 Q. What is your position with CWA Local 13000?
- 5 A. I am the President of Local 13000.
- 6 Q. What portion of Verizon's service area is covered by members of Local 13000?
- 7 A. Our local represents more than 3,500 employees of Verizon Pennsylvania LLC ("Verizon
- 8 PA") throughout Pennsylvania.
- 9 Q. What are your responsibilities as President of the Local?
- A. My responsibilities include the following: bargaining and enforcing contracts for multiple employers across the state, including Verizon PA; maintaining and administering the
- finances and records of the Local with the Secretary-Treasurer; presiding at meetings of
- the Local Executive Board and the membership statewide; responding and reporting to
- our Convention delegates and our Executive Board; representing the interest of the Local
- at other forums both within and outside of the Local Union; and administering our Local
- organizing program.
- 17 Q. What types of work do your members perform for Verizon PA?
- 18 A. Our members at Verizon PA install and maintain the telecommunications network for
- both copper and fiber facilities. Our members provide customer service support for repair
- functions for both of these networks. Our members also perform design functions for
- 21 these facilities across our footprint. We have a group of payroll analysts who do

processing work in the payroll department, as well as truck drivers, clerical positions for 1 office administration and video hub technicians who oversee the content broadcast across 2 FiOS. 3 Are you a full-time employee of CWA? 4 0. A. Yes. 5 Please summarize your employment history with Verizon or other Q. 6 7 telecommunications companies before you became a full-time CWA employee. A. My employment began with Bell of Pennsylvania in 1992 as a collections representative 8 in Philadelphia. In late 1993, I was promoted to a services technician in Philadelphia 9 with responsibilities for the installation and maintenance of telecommunications facilities 10 for both business and residential customers. In 1996, I was elected branch representative 11 in my work location. In 1999, I was elected Unit 13 President with responsibilities for 12 about 1/3 of Philadelphia. In 2005, I was elected Eastern Region Vice President. From 13 2008 until the present I have served as Local 13000 Executive President. 14 15 Q. Have you testified in any other cases before the Pennsylvania Public Utility **Commission?** 16 Yes, I was a witness for CWA in Verizon's deregulation petition case in 2014, Docket 17 A. 18 Numbers P-2014-2446303 and P-2014-2446304. What is the purpose of your testimony in this case? 19 0. I will provide an overview of CWA's direct testimony in this case, a general overview of 20 A.

the condition of Verizon's plant and equipment throughout the non-FiOS portions of

Pennsylvania, my understanding of Verizon's maintenance and repair practices, and a 1 summary of the relief CWA is requesting in this case. 2 Q. Before we discuss those specific topics, please provide an overview of the quality, 3 safety, and reliability of stand-alone landline service in the portions of Verizon's 4 service territory that still rely on copper infrastructure; that is, the non-FiOS 5 portions of Pennsylvania. 6 7 A. The current copper landline network plays a vital role for consumers all across the state. Network reliability provides an essential public safety service particularly when the 8 electricity goes out since the service is supposed to be powered from our offices and not 9 from the residence, giving consumers the ability to place much needed emergency calls. 10 This service also gives consumers the ability to use medical alert type products and home 11 monitoring equipment when needed or required. While some of the facilities are 12 outdated, it is clear to myself and our members that Verizon has allowed this to happen 13 over an extended period of time, leaving customers with a sub-par network in most 14 15 copper areas. 0. What is the general condition of Verizon's copper network? 16 Verizon is doing a poor job of maintaining its copper network. Verizon is supposed to 17 A. 18 make sure the network is safe and provide decent and reliable service to customers. Verizon continues to reduce its workforce without backfilling the positions, thus leaving 19 20 customers with longer outages for extended periods of time. As I will describe later, 21 Verizon's neglect of its copper network also is resulting in unsafe conditions for CWA

members and the public who come into contact with those facilities. We see this every day with old poles that are not removed, sagging cables, wires that are not insulated or protected from lightning, cabinets and splice boxes that are broken in which animals and insects are nesting, batteries that are corroded and leaking, and so much more. CWA members used to take pride in the quality of our network, but now Verizon has allowed the copper network to deteriorate to the point where we are sad to work for a company that cares so little about the condition of its plant and equipment, or the quality of service it provides to its customers.

A.

Q. Please provide an overview of the information CWA will provide in its direct case.

I will discuss the nature of CWA's concerns statewide. This will include presenting two important pieces of information: (1) a review of changes in Verizon's workforce during the past five years, and (2) the results of a survey of CWA-member field technicians about the conditions they encounter on the job with Verizon.

The second part of CWA's direct presentation is the testimony of Susan Baldwin, a nationally recognized expert on telecommunications service quality (CWA Statement No. 2). As I understand it, Ms. Baldwin is analyzing service quality data from Verizon which demonstrates the effects Verizon's neglect of its plant has on the quality and reliability of service received by customers. She also will be making specific recommendations about service quality reporting and other matters relating to customer service.

Q. What types of concerns are your members experiencing with Verizon's physical plant?

The petition CWA filed in October 2015 documented the types of problems we see throughout Verizon's copper service area. These problems include the following: poles that are deteriorating, including unsafe poles that remain in service; lines sagging dangerously below minimum clearance levels; cables that are not properly repaired and replaced; ungrounded, exposed wires used as a work-around because Verizon will not spend the money to replace damaged cables; damaged cabinets and splice boxes that are not repaired or replaced, allowing animals and insects to nest inside; air pressure systems that are not tested and maintained, resulting in customer outages and the hazardous exposure of lead cable to the environment; batteries in remote terminals, controlled environment vaults, and high-capacity optical cable installations that are corroding and that are not being tested and replaced, resulting in preventable telephone outages during power outages.

Q. Can you illustrate these problems?

A.

16 A. Yes. I have attached as Schedule JJG-1 photographs dated between January 2016 and
17 September 2016 in the non-FiOS portions of Pennsylvania to illustrate each of these
18 types of neglect.

Picture 1 in the Schedule was taken in February 2016 on Steinruck Road in Londonderry Township (between Elizabethtown and Hershey). It shows a broken pole

remaining in service (apparently because of Verizon's facilities) even though the new pole has been installed.

Picture 2 shows a line sagging dangerously close to the ground. This picture was taken in September 2016 on Route 342 in Allen Township (Northampton County).

In Picture 3 I have illustrated Verizon's neglect of the cables that serve hundreds of thousands of customers in non-FiOS areas. This example, from Northampton, shows a damaged cable that has not been replaced, but instead has been covered with a plastic wrap. The wrap has been there so long that it has become damaged (as happens from wind, rain, and animal activity), so that service wires are hanging bare and unprotected from the weather and animals.

Failure to give Verizon technicians enough time to make proper repairs results in a type of "spaghetti" -- wires and cables being used to make temporary, "band aid" types of fixes, rather than replacing damaged cable and doing the job properly. This is shown in Picture 4 at the intersection of 4th and Broad Streets in Emmaus.

The fifth picture on the Schedule shows a damaged cabinet that has not been repaired or replaced. The damage impairs service to customers and provides a nesting site for animals and insects that affects the safety of workers and the public.

Finally, picture 6 illustrates a lead cable exposed to the elements. This is a cable with a lead sheath and paper insulated conductors. This type of cable needs an air pressure source to maintain 2 psi of air pressure to ensure that the paper-insulated conductors are protected from moisture. The enclosure used is not air tight or weather-

proof. As a result, the cable will fail due to the paper insulation becoming saturated to the point that it no longer functions as insulation causing shorts and cross talk. Even indirect moisture from the atmosphere will build up causing failures if it is not maintained under an airtight seal.

O.

A.

Let's focus for a moment on that last picture. Why would a lead cable like this be installed in this improper manner -- isn't that just an indication that your members are doing substandard work?

No, the problem isn't our members' training or experience; the problem is that Verizon does not give our members either the time or materials to do the work properly. The type of enclosure in the photo can be placed in about 20 minutes. It is intended for use on plastic insulated cable that can sustain ambient moisture, but it should never be used for lead cable. Because of the unrealistic time constraints placed on technicians, and Verizon's apparent policy to save money at the expense of service reliability and public safety, the proper air-tight enclosure was not used.

The proper enclosure takes about three times as long to install, plus a technician would need to go back to the garage to get one (since Verizon does not let technicians carry them on their trucks). The proper installation also requires a waiting period of 15 to 20 minutes for air pressure to build up in the case so the technician can test for leaks after installation. In other words, doing this job properly would take at least 2 hours after the source of the trouble has been located (which itself can take an hour or two on this type of cable). As I discuss below, Verizon simply does not have enough field

technicians, so it gives them unrealistic requirements, such as having to complete four jobs per shift, rather than giving them enough time to do the work properly the first time.

3 Q. Are these problems widespread in Verizon's copper service area?

A.

Yes. With CWA's limited resources, we cannot do a manual inspection of every inch of Verizon's copper service area, but our petition and the additional information we are providing in our testimony document these problems in areas throughout the non-FiOS portions of Pennsylvania. To determine whether these problems are, in fact, present in all of Verizon's copper service areas, CWA conducted a survey of field technicians who work in non-FiOS areas of Pennsylvania. Schedule JJG-2 provides the results of the survey. I won't repeat everything in that Schedule, but field technicians from throughout the Commonwealth reported that Verizon is neglecting its physical plant in non-FiOS areas by, for example, failing to authorize the repair or replacement of defective copper cable; using unprotected indoor service wire as a work-around instead of replacing defective cable; refusing to repair copper cable and instead installing VoiceLink at customers' premises (I'll discuss this in more detail later in the testimony); and virtually eliminating many types of preventive maintenance programs, such as air pressure testing and battery checks.

Q. Does Verizon's neglect of its copper facilities affect the service received by customers?

20 A. Yes, absolutely. Susan Baldwin will discuss in detail the quality of service being 21 received by Verizon's customers in non-FiOS areas. Generally, I can confirm Ms. Baldwin's conclusions with on-the-ground reports from CWA members: we are seeing increasing numbers of dissatisfied customers whose service goes out when it rains or who simply have no dial tone at all. We know the reasons why -- the cable is bad and needs to be replaced; air pressure systems are not working property; and backup batteries are not replaced when they wear out. But we are powerless to make the changes that would provide good service to customers because Verizon is not willing to spend the money, or hire the people needed, to repair the service. Instead, we're told to install VoiceLink for voice-only customers and allow the copper network to deteriorate even further.

Q. Does Verizon's neglect of its copper plant cause any safety concerns?

A. Yes. Damaged poles, sagging wires, corroding batteries, animal and insect infestations, and exposed lead cable all create hazards both for CWA members working on the facilities and for the general public.

In addition, Verizon is failing to replace batteries in remote terminals, controlled environment vaults, and optical cable multiplexers used by commercial customers with high-capacity circuits. As a result, when commercial power goes out, telephone service to customers served from these facilities also goes out. Verizon used to pride itself on the fact that phone service would remain on during power outages, providing an essential link between customers, their families, and emergency responders. But this is no longer true in many parts of Pennsylvania -- Verizon is simply unwilling to spend the money to repair and maintain backup power facilities to ensure that phone service remains on during storms and other power outages. In fact, I am even receiving reports of central

offices with backup generators that have not been tested or maintained for years. It is likely, therefore, that backup power to some entire central offices will be unavailable during power outages.

I am also receiving reports from our members around Pennsylvania that Verizon is failing to respond to underground locate requests from the PA One Call system. The result, not surprisingly, is that underground cables are damaged, resulting in customer outages that never should have occurred. During those outages, of course, customers lose the ability to contact emergency services, family, and medical providers.

Perhaps most disturbing are the reports I hear statewide of Verizon not responding to calls from emergency responders when a telephone pole is hit by a vehicle or is downed by a storm. CWA's petition showed several examples of small bits of pole suspended above the ground with Verizon cables still attached. Schedule JJG-3 provides another example of this occurrence from the corner of Stevens and Schuylkill Streets in Lancaster. In the instance shown in the Schedule, we have documented that this partial pole has been in place for at least 4-1/2 years.

This situation occurs because Verizon refuses to send a technician out to respond to a report of a downed pole, and refuses to spend the money to move its facilities to the new pole. After waiting many hours for Verizon to respond (while the road remains closed), the fire department and electric company will give up, cut up the old pole, and simply attach Verizon's facilities (still attached to the old pole) to a new pole so that the

1		road can be reopened. I cannot think of a more irresponsible, and more dangerous,
2		practice than a utility that fails to respond to reports of a downed pole and downed wires.
3	Q.	From the information you have received from your members, and from your
4		knowledge of Verizon's management practices during your meetings with them,
5		have you been able to determine the root cause of these problems?
6	A.	Yes. There is one over-riding cause of these problems: Verizon is unwilling to put
7		money into copper service areas. It won't properly repair or replace damaged or worn out
8		plant. It won't hire enough people to do the work properly. It won't upgrade the areas to
9		its highly reliable fiber-to-the-home service, FiOS. Basically, when you get outside of
10		Pennsylvania's high-density urban and suburban areas, Verizon has no interest in
11		spending money to repair, maintain, or improve its service to customers. As a result,
12		Verizon's poles, cables, batteries, and other facilities are in a sorry state of disrepair.
13		Service quality continues to decline, customers leave (if they have alternatives), public
14		and worker safety are threatened, and Verizon does nothing.
15	Q.	You said that Verizon does not hire enough people to do the work properly. How do
16		you know that?
17	A.	We see this every day. A field technician with 30 years or more on the job retires and is
18		not replaced. Technicians are relocated (either temporarily or permanently) from copper
19		to FiOS areas and nothing is done to make sure the work gets done in the copper area.
20		Schedule JJG-4 shows the loss in Verizon's field workforce between 2010 and 2015. As
21		the schedule shows, we lost 450 field technicians (more than 20% of the workforce)

during that period. We now have work locations that have just one or two technicians left to serve hundreds, or even thousands, of customer locations. It is impossible for one or two technicians to respond to outages and downed poles, repair or replace damaged cable, perform preventive maintenance, and otherwise ensure the safety and reliability of service to Verizon's customers and the public. I cannot emphasize enough that the existing workforce level in copper areas is not sufficient to do the work needed to provide safe and reliable service.

- Q. Are there really locations with just one or two field technicians who are qualified to work on outside plant and perform work at customers' premises?
- 10 A. Yes. I have attached as Schedule JJG-5, a listing of the locations where Verizon reported
 11 to CWA that Verizon had only one or two technicians as of the end of 2014. I expect that
 12 there are even more locations today where this is true, as a result of retirements that have
 13 occurred since this list was produced.
- 14 Q. How does the inadequate staffing level manifest itself in day-to-day work?
 - A. I'll give a common example. Because of the low level of staffing, our field technicians are told that they must complete four jobs per eight-hour shift. To replace a damaged cable span might take two people eight hours or more. So rather than fix the underlying problem that might affect dozens or hundreds of customers (replacing a damaged cable), the technicians will use indoor service wire as a "quick fix" to get around a bad section of cable. This can be done in a couple of hours and would allow a technician to complete the four jobs per day that Verizon requires.

1	Q.	Are there other reasons cable is not being replaced?
2	A.	Yes. Apparently Verizon does not want to even spend the money for the new cable itself.
3		Our trucks and warehouses are not stocked with spools of cable. Five or ten years ago,
4		this was common, essential equipment to always have on hand. But now Verizon is
5		unwilling to even give us the raw materials needed to do the job properly, even if they
6		gave us the time needed to do the work as it should be done.
7	Q.	Are there other reasons service in copper areas is deteriorating so badly?
8	A.	Yes. Verizon is unwilling to expand fiber-to-the-home outside of Pennsylvania's major
9		urban and suburban areas. Without adequately maintained copper, and without FiOS,
10		Verizon is essentially abandoning its customers. They are just waiting for service to
11		deteriorate enough that customers will leave the network completely.
12	Q.	Verizon claims that the problems shown in CWA's petition are simply questions of
13		timing; it takes time to move facilities from an old pole to a new one, or to fix
14		sagging cables. Is this accurate?
15	A.	Well, of course problems can't be fixed immediately, but the problems shown in CWA's
16		petition did not happen overnight. We did not go out and take pictures the day after a
17		new pole was installed or right after a damaged cable was found. These pictures
18		document problems that were left in place for many months with Verizon refusing to do
19		anything about them.
20		I wish we had the benefit of time-lapse photography in all of these areas to see
21		exactly how long these dangerous conditions were left in place. Obviously, we don't

have that, but I was able to use Google's Streetview pictures to illustrate what's really happening. Schedule JJG-3 is one example of that, where we used Streetview pictures to show that the same cut-off piece of pole has been in place for more than 4-1/2 years.

In the summer and early fall of 2015 we were gathering evidence of plant conditions to try to show Verizon that there was a need to hire more people. The extent of the problems we found eventually led us to file this petition in October 2015. We collected hundreds of pictures of problems on Verizon's network. We used just a few of those pictures in our petition last October. But a few days before we filed our petition, we provided Verizon a list of locations where we believed there to be unsafe conditions.

Schedule JJG-6 shows one of the locations we did not use in our petition: 166

Pine Street in Oxford, Chester County. The top picture is a Google Streetview picture from September 2014. It shows an old pole cut off with a terminal just hanging in midair above it. Obviously, the terminal was once attached to the old pole. The second picture was taken by a CWA member in August 2015 when we were collecting evidence of Verizon's plant neglect to show Verizon that there was a need to hire more people.

The condition is exactly the same as it was 11 months earlier. The bottom picture is a Google Streetview picture from November 2015, about a month after we filed this case with the PUC. Verizon sent out a crew in a hurry to remove the old pole, but that's all they did. They left the terminal hanging in mid-air. We see this over and over again -- Verizon does little to maintain its copper network and if someone complains loudly enough they'll do the bare minimum to "fix" the problem. What Verizon really does is

put a band-aid on it because the real fix would require an investment of time and money.

Verizon is not willing to spend the money and has refused to hire enough skilled people

to spend the time necessary to do the job right.

Q. Do you have another illustration of this problem?

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- Yes. Schedule JJG-7 shows how Verizon neglects its responsibility to get damaged, 5 A. dangerous poles out of service. The Schedule shows a sequence of pictures from the 6 7 same location in Hershey. The first picture in the Schedule is a Google Streetview picture from August 2011 and it shows a pole marked for removal (the white "X") near 8 the bottom of the pole. On the second page, we see the Streetview picture from July 9 2012, showing that a new pole has been installed, but the old pole is still there, waiting 10 for Verizon to remove its facilities so the pole can be removed. Finally, on page 3, is a 11 picture from February 2016, showing that the old pole is still there, still has Verizon's 12 facilities attached, and is still marked with an "X" indicating that it is unsafe and needs to 13 be removed. The old, unsafe pole has been there at least 4-1/2 years; the replacement 14 15 pole was installed at least 3-1/2 years ago, but Verizon had done nothing to move its facilities so the unsafe pole could be removed. 16
 - Q. You mentioned earlier that Verizon is not repairing copper facilities and is instead using VoiceLink to serve customers. First, what is VoiceLink?
- 19 A. VoiceLink is a device that is placed in a customer's premise that connects the inside
 20 wiring in the customer's premise to Verizon's wireless (cell phone) network. VoiceLink
 21 cannot be used to provide any type of data services. The unavailable data services

include security alarms, fax machines, credit card machines, medical devices (such as 1 pacemakers) that require telephone monitoring, dial-up Internet access, or dedicated 2 Internet access such as DSL service. 3 Is Verizon using VoiceLink in Pennsylvania's non-FiOS areas? 4 0. A. Yes. Attached as Schedule JJG-8 is a document provided to me by Verizon showing the 5 number of new VoiceLink installations in Pennsylvania between January and July 2016. 6 7 It can be seen that in just seven months, Verizon installed VoiceLink in more than 1,000 locations throughout Pennsylvania. 8 Q. Many of the VoiceLink installations were during the time when CWA members 9 were on strike. How do you know that VoiceLink wasn't just a temporary fix 10 during the strike? 11 I know this for three reasons. First, the schedule shows that Verizon had hundreds of 12 A. VoiceLink installs before and after the strike. Second, from reports I have received from 13 our members, we are being asked to remove few if any of the VoiceLink installations that 14 15 were made during the strike. Thus, VoiceLink was installed as a permanent fix, not a temporary solution until the strike ended. Third, just within the last month I am receiving 16 reports from throughout Pennsylvania (and I am seeing similar reports from my 17 18 counterparts in other Verizon states) that Verizon is making a major push to use VoiceLink in copper service areas. I have attached as Schedule JJG-9 a few of those 19 documents that are being sent from Verizon management and supervisors to CWA 20

members. These documents make it clear that VoiceLink is designed to be a permanent

solution and that VoiceLink should be used wherever possible. Indeed, field technicians are required to have VoiceLink units on their trucks and to refuse to repair copper plant serving voice-only customers.

In fact, starting last week, our members are being told that if they actually try to repair copper plant instead of using VoiceLink, they will be subject to disciplinary action by Verizon (see the last two pages of Schedule JJG-9).

Q. What is wrong with using VoiceLink as a permanent solution for voice-only customers?

A.

The biggest problem with using VoiceLink as a permanent solution is that it assumes that the needs of the customer, or more accurately the customer's premises, will not change. If three months from now a customer with VoiceLink requires a pacemaker, Verizon's service to the customer would be unable to support the service. If, in the future, the customer (or a new owner of the premises) needs Internet access or a security alarm, the network would not support that service. In other words, VoiceLink represents a reduction in the quality of service, and the types of services, the network is able to support. If it is viewed as a permanent solution, the copper infrastructure will continue to deteriorate and will become ever more expensive, and time-consuming, to repair and replace as customers' needs change. Verizon should not be permitted to remove important functions from the network through the piecemeal installation of VoiceLink, just to save some money in the short-term.

1 Q. What is CWA asking the Commission to do in this case?

- A. In addition to the specific service-quality actions and remedies recommended by Susan
 Baldwin, CWA is asking the Commission to do the following:
 - Require Verizon to hire more field technicians. I would recommend a goal of restoring the number of field technicians to the 2010 level within two years.
 - o Prohibit Verizon from using VoiceLink as a permanent solution. If there is an emergency (such as a natural disaster), Verizon can petition the Commission to use VoiceLink as a temporary measure to keep a customer connected to the voice network. It should never be used as an excuse to fail to keep the copper network in a reasonable state of repair, or to remove functionality from the network.
 - Require Verizon to substantially increase its budget for maintenance and repair of copper facilities in non-FiOS areas.
 - Direct Verizon to expand its FiOS service area into currently unserved areas, particularly smaller urban and suburban areas. These could include, for example, the Lehigh Valley (where only some communities have FiOS), the greater Scranton-Wilkes-Barre area (where Verizon has not installed any FiOS), the greater Harrisburg area (where FiOS is available in only a few areas), the State College area (where no FiOS is available to one of Pennsylvania's technology and education centers), and Altoona (where no FiOS is available to customers in an area that serves as a hub of telecommunications services and where Verizon already has substantial high-capacity fiber installed to serve large commercial

- customers). These are significant population centers that should have the benefit of Verizon's state-of-the-art fiber-to-the-home service, rather than continuing to rely on a copper network that Verizon refuses to keep in a reasonable state of repair.
- The PUC should conduct a thorough audit of Verizon's maintenance and repair practices of facilities serving non-FiOS area. From the evidence we have gathered, I believe that this will show Verizon's widespread neglect of poles, cables, batteries, and other vitally important components of the non-FiOS network. The audit also should include a review of Verizon's responses to PA One-Call locate requests. As I discussed above, I believe this will show that Verizon supervisors or management-level personnel systematically refuse to respond to locate requests.
- o In order to ensure public safety, Verizon should be required to respond to all pole hits (that is, downed or damaged utility poles) as soon as possible but always within 8 hours (except during severe wind or ice storms when hundreds of poles might be affected); and all reports of damaged, leaking, or dead batteries within 24 hours.
- o The PUC also should order Verizon to provide a complete inventory of double and faulty poles in Pennsylvania and provide a plan for eliminating all double or faulty poles within 12 months of the conclusion of this case. When a double pole situation exists, it usually means that an old pole was too dangerous to keep in

place, yet that old, dangerous pole remains in service months or even years after the replacement pole is installed.

- o Verizon should be ordered to test and replace (as necessary) all batteries located in remote terminals, multiplexers, and controlled environment vaults within six months of the conclusion of this case. These batteries provide critical backup in the event of power outages. This includes service that enables consumers to contact emergency responders, family, schools, and medical facilities. In addition, these backup batteries ensure the availability of critical data services both for residential consumers and for large commercial and government customers who rely on Verizon's high-capacity data network.
- o Finally, the PUC should order Verizon to maintain, repair, and replace (as needed) the air pressure system that is vitally important to protect the integrity of certain types of cable, especially lead cable. I showed an example of exposed lead cable that is supposed to be enclosed in an air pressure system to ensure that moisture does not penetrate the paper cable wrapping. A wet lead cable not only impairs the quality of service to customers, it also risks environmental exposure to lead as the water reacts with the lead in the cable.

Q. Does this conclude your direct testimony?

19 A. Yes.

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America for a Public, On-the-Record
Commission Investigation of the Safety,
Adequacy, and Reasonableness of Service
Provided by Verizon Pennsylvania IIC

Docket No. P-2015-2509336

VERIFICATION

I, <u>JAMES</u> <u>GARDLOM</u>, hereby state that the facts above set forth in my Direct Testimony are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Dated: 9-29-16

James Gudler