### COMMONWEALTH OF KENTUCKY

#### BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

)
) ) ) CASE NO.
) 2025-00027
)
)

#### <u>ORDER</u>

Kentucky Power Company (Kentucky Power) is hereby notified that it has been named as a Defendant in a formal complaint filed on December 6, 2024, supplemented with additional information filed February 3, 2025. Copies are attached as an Appendix to this Order and incorporated herein.

The Commission finds that pursuant to 807 KAR 5:001, Section 20, Kentucky Power should satisfy the matters complained of or file a written answer to the complaint within ten days from the date of service of this Order. The Commission directs Kentucky Power to the Commission's July 22, 2021 Order in Case No. 2020-00085<sup>1</sup> regarding filings with the Commission.

Kentucky Power should send copies of any responses filed in this matter to Larry and Debra Peterman at 51 Woodland Way, Grayson, Kentucky 41143.

<sup>&</sup>lt;sup>1</sup> Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC July 22, 2021), Order (in which the Commission mandated the use of the electronic filing procedures found in 807 KAR 5:001, Section 8, except for *pro se* formal complaints filed against utilities).

A copy of this Order should be served, through the USPS, certified mail return receipt requested, on Larry and Debra Peterman at 51 Woodland Way, Grayson, Kentucky 41153.

IT IS THEREFORE ORDERED that:

1. Kentucky Power shall satisfy the matters complained of or file a written answer to the complaint within ten days from the date of service of this Order.

2. A copy of this Order shall be served by U.S. mail, via certified mail with return receipt requested, on Larry and Debra Peterman at 51 Woodland Way, Grayson, Kentucky 41143.

# [REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

PUBLIC SERVICE COMMISSION

Chairman

Will

Commissioner

1 Stray Commissioner



ATTEST:

sell fl

**Executive Director** 

Case No. 2025-00027

# APPENDIX

# APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2025-00027 DATED FEB 12 2025

TWELVE PAGES TO FOLLOW

RECEIVED

DEC 06 2024

COMMISSION

### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMISSION

In the matter of:

leterma Larry + Debra COMPLAINTANT

VS.

American Electric (Name of Utility)

COMPLAINT arry M The complaint of etternan espectfully shows: (Your Full Name) (a) Way, Grayson, Ky 41143 5 1000 1 2333 Kering Alt Ashland, Ky 41102 (c) That: Stray Voltage from AES Service (Describe here, attaching additional sheets if necessary, the specific act, fully and clearly, Sheet 110 that are the reason and basis for the complaint.)

Formal Complaint

Larry 3 Debra Petensons AEP Wherefore, complainant asks (Specifically state the relife desired.) Identify and correct source of Stray voltage. 27 Dated at \_\_\_\_\_y Kentucky, this day of Decembr 202 du Your Signature\*) (Name and Address of Attorney, if any) Date

\*Complaints by corporations or associations, or any other organization having the right to file a complaint, must be signed by its attorney and show his post office address. No oral or unsigned complaints will be entertained or acted upon by the commission.

I purchased this property and took possession last November. We weren't aware of any electrical issues until June, when we opened the pool. We experienced varying degrees of electric shock while swimming and contacting the concrete and coping outside of the water. We contacted AEP about the problem within the first few weeks, after we realized what was happening. They sent a technician Derrick McKinney in response. He stated that he had been called out multiple times by the previous owners about this issue, and had warned them not to use the pool. He also said that he had done checks before, and that the problem was not AEPs fault, and suggested that I call an electrician for assistance.

I took Mr McKinney's advice and called a local electrician that he suggested (Roger Yates). This man came out and also stated that he had been called to the residence about this problem previously. He checked all of my grounding connections and added bonding wires to my pump and salt chlorinator. These actions didn't change the voltage in my pool.

I proceeded to research online and learn as much as I could about the subject. During this process, I became familiar with Mike Holt. He is also referred to as the "Electrical Code Coach" and offers services online and classes to make electricians familiar with the National Electrical Code. I proceeded to begin a correspondence with him via email and phone over the next few months. He directed me, and other electricians that I subsequently hired to tend to my problem with the stray electrical current that we were experiencing in our pool.

I also spoke twice to the company that installed my pool (Custom Pools and Spas, Grayson, KY) to verify the correct implementation of an equipotential bonding grid around my pool, when it was installed. I was assured by them that it was properly bonded. Also, there was an exposed #8 wire coming up from under the concrete near my pool equipment that seemed to verify this.

After exhausting all of the recommendations for improvements and corrections on my side of my electrical service, I still was left with a charge in my pool. It always varied between 1-3 volts. There was, during this process, several things that were corrected by about 5 different electricians and a pool installer, including waterproofing some conduit fittings, installing a water bonding system, and tightening and cleaning some grounding lugs.

When I could do no more, I turned back to AEP. They sent out a team of electricians and an engineer. They spent parts of two afternoons running various tests. At the time, they seemed very perplexed by the problem and could only suggest one possible solution. They said that I should drive two additional ground rods and tie into my breaker box grounding system to hopefully mitigate some or all of the voltage. So, I contacted a master electrician that I had become acquainted with to assist me. He was very sure that this would not solve my problem, but did this work anyway. By this time, I was about \$1000+ in electrical work that had produced no results.

The master electrician, Matthew Porter (606-939-4596) offered to help me. He was able to access the electrical service box and disconnect the service neutral wire. When this happened, the voltage in my pool went to zero, and the voltage on AEP service ground wire was at 2 volts. When he reconnected it, my pool water went back to 2 volts.

In addition, while AEP was trying to determine a solution, they had disconnected my service at the pole, which also took my pool voltage to zero. When service is connected, and I turn off all power in my breaker box, the voltage is still in the pool. All of this proves beyond any doubt that the voltage is coming from AEP service line leaking voltage. Mr Porter recommended several remedies that AEP could use to correct this situation.

I called AEP to come out one last time to fix this. From the time they arrived (with a team of electricians and two engineers) their behavior seemed to indicate that they were only set on any solution that didn't involve them. I felt they were only there to "muddy the waters." I read twice to them the reasons for the voltage and the tests they could perform to prove this along with the remedies they could use to help me as prescribed by Matthew Porter. They were completely dismissive, even to the point that they wouldn't even respond to me in conversation. They would just stand there and look at the ground for a minute, and then change the subject to deflect. The one thing they kept repeating and leaning on was that this was a problem with Optimum, my internet provider. They continue to repeat this now, even though they actual cut my internet and phone lines at the pole for several days and the voltmeter still read 2.7 volts. I've had Optimum come out twice to check their grounding of my internet. They have done this (while rolling their eyes) and are very sure everything is done properly. I've personally never been shocked by a coax cable, let alone have voltage travel through the ground and shock me from cable service. This obviously makes no sense, and I strongly feel it is just AEPs way of not taking responsibility.

I bought this property specifically for the pool for my four grandkids. We were unable to use it all summer, due to lack of safety. I've lost many many hours of sleep and spent money trying to fix this. Every single person that I hire or talk to (including the Electrical Code Coach) agrees that this is not a pool bonding problem, or a problem with my electrical wiring. They ALL agree that AEP is the only one that can fix this. I have even offered multiple times to pay for a new service drop to be ran, like a new construction would do, but they won't even do that. I have no recourse left but to bury my pool if they won't fix my problem. Interestingly, upon recently talking to my neighbors about this problem, they even mentioned to me that their children have told them that they feel a shocking sensation in their pool as well. Therefore, I feel it can't be all their fault too. Please help us use our pool safely. I feel like we are stuck here with a house that we can't fully use and can't sell without risking the safety of anyone who swims in it. We do not know if this electrical charge could fluctuate to a dangerous level in water.

Thanks for your help. At the end of the day- when the electrical service is connected, I have stray voltage. When it's disconnected-I don't. The reason is not my responsibility to diagnose. The voltage is coming in on AEP wires, so they should fix it. They blame it on Optimum, but that really doesn't even matter if it were true (which I believe makes no sense anyway).

Thanks again!

# RECEIVED

#### COMMONWEALTH OF KENTUCKY

FEB 0 3 2025

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION

In the matter of: Debra A. Peterma (Your Full Name) COMPLAINANT VS. (Name of Utility) DEFENDANT COMPLAINT The complaint of <u>Debra + Larry Leturnan</u> respectfully shows: (Your Full Name) (a) Debra + Larcy Peterman (Your Full Name) 51 Woodland Way, Grayson, Ky 41143 (Your Address) Kentucky Power (Name of Utility) (b) (Address of Utility) (c) That: Stram chectrical voltage origination (Describe here, attaching additional sheets if necessary, Han Kentucky Your Service Ir the specific act, fully and clearly, or facts that are the reason (sec altached papers, and basis for the complaint.)

Continued on Next Page

Formal Complaint

Debra + Large Peterner vs. Kentucky Pourse

Page 2 of 2

Wherefore, complainant asks <u>All Stran electrical</u> Vo (Specifically state the relief desired.) VO ram Mu FINOVI Proper or attached Daderagistions fr rscribe as E\_KEME \_, Kentucky, this <u>29</u>H Dated at day (Your City) , 20 2. of Man our Signature (Name and address of attorney, if any) Date

<sup>\*</sup>Complaints by corporations or associations, or any other organization having the right to file a complaint, must be signed by its attorney and show his post office address. No oral or unsigned complaints will be entertained or acted upon by the commission.

#### Summary of Electrical Problem:

We purchased this property and took possession November, 2023. We were not made aware of any electrical issues by the seller at the time of purchase. In June 2024, when we opened the pool we began to experience varying degrees of electric shock while swimming in the pool, and while sitting on or touching the concrete deck or metal coping around the pool. The shock felt like a stinging sensation, especially where skin was broken. It was also felt more prominently by our four young grandchildren (ages 3-6). Our grandson, who was 5 at the time, stated to me, "Grandpa, why does your pool keep shocking me?" In addition, several adults, when sitting on the steps of the pool, would state that they felt like their legs were stinging. After doing as much research as we could, we finally realized that we have stray current going into our pool and pool deck area. We learned from a few different sources that even a very small amount of electricity (E.g. as little as 10 milliamps, which is around 1/50th the current used by a 60-watt light bulb, can be dangerous in water and potentially cause paralysis and drowning due to electric shock drowning; making any level of electricity in water a potential hazard. Although we would later be given different opinions about whether this could be dangerous or not, many electricians with knowledge warned that it would be unsafe to get in the pool.

As a first step, we contacted AEP about the problem. They sent a technician/lineman, Derrick McKinney, in response. He stated that he had been called out multiple times by the previous owners about this issue, and had warned them not to use the pool. He also said that he had done checks before, and that the problem was not AEPs fault, and suggested that I call an electrician for assistance. It was then that we realized that we had a big problem that was not disclosed upon the purchase of our house. This is, of course, a separate matter that we are trying to address through our realtor.

At that time, we took Mr McKinney's advice and called a local electrician that he suggested named Roger Yates. This man came out and also stated that he had been called to the residence about this problem previously. He checked all of my grounding connections and added bonding wires to my pump and salt chlorinator. These actions didn't change the voltage in my pool.

We continued to research online and learn as much as we could about the subject. During this process, I became familiar with Mike Holt. He is also referred to as the "Electrical Code Coach" and offers services online and classes to make electricians familiar with the National Electrical Code. Mr. Holt seems to be very well known and respected by the electrical community. I proceeded to begin a correspondence with him via email and phone calls over the next few months. He directed me, and other electricians that I subsequently hired to tend to my problem with the stray electrical current. He also instructed us to be sure and stay out of the water, and that it could be fatally dangerous. He said that even the smallest amount of voltage was unacceptable, and it could increase unpredictably.

Meanwhile, in addition, I spoke to the company that installed my pool, on two different occasions, to verify the correct implementation of an equipotential bonding grid around my pool when it was installed. I was assured by them that it was properly bonded. Currently there is an exposed #8 wire coming up from under the concrete near my pool equipment that seems to

verify this.

After exhausting all of the recommendations for improvements and corrections on my side of my electrical service, I still was left with a charge in my pool. It always varied between 1-3 volts. There were, during this process, several things that were corrected by about 5 different electricians and a pool installer. These include waterproofing some conduit fittings, installing a water bonding system, and tightening and cleaning some grounding lugs.

When I could do no more, I turned back to AEP. They sent out a team of electricians and an engineer. They spent parts of two afternoons running various tests. At the time, they seemed very perplexed by the problem and could only suggest one possible solution. They said that I should drive two additional ground rods and tie into my breaker box grounding system to hopefully mitigate some or all of the voltage. So, I contacted a master electrician that I had become acquainted with to assist me. He was very sure that this would not solve my problem, but did this work anyway. By this time, I was about \$1000+ in electrical work that had produced no results.

The master electrician, Matthew Porter **exercises** offered to help me. He was able to access the electrical service box and disconnect the service neutral wire. When this happened, the voltage in my pool went to zero, and the voltage on AEP service ground wire was at 2 volts. When he reconnected it, my pool water went back to 2 volts.

In addition, while AEP was trying to determine a solution, they had disconnected my service at the pole, which also took my pool voltage to zero. When service is connected, and I turn off all power in my breaker box, the voltage is still in the pool. All of this proves beyond any doubt that the voltage is coming from AEP service line leaking voltage. Mr Porter recommended several remedies that AEP could use to correct this situation. Being unable to be present when AEP scheduled a time to come back, Mr. Porter left me with the following text to help me communicate his findings to the AEP employees:

We.....

\*Shut off both main breakers to isolate the house electrical system from power.

\*Read voltage from pool water to wet concrete at 2 volts.

\*Disconnected AEP undersized aluminum neutral in meter base.

\*Read voltage from wet concrete to undersized neutral was 2 volts.

\*With the undersized neutral isolated, the voltage from pool water to wet concrete was

zero.

Possible causes...

\*Check neutral and ground bonding "XO" connection on the transformer can. Paint, corrosion, loose connection, etc. can preventing adequate contact between components.

\*Check adequate grounding installed at pole. Possible that not enough wire was installed below ground when the pole was set, or the soil/rock was not a suitable ground medium.

\*Check stray voltage possibly originating from the neighbors house since both are being served, paralleled, from a common service lateral. It's possible, a high resistance ground in the parallel circuit at the neighbors would push more voltage to a better ground if available.

\*With the 2 existing ½" x 8' rods and the 2 new 2/4" x 10' rods at the Peterman's, this could have become the best ground path on the circuit causing the standing voltage on the neutral wire to flow that direction from either or both of the TX can/pole and neighbors.

I called AEP to come out one last time. From the time they arrived (with a team of electricians and two engineers) I could not help but feel that they were only set on any solution that didn't involve them having to fix the problem. The reason I felt this way was that they would not respond in conversation to any of the suggestions I talked to them about. It felt very obvious that they were only there because they had to respond to my call. Unlike before, they did not even seem to show concern about finding the problem, which was very confusing to me. I read twice to them the reasons for the voltage and the tests they could perform to prove this, along with the remedies they could use to help me as suggested by Matthew Porter. They were completely dismissive, even to the point that they wouldn't even respond. They would just stand there and look at the ground for a minute, and then change the subject to deflect. The one thing they kept repeating and leaning on was that this was a problem with Optimum, my Internet provider. They continue to repeat this now, even though they actually cut my internet and phone lines at the pole for several days and the voltmeter still read 2.7 volts. My apologies for being upset, but I feel that anyone would have been very frustrated, upset, and at a loss.

I've had Optimum come out twice to check their grounding of my Internet. They have done this

(while rolling their eyes) and are very sure everything is done properly. I've personally never been shocked by a coax cable, let alone have voltage travel through the ground and shock me from cable service. This obviously makes no sense, and I feel this is just AEPs way of not taking responsibility for fixing the problem that is on their side.

I bought this property specifically for the pool for my grandkids. I couldn't use it all summer I've lost many many hours of sleep and spent money trying to fix this. Every single person that I hire (including the Electrical Code Coach) agree that this is not a pool bonding problem, or a problem with my electrical wiring. They ALL agree that AEP is the only one that can fix this. On top of that, I have even offered multiple times to pay for a new service drop to be ran, like a new construction would do. However, they will not even do that. I have no recourse left. I am looking for assistance in what to do next. I would also like to mention that my neighbors across the street have told us that their kids can feel a shock in their pool as well, but they swim in it anyway. I do not believe they realize the danger of this problem. If they are having the same issue, then this is obviously not all their fault too.

Please help us use our pool safely. I feel like we are stuck here with a house that we can't fully use without risking electrical shock.

Thank you for your help. At the end of the day- when the electrical service is connected, I have stray voltage. When it's disconnected-I do not. The reason is not my responsibility to diagnose. The voltage is coming in on AEP wires, so they should be responsible for fixing it and making it safe. They blame it on Optimum, but that really doesn't even matter if it were true (which I believe makes no sense anyway).

Thanks again,

Larry Peterman

51 Woodland Way

Grayson, KY 41143

What we have tried .....

- Shut off both main breakers to isolate the house electrical system from power.
- Read voltage from pool water to wet concrete at 2 volts.
- Disconnected AEP undersized aluminum neutral in meter base.
- Read voltage from wet concrete to undersized neutral was 2 volts.
- With the undersized neutral isolated, the voltage from pool water to wet concrete was zero.

Possible causes...

- Check neutral and ground bonding "XO" connection on the transformer can. Paint, corrosion, loose connection, etc. can preventing adequate contact between components.
- Check adequate grounding installed at pole. Possible that not enough wire was installed below ground when the pole was set, or the soil/rock was not a suitable ground medium.
- Check stray voltage possibly originating from the neighbors house since both are being served, paralleled, from a common service lateral. It's possible, a high resistance ground in the parallel circuit at the neighbors would push more voltage to a better ground if available.
- With the 2 existing ½" x 8' rods and the 2 new 2/4" x 10' rods at the Peterman's, this could have become the best ground path on the circuit causing the standing voltage on the neutral wire to flow that direction from either or both of the TX can/pole and neighbors.

\*Kentucky Power Company 1645 Winchester Avenue Ashland, KY 41101

\*Larry Peterman 51 Woodland Way Grayson, KENTUCKY 41143