

**KENTUCKY-AMERICAN WATER COMPANY**  
**CASE NO. 2016-00394**  
**COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION**

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**Witness:**      **Kevin N. Rogers**

1. Provide the following information concerning Kentucky-American's meters and meter settings:
  - a. State whether Kentucky-American conducts periodic inspections of its meters or meter settings.
  - b. If Kentucky-American conducts periodic inspections of its meters or meter settings, provide the inspection schedule(s).
  - c. If Kentucky-American does not conduct periodic inspections of its meters or meter settings, state whether Kentucky-American has ever conducted periodic inspections of its meters or meter settings and, if applicable, the date(s) the most recent periodic inspections ended.

**Response:**

- a. Kentucky American Water utilizes Automatic Meter Reading (AMR) technology to read meters each month. These meters have diagnostic and monitoring capabilities that allow them to provide customer usage profiling and information regarding register and transmitter issues, potential leaks, reverse flow, zero usage, magnetic tampering and status of the transmitter's battery. They are essentially self-inspecting and provide inspection related data each month as they are read.
- b. The collection of diagnostic and monitoring related data each month is the method of inspection utilized by Kentucky American Water.
- c. The collection of diagnostic and monitoring related data is currently conducted as part of the reading cycle each month. Kentucky American Water has migrated to a total AMR system and the majority of meters in the system have been changed within the last five years, prompting visual inspection of the entire installation at the time of the change out.

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2. Refer to numbered paragraph 6 of the Petition wherein Kentucky- American states that its "current system of inspecting meters and meter settings also assures safe operations" and provide the following information:
  - a. Fully describe Kentucky-American's current system of inspecting meters and meter settings.
  - b. State the system of inspections that Kentucky-American will use for its meters and meter settings in the event that the Commission grants Kentucky-American a deviation from the requirement to inspect meters and meter settings as often as necessary but not less frequently than established in 807 KAR 5:006, Section 26(6)(b).
  - c. State how Kentucky-American's current system of systematic inspections of its system ensures that Kentucky-American is conducting inspections of its meters and meter settings as often as necessary but not less frequently than established in 807 KAR 5:006, Section 26(6)(b).
  - d. Notwithstanding sub-parts a and b, above, state whether Kentucky-American inspects meters and meter settings only upon either being notified by a customer or alerted by an abnormal change in a customer's usage.

**Response:**

- a. Meters are read each month utilizing drive-by technology via RF communication. The information captured in the RF communication not only provides a reading but it also obtains pertinent information regarding usage, possible leaks, reverse flow, integrity of the register and tampering of the device. This information is exported into the reading software where an error report is created and then it goes to the customer information system that hosts all customer related data. Any alarm that is triggered during the reading process is addressed in our host system as part of the meter edit process which includes an enhanced overview of the information obtained utilizing both current and historical data. When necessary, service orders are generated and worked by Field Service Representatives to resolve issues in the field or confirm that none exist. Billing related orders are dispatched within three days from obtaining a reading, prior to the creation of bills. Other orders are prioritized according to type of issue and criticality as it relates to the impact it has on the integrity of the reading process and customer billing accuracy. This process is the method utilized to monthly inspect all meters and meter settings. Visual inspections of all parts of a service installation are made whenever visits to a premise are required. In 2016, 33% of premises in our

distribution system were inspected in association with the completion of a device related service order.

- b. Kentucky American Water will utilize the process as described in the response to part a above. The Company feels that it is aligned with the intent of annual inspections by completing a more frequent (monthly) assessment of the operating condition of the meter which assures that the meter is working properly while driving operational efficiencies to benefit the customers.
- c. As described in the response to part a above, Kentucky American Water utilizes a process by which inspections occur monthly thereby exceeding the requirement for annual inspections. This process provides both efficiencies for the customers and ensures that the meters are working properly.
- d. See parts a-c above. The monthly assessment of all meters has the potential to identify issues outside of those that are usage related. Kentucky American Water will provide physical inspections when necessary for possible leaks, reverse flow, integrity of the register and tampering of the device obtained as part of the reading process, as all are associated with the meter and setting combination. Even with this thorough check, we will always benefit from information received from our customers and municipal entities to quickly address ever-changing conditions throughout the distribution system.

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3. Fully explain whether it is Kentucky-American's position that an inspection of a meter and meter setting no less frequently than annually does not provide better assurance that the Commission's safety requirements are being met than an inspection of a meter or meter setting based upon a notification from a customer or an alert by an abnormal change in a customer's usage.

**Response:**

Through our monthly meter reading process, we obtain inspection related information more frequently and as thoroughly as what would be obtained through an annual inspection process. The information obtained monthly potentially leads (when necessary) to service order generation and field visits prompting visual inspections on a timelier basis than those associated with an annual inspection.

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4.      Fully explain whether it is Kentucky-American's position that an inspection of a meter and meter setting no less frequently than annually is not necessary to detect tampering, vandalism, and damage to the meter or meter setting.

**Response:**

Kentucky American Water's automated monthly meter reading provides inspection related information regarding the condition of the meter and whether it has been subjected to tampering. As meter reading technology progresses with the integration of Advanced Metering Systems, we will have more information concerning the meter, its operations, and its attributes available at even shorter intervals without visiting the property. Issues identified by an Advanced Metering System will trigger the creation of "real time" alerts to the Company regarding the condition of the meter and setting. These advancements will make visual inspections even less important in the near future.

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5.      State why Kentucky-American did not propose an alternative time period for the minimum frequency of inspections of its meters and meter settings such as a three-year or five-year minimum frequency.

**Response:**

New metering technology provides diagnostic indicators and alarms to the end user each time the meter is read. Information regarding the integrity of the meter, leak, flow and other information necessary to best serve our customers is provided. For these reasons, our current practice of monthly reading appropriately addresses the need.

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6. Refer to numbered paragraph 4 of the Petition wherein Kentucky- American provided a schedule of its valve inspection and exercising program and provide the following:
- a. Provide the factors that support each proposed valve inspection and exercise interval.
  - b. State how Kentucky-American's current system of systematic inspections of its system ensures that Kentucky-American is conducting inspections of its valves as often as necessary but not less frequently than established in 807 KAR 5:006, Section 26(6)(b).

**Response:**

- a. Plant valves and those 30” and larger are inspected annually. They are deemed most critical because they control water from the treatment plant which is the source of supply to the distribution system. Valves 30” and larger typically are of high importance because of the capacity of water they carry and how they impact pressure and flows throughout the system. Having the ability to control large flows is of great significance to the operation.

Valves 16” to 24” in size are exercised every two years. Although important to the operation, they have less impact on the system and the American Water Practice for Valve Operation, Inspection and Maintenance indicates that two year intervals are sufficient in maintaining the controlling abilities of valves these sizes.

Valves smaller than 16” have even less impact on operations. American Water Company practice indicates that five year intervals are sufficient for valves of these sizes. Even when found to be defective, valves in this category are the most prevalent in our system and there is, on average, another adjacent valve within 530’ that can be utilized for control.

- b. Kentucky American Water’s current system of inspections provides assurance that our valves are being inspected as often as necessary to ensure the valves and the entire distribution system operate reliably and efficiently. The overarching intent of the inspection requirements is to “assure safe and adequate operation of the utility’s facilities.”<sup>1</sup> All valve inspections include: confirming adequate

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<sup>1</sup> 807 KAR 5:006, Section 26(1).

access to valves; assessing the condition of the valve box, lid and operating nut; and exercising or turning the valves themselves. This process and the schedules described above ensure the intent of the regulation is satisfied. Therefore, the requested deviation is appropriate and will result in avoiding the expense described in Paragraph 7 of the November 18, 2016 Petition in this matter.



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7.     Refer to numbered paragraph 5 of the Petition wherein Kentucky- American stated that it "has, on average, a valve every 530 feet" and provide the following information:
- a.     State whether some of the valves located adjacent to each other will be on different inspection schedules depending upon their respective sizes.
  - b.     State why Kentucky-American does not propose to consider the location of a valve as a factor, in addition to the size of the valve, in determining the appropriate inspection interval for the valve.
  - c.     State how Kentucky-American detects valve damage short of failure and how Kentucky-American detects a complete valve failure.

**Response:**

- a.     Some valves that are in close proximity to one another will be on different inspection schedules, according to size. See the response to Item No. 6 for the explanation as to why different schedules are appropriate.
- b.     Location is not the most important factor in determining inspection intervals. Valves of different sizes have distinctive operational characteristics that factor in determining how often they should be inspected and exercised. Larger valves require more attention and investment of personnel resources based on these characteristics. Also, they are more critical to the operational integrity of the distribution system due to the capacity large mains carry and assist in managing adequate pressure and flow. See the response to Item No. 6.
- c.     Valve damage is detected through the inspection and exercising process. Each valve has a pre-determined number of turns necessary to fully close it. If it is determined while exercising the valve that the number of turns exceeds this number, it can be concluded that the valve has failed.