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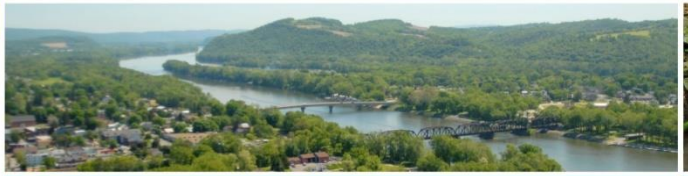
Bureau of Safe Drinking Water



Actions Related to Pittsburgh Water and Sewer Authority

Monday, April 25, 2016, 2 pm

Dial-in number for audio: 877-668-4493
Access code: 643 130 745
WebEx Technical Support: 866-229-3239

Tom Wolf, Governor

John Quigley, Secretary

Agenda

- Facilitator: Neil Shader, Press Secretary
- Overview of Today's Action: John Quigley, Secretary
- Technical Context: Lisa Daniels, Director, Bureau of Safe Drinking Water
- Timeline: Alan Eichler, Southwest Region Program Manager, Safe Drinking Water
- Next Steps: Lisa Daniels
- Wrap up: Secretary Quigley

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DEP Action Today

- Administrative Order issued to Pittsburgh Water and Sewer Authority (PWSA) today for making modification to its drinking water treatment system without prior approval from DEP
- PWSA replaced soda ash with caustic soda to control corrosion in PWSA's water distribution system, and did not first notify and obtain authorization from DEP as required by the Safe Drinking Water Act and regulations
  - Change occurred in April 2014
- PWSA began using soda ash again in January 2016 without prior approval from DEP
- Preliminary data shows no imminent threat to the public

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Background

- The federal Lead and Copper Rule (LCR) establishes an action level of 15 parts per billion for lead, and 1,300 parts per billion for copper
- Lead and copper are present in water due to corrosion of lead and copper-based pipes/plumbing materials in customer's homes
- The action level is exceeded if the concentration in more than 10% of a system's water samples are greater than the action level
- All large water systems (such as PWSA) are required to conduct routine lead and copper tap monitoring and install/maintain optimized corrosion control treatment (OCCT)
- Lead and copper tap monitoring varies from every 6 months to once every 3 years based on previous sample results
- PWSA had been on 3-year cycle; last monitoring completed in 2013

Corrosion Control Treatments

- pH/alkalinity adjustment chemicals:
  - Form insoluble compounds in scale (protective coating on pipes) that prevent release of lead and copper
  - Most common chemicals:
    - Soda Ash (sodium carbonate) increases alkalinity and DIC with moderate increase in pH (required by current DEP permit)
    - Caustic Soda (sodium hydroxide) raises the pH, but does not increase DIC; pH control may be difficult in poorly buffered water
- Inhibitors:
  - React with lead and copper to form insoluble and adherent film on surface of pipe
  - Phosphate and silicate-based inhibitors

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Timeline

- 1993: PWSA feasibility study demonstrates that use of soda ash is effective as anti-corrosion treatment so long as pH and alkalinity are maintained with set range
- 1995: DEP approves plan, which renders it a permit requirement
  - PWSA has never exceeded the EPA Action Level for lead/copper at the 90th percentile level, and other water quality parameters were consistently met
  - PWSA qualified for reduced triennial (every 3 years) monitoring for lead and copper in 1998
- September 2013: Most recent PWSA system lead and copper tap monitoring at 50 sites -- 14.8 parts per billion of lead

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Timeline, cont'd.

- April 2014: PWSA begins using caustic soda instead of soda ash as the primary anti-corrosion treatment
  - During ongoing 2016 DEP investigation, PWSA informed DEP that it made the switch due to difficulty with an "obsolete" soda ash feeder and increasing cost of soda ash
  - PWSA does not notify DEP or receive approval for this change

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Timeline, cont'd.

- October 5, 2015: Allegheny County Health Department (ACHD) provides to DEP a copy of ACHD's June inspection of PWSA's treatment plant, and states that PWSA is using corrosion prevention chemicals in accordance with the permit
  - A handwritten note on the inspection report by the inspector expresses belief that PWSA could switch to caustic soda
  - Report did not indicate that switch had occurred
  - Report did not note any violations

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Timeline, cont'd.

- January 2016: Growing public concern over lead in water because of widely reported problems in Flint Michigan prompts nearly 400 PWSA customers to request water sampling for lead levels
- January 22, 2016: PWSA announces to media that it is adding soda ash as an anti-corrosive
- February 1, 2016: Approximate date that DEP begins formal investigation of PWSA change in treatment without notice to or approval by DEP

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Notice of Violation Issued

- February 18, 2016: **DEP issues Notice of Violation (NOV) to PWSA** for violating permit by making a substantial modification of treatment system without prior permit authorization
  - Although investigation is in preliminary stage, DEP is requiring PWSA to increase and accelerate system-wide lead sampling
  - In the NOV, DEP resets PWSA's required lead/copper monitoring from 50 samples/three years to 100 samples by June 30, 2016, and second round of 100 samples by December 31, 2016
  - Further monitoring requirements will be evaluated as investigation continues

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Notice of Violation Issued

- March 10, 2016: At DEP/PWSA meeting, PWSA confirms change in treatment, but maintains that other testing confirms there was no effect on compliance
  - DEP directs PWSA to provide all testing results and other documentation as soon as possible
- March 28 through April 15, 2016: PWSA provides documentation to DEP; DEP determined that subsequent investigation and evaluation warranted to verify effective corrosion control techniques

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Investigation Results to Date

- PWSA unlawfully altered its corrosion controls without prior demonstration to DEP that change would still provide optimal control
- Although caustic soda is approved for use by some water systems, its use must be fully assessed in a feasibility study
- Preliminary data shows no imminent threat to the public
  - Lead and copper in the water leaving the plant are below detection levels; if lead and copper are present at the tap in a home, it likely comes from lead and copper service lines, or soldered joints from the street into the homes or in the home itself
- But PWSA must sample to adequately prove safety

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Administrative Order Issued

- April 25, 2016: DEP issues Administrative Order to PWSA
  - Complete two rounds of lead and copper tap monitoring from 100 Tier 1 sites throughout the authority's distribution area
  - Complete first set by June 30, with results to DEP by July 10; complete second set by December 31, with results to DEP by January 10, 2017
  - Provide any sampling data PWSA collected since June 1, 2013
  - Submit all current lead and copper testing sample locations, and inform DEP within 10 days after any sampling location changes
  - Develop plan to investigate lead levels within its system, the effect of prior and proposed changes to treatment methods for corrosion control, and recommendations for appropriate changes to assure the best possible corrosion control measures for the system

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Administrative Order, cont'd.

- Provide initial notice to all 300,000 customers about its prior change in corrosion control chemicals and the measures to evaluate impacts
- Outline in subsequent customer notices details of water sampling and analysis, and updates on investigation of treatment change impacts

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Current Status

- DEP sampled PWSA water on Friday, April 22, 2016, as it leaves the plant on its way into the distribution system
  - Lead levels were less than 1 part per billion
  - Copper levels were less than 4 parts per billion
  - All other contaminants analyzed leaving the treatment plant were well within safe levels as defined by U.S. Environmental Protection Agency's primary drinking water standards
- PWSA has resumed use of soda ash as is required by the permit
- PWSA is maintaining required water quality parameters

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Next Steps

- DEP will review all the data required by today's order as it is submitted to assure it complies with regulatory requirements and to determine if any adverse affects resulted from the unauthorized use of caustic soda
- PA Department of Health is analyzing records of blood samples by zip code in PWSA's service area
- PWSA providing free in-home tap water sampling
  - Info on how to obtain free test kits and instructions on how to use them available on the PWSA web site : www.pgh2o.com

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Next Steps

- PWSA will provide consumers with timely public notice regarding these violations, and subsequent repeat notices to keep consumers informed of sampling results and progress made in meeting the actions required under the Order
- PWSA will submit a final report that includes findings, data, conclusions and recommendations for optimization of corrosion control

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Consumer Information

Ways for residents to reduce exposure to lead in drinking water:

- Check in home plumbing and fixtures for lead using a Lead Check Kit – available at most hardware stores
- Run the tap to flush out lead prior to drinking or cooking
- Use only cold water from taps for drinking or cooking
- Do not boil water to remove lead. Boiling water will not reduce lead.
- Visit www.dep.pa.gov/lead for more information

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Bureau of Safe Drinking Water

Mission

"To protect Pennsylvania's air, land, and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. We will work as partners with individuals, organizations, governments, and businesses to prevent pollution and restore our natural resources."

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QUESTIONS

Questions during this webinar will be accepted from working media

All other inquiries should be directed to:

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http://www.dep.pa.gov/About/Regional/SouthwestRegion/Pages/Community-Information.aspx