Drinking Water Quality

Operating Board Briefing

March 3, 2016

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Agenda

Chromium-6

Other Current WQ Topics

- Legionella
- Environmental Working Group Data

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Chromium-6

Why is it on the agenda today?

- Report published on September 19, 2016, by Environmental Working Group (EWG) based upon data collected under the Unregulated Contaminant Monitoring Rule (UCMR)
- Known as the “Erin Brockovich” chemical
- Highest level of hexavalent chromium reported in Washington State was 9.9 parts per billion (ppb) and most samples were less than 1 ppb
- Most systems (more than 75%) that tested under UCMR3 found it above 0.030 ppb, the method reporting limit, and the California Maximum Contaminant Level **Goal** of 0.020 ppb

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What is it?

- Chromium is a naturally occurring element found in rocks, animals, plants, rock, and soil existing in in several forms:

- Chromium-3
  - most common in nature
  - an essential nutrient for the body
- Chromium-6
  - rare in nature
  - can be produced by industrial processes or
  - oxidation of naturally occurring Chromium-3, eg., chlorination

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What were SPU's results?

- In 2015 under UCMR, we detected Chromium-6 in most of our samples at very low levels
- Values ranged from 0.063 to 0.17 ppb
- These were reported in our Annual Water Quality (Customer Confidence) Report

Is our drinking water safe to drink?

- Water supplied by SPU meets, and will continue to meet drinking water standards
- Results are nearly 1000 times less than the federal standard (100ppb)
- Results are nearly 100 times less than CA standard (10ppb)

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What is the chromium-6 drinking water limit?

- Chromium-6 is not currently regulated specifically by the EPA in drinking water
- EPA has established a drinking water standard of 100 ppb for all forms of chromium
- In 2014 California established:
  - a state standard for drinking water of 10 ppb
  - a “public health goal” of 0.02 ppb

What is the enforceable standard?

- 100 ppb nationally
- 10 ppb in California

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What does the California “public health goal” of 0.02 ppb mean?

- An estimate of the level of chromium-6 at which no adverse health effects would be anticipated over an entire lifetime of exposure
- It is not a boundary line between a “safe” and “unsafe”
- There is scientific debate and uncertainty about the challenging methods required to extrapolate high doses used in animal studies to the extraordinarily low dose identified as the public health goal

Will EPA regulate in the future?

- Prior to EPA making any decisions about revising the chromium drinking water regulation, EPA must issue its final human health assessment
- EPA will carefully review the final assessment and consider all other relevant information (like UCMR3 results)to determine if a new drinking water regulation for chromium-6 or a revision to the current total chromium standard is warranted

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Where can I get more information?

- California fact sheet on their health goal:

http://oehha.ca.gov/water/public-health-goal-fact-sheet/final-technical-support-document-public-health-goal-hexavalent

- Washington State Department of Health

http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Chromium

- US EPA

https://www.epa.gov/dwstandardsregulations/chromium-drinking-water

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Other WQ Topics

Legionella

- Discovered after the outbreak at the 1976 American Legion Convention in Philadelphia
- Legionnaires' disease is acquired by inhaling airborne droplets of water (aerosols) containing the bacteria
- The EPA considers water systems meeting treatment requirements of the Surface Water Treatment Rule protective of pathogens, to include Legionella
- Compared to other bacteria, it is more resistant to standard chlorine disinfection, but at the levels practiced and maintained in our distribution system, would be killed in minutes
- However, it is possible that very small numbers can be shielded from disinfection
- When they colonize the right environment (like building plumbing systems at 20^{o}C – 50^{o}C), they can multiply and pose a risk to health
- A large building must manage the risk within its own premises, and there are practices and protocols to do so

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Other WQ Topics

EWG Database (directly from AWWA Public Affairs Advisory)

Who:	Environmental Working Group
What:	Water quality report
When:	Unknown, but likely December or early 2017

- EWG is preparing an update of its “National Drinking Water Database.”
- AWWA advises water utilities to be proactive to ensure media and local influencers understand the facts before EWG releases its database report
- In previous reports, EWG has partnered with individual media outlets to prepare embargoed stories, which then run in newspapers and on websites the same day the report is released to electronic media and the general public
- This allows radio and TV stations to quickly develop news segments but does not provide utilities with time to respond in a meaningful way

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Other WQ Topics

EWG Database (directly from AWWA Public Affairs Advisory)

AWWA's suggestions:

- Tell your own story first: Talk to your media contacts in the weeks ahead and make sure they know the truth about your water quality

- Break your own news on UCMR monitoring: The EWG report is likely to draw on results from the Unregulated Contaminant Monitoring Rule 3 process, as it did in its recent report on hexavalent chromium

- Check your data on EWG's site: AWWA recommends that you do visit EWG's site and attempt to correct bad data by Oct. 31, even if you are unsuccessful. You can do so on their site. (username: water, password: utility) Follow up with email requests and retain EWG's responses, providing those exchanges to public officials, media or other stakeholders as necessary

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Questions?

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