Lead and Copper Rule

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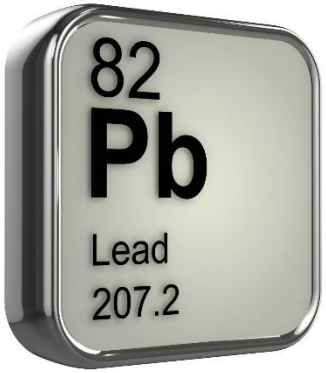
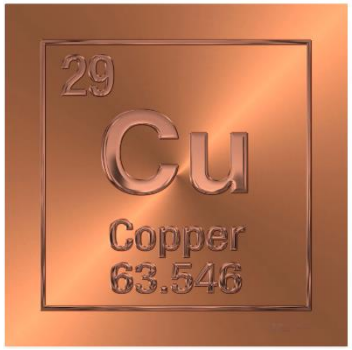
Objectives

1. What is the problem and why should be we concerned
2. Lead and Copper Toxicity
3. Short history of EPA lead and copper regulations
4. Summarize the six key proposed revisions





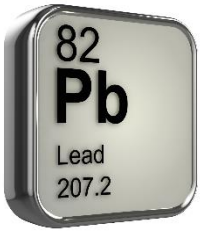
LCR – Why do we need to know

1. Lead from lead pipes, faucets, and fixtures can dissolve into water or sometimes can enter as flakes or small particles
2. To keep lead from entering the water, EPA requires some systems to treat water using certain chemicals that keep the lead in place by reducing corrosion
3. When corrosion control alone is not sufficient to control lead exposure, EPA requires systems to educate the public about risks of lead in drinking water and to replace lead service lines

LCR – Why do we need to know

1. More than 4 million dwellings in the US have lead-based paint and lead dust hazards and are home to at least one child
2. Up to 6-10 million US homes receive their drinking water from lead service lines
3. Children under age 6 are at highest risk of harm from lead exposure, including prenatal exposure
4. Adverse health and developmental effects can be serious and irreversible, with lifelong impacts to well-being

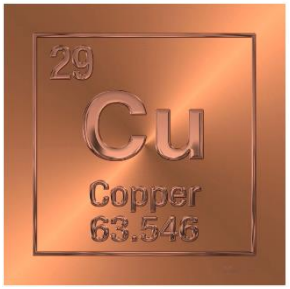
Lead Toxicity



- **Acute Poisoning** –
  - Neurological signs are pain, and muscle weakness
  - Gastrointestinal problems can vary from poor appetite, weight loss, to reflux and other issues.
  - Renal system damange may cause issues in urination such as decreased output.
- **Chronic Poisoning** –
  - More concerning due to how difficult it can be to diagnose an issue. Three main issues arise associated with gastrointestinal, neuromuscular, and neurological.

Copper Toxicity

- **Acute symptoms**
  - Vomiting, hematemesis, hypotension (low blood pressure), coma, jaundice (yellowish pigmentation of the skin), and gastrointestinal distress.
- **Chronic Symptoms**
  - Chronic (long-term) copper exposure can damage the liver and kidneys. There is also indication that neurological issues can occur.



Original LCR

- First published on June 7, 1991
- Established MCLGs for lead and copper
- Established Action Levels in lieu of MCL's

	MCLG	Action Level
Lead	0 mg/L	0.015 mg/L
Copper	1.3 mg/L	1.3 mg/L

- 90th percentile sample result is compared to AL
- ALE is a trigger and is *not a violation*
- ALE requires waterworks to initiate various treatment techniques and additional monitoring activities

LCR Proposed Revisions

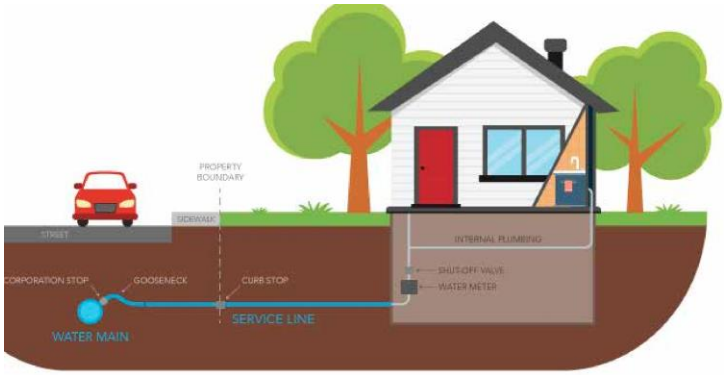
- Takes a proactive and holistic approach to improving the current rule—from testing to treatment to telling the public about the levels and risks of lead in drinking water
- Requires earlier action to reduce risks and better protect families
- Includes efforts to improve transparency and communication to help protect children from lead exposure where they live, learn and play

LCR Proposed Revisions

- The proposed LCR maintains the current MCLG of zero and AL of 15 ppb but requires a more comprehensive response at the action level and introduces a trigger level of 10 ppb
- The trigger level is a new flexible provision designed to compel water systems to take progressive, tailored actions to plan upgrades to aging infrastructure and reduce levels of lead in drinking water
- This approach focuses on six key areas

LCR Proposed Revisions

- **Identifying areas most impacted**
- **Strengthening treatment requirements**
- **Replacing lead service lines**
- **Increasing sampling reliability**
- **Improving risk communication**
- **Protecting children in schools**



Proposed Revisions: Key Area 1

Identifying Areas Most Impacted

- The EPA will for the first time require systems to develop a public lead service line inventory and create a plan for removing lead service lines
- Unlike now, systems will have to pay attention to individual locations with elevated levels of lead by identifying the cause and mitigating the problem (find & fix)

Proposed Revisions: Key Area 2

Strengthening treatment requirements

- Based on sampling results, systems with elevated lead levels will reevaluate their existing corrosion control treatment or conduct a treatment study so that they are prepared to respond quickly when necessary
- Flexibility is important for small systems so that they can protect public health by taking the action that makes sense for their community

Proposed Revisions: Key Area 3

Replacing Lead Service Lines

- Systems above the trigger level of 10 parts per billion would be required to work with their state to set an annual goal for replacing lead service lines
- Water systems above 15 parts per billion would be required to fully replace a minimum of three percent of the number of known or potential lead service lines annually

Proposed Revisions: Key Area 3

Replacing Lead Service Lines (cont.)

- Importantly, the proposal prohibits "test-outs" to avoid replacing lead service lines – an allowed practice under the current rule that has significantly slowed national progress in removing this significant source of lead from our homes
- Partial lead service line replacements will no longer be allowed except in certain situations (e.g., emergency repair) because science has recently shown us that partial lead service line replacement may increase shortterm lead exposure

Proposed Revisions: Key Area 4

Increasing Sampling Reliability

- Water systems will follow new, improved sampling procedures, will adjust sampling sites to better target locations with higher lead levels, and systems with higher levels will sample more frequently

Proposed Revisions: Key Area 5

Improving Risk Communication

- Homeowners will learn about elevated levels of lead in their system sooner
- They will also understand where lead services lines are in their community and how to protect their family from exposure to lead

Proposed Revisions: Key Area 6

Protecting Children in Schools

- For the first time, systems will be required to test school and child care facilities
- The system would be required to provide the results and information about the actions the school or child care facility can take to reduce lead in drinking water

Proposed Revisions: Key Area 6

Protecting Children in Schools (cont.)

Community water systems (CWSs) would be required to:

- Compile a list of schools and licensed child care serviced by the CWS and verify list every five years
- Provide facility with EPA's 3Ts toolkit
- Test at 20% of schools and licensed child care constructed prior to 2014 every year
- Retest every 5 years
- Share sampling results with facility as well as local or state health department

I appreciate your time today,
Thank you