Current Lead Rules

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OHA Drinking Water Services
Presentation Overview

• Health Effects of Lead
• Lead sample site selection
• Sampling protocol and invalidation
• Consumer Notification
• Adding a new source or treatment
• Actions after an exceedence
• Water quality parameter monitoring
• Reporting
Health effects of Lead

• Lead gets into a body’s bloodstream, organs and bones, and primarily affects the central nervous system (brain)

• No safe blood lead level has been determined

• Children aged 6 and younger are at higher risk due to increased absorption of lead and hand-to-mouth activity
  – Ages 9 months to 2 years at highest risk
Health effects, continued

• Low blood levels (<10ug/dL) can cause
  – reduced IQ and attention span,
  – learning disabilities,
  – behavioral problems,
  – impaired growth, and
  – hearing loss

• High blood levels (>70 ug/dL) can cause coma,
  convulsions, and possibly death
Sample site selection

- Materials Evaluation should have been conducted to identify a pool of sites.
  - If no documentation exists, consider re-doing

- Sampling sites must consist of:
  - Tier 1 sites: homes with copper pipe and lead solder built between Jan 1983 and June 1985 OR contain lead pipes (goosenecks)
  - Tier 2: any building as above
  - Tier 3: homes built before 1983 with copper pipes and lead solder
### EPA 141-A form

**CERTIFICATION OF SAMPLING SITES**

<table>
<thead>
<tr>
<th>LEAD SOLDER SITES</th>
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</thead>
<tbody>
<tr>
<td># of single-family structures with copper pipes with lead solder installed after 1982 or lead pipes and/or lead service lines (Tier 1)</td>
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<tr>
<td># of multi-family structures with copper pipes with lead solder installed after 1982 or lead pipes and/or lead service lines (Tier 1)</td>
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<tr>
<td># of buildings containing copper pipes with lead solder installed after 1982 or lead pipes and/or lead service lines (Tier 2)</td>
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<td># of sites that contain copper pipes with lead solder installed before 1983 (Tier 3)</td>
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<tr>
<td># of sites that do not meet Tier 1, 2, or 3 criteria <em>(to be used only if other conditions have been exhausted)</em></td>
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<tr>
<td><strong>TOTAL</strong></td>
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The following sources have been explored to determine the number of structures which have interior lead pipe or copper pipe with lead solder.

- Plumbing and/or building codes
- Plumbing and/or building permits
- Contacts within the building department, municipal clerk’s office, or State regulatory agencies for historical documentation of the service area development
- Water Quality Data

**Other Resources Which PWS May Utilize**

- Interviews with building inspectors
- Survey of service area plumbers about when and where lead solder was used from 1982 to present
Sample sites

• Is system still sampling from the original pool of sites?
• Is system asking owner if plumbing has changed?
• Does system have goosenecks? Do they know where?

• 141A form if changes
<table>
<thead>
<tr>
<th><strong>CHANGE IN SAMPLING SITES</strong></th>
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<tbody>
<tr>
<td><strong>Original site address:</strong></td>
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<tr>
<td><strong>New site address:</strong></td>
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<tr>
<td><strong>Distance between sites (approximately):</strong></td>
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<tr>
<td><strong>Targeting Criteria: NEW:</strong></td>
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<tr>
<td><strong>OLD:</strong></td>
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<td></td>
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<tr>
<td><strong>Reason for change (attach additional pages if necessary):</strong></td>
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</tbody>
</table>
Sampling protocol

- 1-liter sample bottle, wide mouth to allow full flow
- Water must sit stagnant in pipe for at least 6 hours before sampling
- First draw sample from tap used for consumption
- If homeowner collects sample, provide and ensure that they have read the sampling instructions
Invalidation

• If homeowner collects the sample, an operator cannot claim sampling protocol as reason for invalidation!

• Allowable reasons to invalidate:
  – Improper lab analysis
  – Did not meet site selection criteria
  – Sample was damaged or subject to tampering
  – NOTE: there is no upper stagnation time limit!

• A replacement sample must be taken within 20 days of invalidation
Consumer Notification

- Consumers of the water at sites sampled must be notified of their results. Must also include:
  - Health effects of lead
  - Steps to take to reduce lead exposure
  - Water system contact information
  - Action levels and MCLG for lead

- Templates available on DWS website

- Also, all customer-requested samples, not evaluated as compliance sample, must be submitted to OHA
Adding a new source

• If system has NO corrosion control:
  – Conduct 2 6-month rounds of lead / copper
  – OR submit adequate Lead and Copper Evaluation

• If system has corrosion control:
  – Apply same treatment as other entry points
  – OR submit adequate Lead and Copper Evaluation
Adding new treatment

- Must conduct 2 6-month rounds of lead and copper testing if treatment is added that may affect lead and copper levels at the tap.

- This may include:
  - Adding or changing chemical disinfectant
  - Adding or changing coagulant chemicals
  - Ion exchange
  - Membrane filtration

- A Lead and Copper Evaluation may also be submitted. Must include a pilot test.
If Action Level is exceeded

- On track to install corrosion control!

- If system collects 2 6-month rounds (original number of sites) that are below action level, plans to install treatment can cease.
Steps after an exceedance (no CCTx)

• Collect 2 rounds of water quality parameters, 2 weeks apart
  – From sources, and in distribution system
• Lead and copper sample from entry point
• Public Education if exceeded lead (within 60 days)
• Letter of recommendation of treatment within 6 months
• Installation within 2 years
• Demonstration rounds
Water Quality Parameter monitoring

- At entry point following treatment:
  - Minimum parameter(s) will be established
  - Sample and record at least every 2 weeks
    - If below minimum, adjust chems and sample at least daily
  - Sample for parameter that is adjusted (pH, Alkalinity)
  - Submit forms monthly

- In distribution system:
  - Sample at same time as lead and copper tap sampling
  - Number of representative sites based on population
Public Health Division

Drinking Water Services

Reporting to OHA

• Tap results must be submitted 10 days after the end of the monitoring period
  – October 10th if must sample June 1-Sept 30

• Consumer notification certification and example must be submitted within 3 months of end of monitoring period
  – December 31st if sampling June 1-Sept 30

Lead Tap Water Monitoring Certification of Notice to Individual Consumers

Water System Name: [ ]
PWS ID No: [ ]
Monitoring period to which the notice applies (for example, June – Sept. 2009): [ ]
Date(s) results were received from laboratory: [ ]
Date(s) results were provided to consumers: [ ]

☐ Notice included individual tap results from lead tap water monitoring completed by [ ]
Contact Us!

For technical assistance, contact

Oregon Health Authority
Drinking Water Services
971-673-0405