

Ohio Revisions to the Lead and Copper Rule

Ohio EPA

Division of Drinking and Ground Water

Rule Revision Timeline

Ohio House Bill 512

- Incorporated numerous L&C rule requirements

9/9
2016

6/20
2016

2/15
2017

1/31
2018

3/6
2018

Interested Party Review

- 118 comments
- Response posted on Ohio EPA's website

Public Hearing

- Ohio EPA Columbus office

Early Stakeholder Outreach

- Received feedback and ideas from interested parties

Original File

- Incorporates HB 512 and updates federal requirements

Rules Affected

- 3745-81-01 – Primary drinking water standards definitions
- 3745-81-04 – Administrative penalties
- 3745-81-80 – Control of lead and copper – general requirements
- 3745-81-81 – Control of lead and copper – applicability of corrosion control treatment steps to small, medium-size and large water systems
- 3745-81-84 – Control of lead and copper – lead service line requirements
- 3745-81-85 – Control of lead and copper – response to lead monitoring results
- 3745-81-86 – Control of lead and copper – monitoring requirements for lead and copper in tap water
- 3745-81-87 – Control of lead and copper – monitoring requirements for water quality parameters
- 3745-81-89 – Control of lead and copper – analytical methods
- 3745-81-90 – Control of lead and copper – reporting and record keeping requirements
- 3745-89-08 – Analysis and reporting
- 3745-96-02 – Consumer confidence report – required content

Overview of Changes

3745-81-01

- Defined lead threshold level

3745-81-04

- Updated penalties

3745-81-80

- Established lead threshold level (15 ppb)
- Clarified 90th percentile calculation and implementation

3745-81-81

- Revised requirements for corrosion control studies
- Added requirement for systems with an action level exceedance (ALE) to implement corrosion control steps
- Revised treatment step timeframes
- Added requirement for wholesale systems to notify consecutive systems of substantial changes

Overview of Changes

3745-81-84

- Established consumer notice, sampling, and record keeping requirements for lead service line (LSL) replacements
- Established a more stringent LSL replacement program when an ALE occurs after corrosion control has been implemented
- Added a requirement for PWSs to provide filters to consumers affected by partial LSL replacements and main work in areas with LSLs

3745-81-85

- Established more stringent timelines for the delivery of consumer notice (CN), public notice (PN) and public education (PE) Added public health language

3745-81-86

- Added mapping requirements
- Established more stringent requirements for PWSs on reduced tap monitoring

3745-81-87

- Established more stringent requirements for PWSs on reduced WQP monitoring

Overview of Changes

3745-81-89

- Established 30 day requirement for completing LC laboratory analysis

3745-81-90

- Added requirement for PWSs to notify Ohio EPA prior to making a change that could affect corrosion control
- Established 5 day time frame for PWSs to certify CN/PN/PE to Ohio EPA

3745-89-08

- Established next day reporting requirement following laboratory analysis for lead, copper, total microcystins in raw water, and seasonal startup samples
- Added requirement to report results to Ohio EPA no later than 10 days following analysis for all analytes
- Added requirement that for all analytes a complete analysis must be performed within 30 days of receiving the sample (except radiologicals)

3745-96-02

- Required LC results to be reported in the PWSs consumer confidence report (CCR)

Ohio revisions to the Lead and Copper Rule

COMMONLY ASKED QUESTIONS

With the change from using paper 5105 forms to electronic SMP IDs, were there any changes to when 90th percentiles are calculated?

- 90th Percentiles are now being calculated as results are being reported rather than at the end of the monitoring period.
 - Based on the minimum number of scheduled samples until more than the minimum number of samples has been collected
- Ohio EPA will act on the information we have to protect public health.

What if a water system has an ALE while also operating outside of Director-established optimal WQPs?

- PWS will be required to review corrosion control study
- If water quality has changed, a new study will be required
- Otherwise, their treatment recommendation will need to be updated
- This should include the reason as to why the PWS was outside of optimal WQPs and what the system is doing to resolve the issue

What qualifies as a substantial change in water treatment?

- US EPA's *Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems*
- Ohio EPA's *Guidelines for Determining When Source or Treatment Changes Trigger New Optimal Corrosion Control Evaluation* *coming soon*
- Long term treatment changes, including changes that don't require plan approval

*This rule used to only apply to PWSs with an ALE;
is that still true?*

- While parts of the rule are only required if a system has an ALE, the rule as a whole now applies to all PWSs with lead service lines (public or private).
- New requirements for all lead service line replacements.
- The structure of the rule has been clarified to reflect this change.

What are the different lead service line replacement requirements?

Main Replacements

- New requirements for **any** PWS conducting a water main replacement in an area with *known* lead service lines or in an area that is *likely to contain* lead service lines:
 - Information from 3745-81-86 (A): lead maps, lead inventory
 - Provide notice to consumers of the replacement
 - At least 45 days prior to replacement, unless as a part of an emergency repair
 - Explains to consumers they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures they can take to minimize their exposure to lead
 - Offer and provide NSF/ANSI 53 certified filters to impacted consumers

What are the different lead service line replacement requirements?

Lead Service Line Replacements – Full and Partial

- Provide notice to residents or building administrators for buildings served by the line
 - At least 45 days prior to replacement, unless as a part of an emergency repair
 - Explains to consumers they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures they can take to minimize their exposure to lead
 - Individually mailed or posted (MFR, building, etc.)
 - If PWS is a school, nursing home or prison: parents/guardians or power of attorney should also be directly notified
- If the system does not own the whole line, notify the owner of the replacement and offer to replace the owner's portion of the LSL
 - PWSs **do not** have to pay for the replacement of the privately owned portion of the line
- Keep records of replacements for 12 years



What are the different lead service line replacement requirements?

Lead Service Line Replacements – Partial Only

- If the PWS performs a partial LSL replacement:
 - Collect (and pay for) service line sample within 72 hours of replacement
 - Provide notice of results to consumer in accordance with consumer notice requirements
 - Offer and provide NSF/ANSI 53 certified filters to consumers served by the partial line

What are the different lead service line replacement requirements?

ALE Specific Requirements

- Identify and inventory lead service lines in distribution
 - This information will also be submitted to the Director of the Ohio EPA
- Annually replace 7% of total lead service lines
 - In accordance with lead service line replacement requirements

What does “impacted area” mean for main replacements in areas with lead service lines?

Left to the PWS to define using:

- Lead maps
- Hydraulic models
- Other methods that work for the PWS

What is the basis for providing NSF certified filters to residents affected by main replacement or a partial LSL replacement?

- One of the revisions being considered in the long term revisions to the federal L&C rule, US EPA's *L&C Rule Revisions White Paper*
- Recommendation of the US EPA Flint Technical Support Team to ensure residents have certified filters prior to LSL replacement activities
- Recommended in the AWWA standard for the *Replacement and Flushing of Lead Service Lines*
- NSF 53 filters capture particulate lead, which is generally released following partial lead service line replacement and main replacements in areas with lead service lines

Who is placed on the LSL replacement schedule outlined in this rule?

- Only PWSs who have an ALE after installing corrosion control or source water treatment are required to replace lead service lines.
- Must replace at a rate of 7% per year until all service lines are removed.

Why are systems who have an ALE required to follow a LSL replacement schedule?

- Only applies to systems who have an ALE after installing corrosion control or surface water treatment (or after refusing to install treatment)
- Reduce public exposure to lead as fast as possible following treatment failure or refusal to install treatment

What are the differences between consumer notice, public notice, and public education?

Lead Consumer Notice (CN)

- Sample results and information about lead to consumer and owner of sample taps (including, if applicable, parents, guardians, or power of attorney)
- **Two** business days following receipt of sample results
 - Regardless of result, sample type, or sample size
 - Lead **or** copper
- If the lead result is above 15ug/L:
 - Additional info on health screening and blood lead level testing included in consumer notice
 - Send results to board of health
 - Remove fixtures with high lead levels from service (NTNC only)
- **All required information is included in Ohio EPA's CN templates**

What are the differences between consumer notice, public notice, and public education?

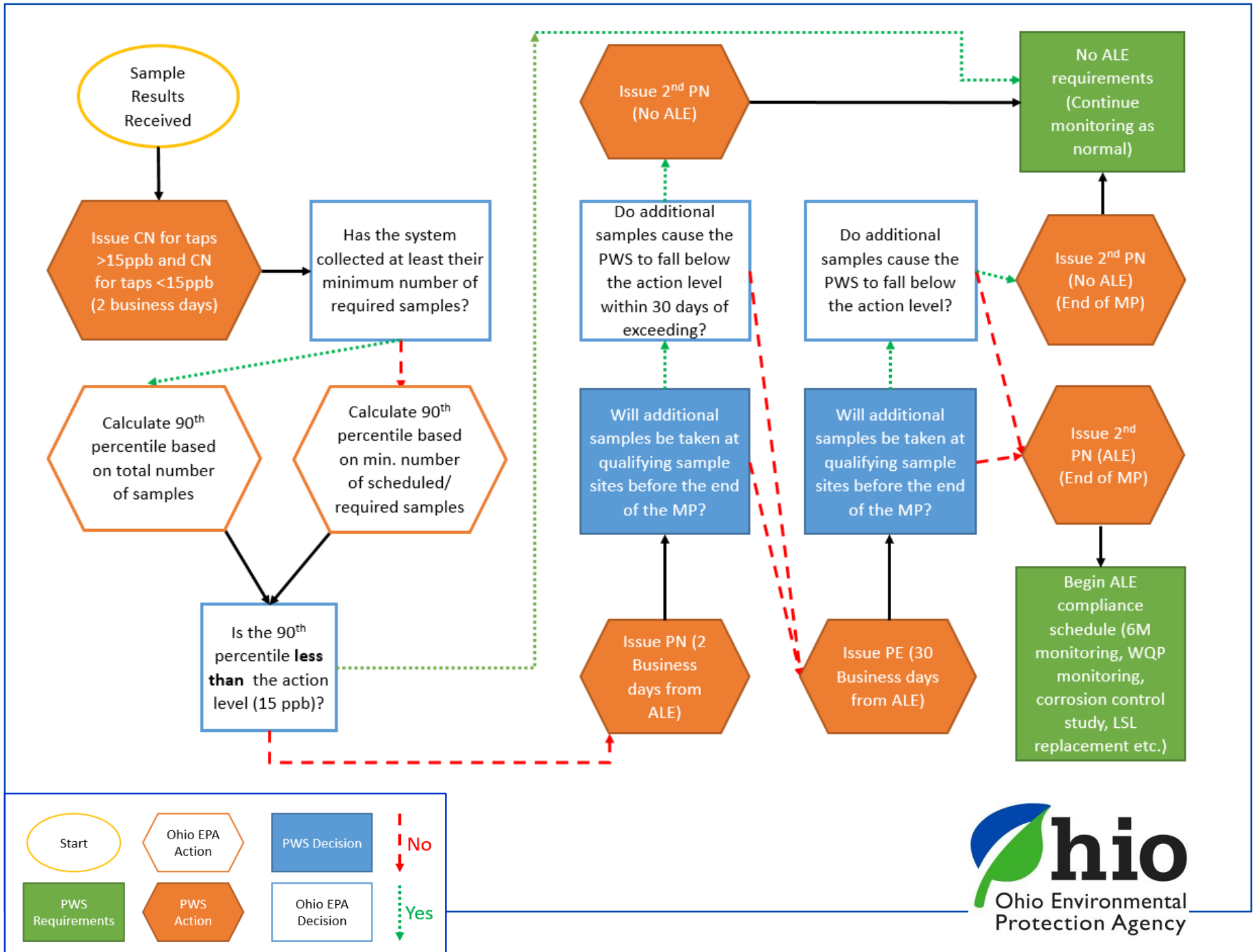
Lead Public Notice (PN)

- Initial announcement to all consumers about ALE (previously PSA in PE)
- **Two** business days following ALE determination
- Delivery methods: broadcast media, social media, hand-delivery, email, posting
- Content:
 1. Results of tap monitoring including number of samples and 90th percentile
 2. Explanation of health effects of lead
 3. Steps to reduce exposure to lead from drinking water
 4. Contact info for PWS
 5. Information on the availability of tap water testing (community PWSs only)
- Repeating the PN:
 - If the PWS decides to sample at additional qualifying sites before the end of the MP, an updated PN is required at the end of the MP
 - Twice yearly for as long as the system has an ALE (community PWSs only)

What are the differences between consumer notice, public notice, and public education?

Lead Public Education (PE)

- Additional information given to all customers following an ALE
- **Thirty** business days following ALE determination
- Community PE Requirements:
 - Deliver printed materials to all bill paying customers
 - Contact at-risk consumers (i.e schools, hospitals, pediatricians)
 - “High lead levels...” notice in all water bills
 - Perform 3 public outreach activities
 - Post information on PWS website (for population >100,000)
- NTNC PE Requirements:
 - Deliver printed materials to all persons served
 - Post informational posters
- **All required information is included in Ohio EPA’s PE templates**



Why do PWSs have to sample for lead and copper at consumer taps?

- Reducing water corrosivity is the primary method for reducing the health risk
- L&C enter drinking water due to the corrosion of service line and household plumbing materials
- Corrosivity of water in contact with service lines and household plumbing could not be measured if taken at the entry point to the distribution system or other PWS-owned locations in the distribution
- Therefore samples are taken at residential taps (plus it's a federal requirement)

What are the monitoring requirements for lead and copper?

- 6 month, annual or triennial
- Number of samples based on population
 - Can range from 5-100
 - Can be reduced if on annual or triennial monitoring
- Sample sites are based on locations in the PWS with the highest risk for exposure
- SMP ID Spreadsheets
 - Tool for ensuring PWSs are sampling at qualifying locations and have information for required CN
 - HB 512 requires Ohio EPA to give CN to residents if PWS fails to
 - Good idea for PWSs to have more than required number of **unreduced** sample sites listed on SMP ID list
 - Send any SMP ID updates to your District Office

What are the monitoring requirements for lead and copper?

Tier Requirements

A PWS must take all samples from Tier 1 sites (if available, at least 50% from Tier 1-LSL sites). If not enough Tier 1 then the PWS must take samples from Tier 2 sites. If not enough Tier 2 sites, then PWS can use Tier 3 sites.

Community	Non Transient Non Community
Tier 1: single family structures <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line 	Tier 1: buildings <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line
Tier 2: multi-family structures <ul style="list-style-type: none"> Containing lead pipes or copper pipes with lead solder installed between 1982 and 1988 Served by a lead service line 	(Tier 2): buildings <ul style="list-style-type: none"> Containing copper pipes with lead solder installed before 1983
Tier 3: single family structures <ul style="list-style-type: none"> Containing copper pipes with lead solder installed before 1983 	Tier 3: not applicable for NTNC

Tier Other:
Representative sites are used if a system does not have qualifying sample sites (e.g. a mobile home park with all PVC piping)



What are the new requirements for reduced triennial monitoring?

- PWSs need to demonstrate they meet one of the following:
 - 90th percentile for lead is less than 5 ug/L and 90th percentile for copper is less than 0.65 mg/L for 5 consecutive monitoring periods
 - Maintained water quality parameters within the director-approved ranges for 5 consecutive monitoring periods
 - PWS does not own service lines, fixtures, pipe, or solder that contain lead
- If a PWS meets criteria, they will need to fill out application to continue with triennial monitoring.
 - Application due April 2, 2018



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Triennial Lead and Copper Monitoring Application

PWS NAME:	DRINKING WATER PROGRAM – COMPLIANCE NOTIFICATION
PWS ID: OH	DATE:
COUNTY:	SUBMITTED BY:

In accordance with Ohio Revised Code Section 6109.12, every owner or operator of a public water system shall have analyses of the water made at such intervals and in such manner as may be ordered by the environmental protection agency. No water systems are eligible to monitor for lead and copper once every three years ("triennially") without applying to, and receiving written approval from, the director of Ohio EPA.

Documentation provided herein to request a reduction to triennial monitoring (select at least one for eligibility):

- Demonstrates that the water system's tap water lead and copper levels, computed pursuant to OAC Rule 3745-81-80, are less than or equal to 0.005 milligrams per liter and 0.65 milligrams per liter, respectively, for the five most recent consecutive monitoring periods. List the monitoring periods you are using in this application:

Type of Monitoring Period (triennial, annual or 6-month)	Corresponding Dates for Monitoring Period	Lead 90 th Percentile	Copper 90 th Percentile

- Demonstrates that the water system has maintained the range of values for water quality control parameters reflecting optimal corrosion control treatment as designated by the director pursuant to OAC Rule 3743-81-82(F), for the five most recent consecutive monitoring periods. Attach a summary of the water quality parameter data, list the monitoring periods you are using in this application, and give date water quality parameters were established:

Type of Monitoring Period (triennial, annual or 6-month)	Corresponding Dates for Monitoring Period

Date Director established Water Quality Parameters
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- Demonstrates the water system does not own service lines, fixtures, pipe or solder that contains lead. Attach completed verification form.

Signature of Responsible Person Date

Printed Name and Title of Responsible Person

OHIO EPA USE ONLY	
Received:	
Reviewed:	
Comments:	

Revised 2/8/2018

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Triennial Lead and Copper Verification Form

FOR COMMUNITY AND NON-TRANSIENT NON-COMMUNITY PUBLIC WATER SYSTEMS CLAIMING DO NOT OWN SERVICE LINES, FIXTURES, PIPES OR SOLDER THAT CONTAIN LEAD

	DRINKING WATER PROGRAM – COMPLIANCE NOTIFICATION
	DATE:
	SUBMITTED BY:

Revised Code Section 6109.12, every owner or operator of a public water system shall have analyses of intervals and in such manner as may be ordered by the environmental protection agency. No water system does not own service lines, fixtures, pipes or solder that contain lead (for additional clarification, see OAC Rule 3745-81-80 of Ohio EPA.

to triennial monitoring using the criterion that the water system does not own service lines, fixtures, pipe or solder, the owner or operator of a community or non-transient non-community public water system must verify that historical permit records, local ordinances, distribution maintenance records, information pertaining to installation dates for all service lines (for example, after 1986 when lead service lines were banned), and that all service line material, pipes, fixtures, solder composition is known (for example, all are known to be non-lead) or other (list):

Apply for a reduction using the criterion that it does not own service lines, fixtures, pipe or solder that contain lead. The owner or operator must verify that historical permit records, local ordinances, distribution maintenance records, information pertaining to installation dates or materials, or other pertinent information has been reviewed. Verify the information reviewed.

VERIFICATION

I, the undersigned, states they do not own service lines, fixtures, pipes or solder that contain lead and have reviewed the following information (select one or more of the following):

- Historical permit records and/or local ordinances
- Distribution maintenance records (for example, meter replacement, waterline break repairs)
- Information pertaining to installation dates for all service lines (for example, after 1986 when lead service lines were banned)
- That all service line material, pipes, fixtures, solder composition is known (for example, all are known to be non-lead)
- Other (list):

WS's last lead map update: _____

Signature of Person Date

Printed Name and Title of Responsible Person

OHIO EPA USE ONLY	
Received:	
Reviewed:	
Comments:	

Why are there new requirements for reduced triennial monitoring?

- Previous versions of rules allowed for reduced monitoring schedules, if certain requirements were met, but only required systems to go back to 6-month and annual monitoring after ALEs or significant treatment changes
- Three years between monitoring periods for systems that displayed possible corrosive water with the potential for lead exposure is not reasonable
- The best way to determine lead exposure to consumers is through the collection of lead monitoring data

What are the new requirements for laboratories?

- Established next day reporting requirement following laboratory analysis for:
 - Lead, copper, total microcystins in raw water, seasonal startup samples
- Added requirement to report results to Ohio EPA no later than 10 days following analysis for all analytes
- Added requirement that for all analytes a complete analysis must be performed within 30 days of receiving the sample
 - Except radiologicals (60 days)
- October 2018

Still have questions? Contact DDAGW at 614-644-2752

Presentation Sides and other Lead and Copper information available at:
<http://www.epa.state.oh.us/ddagw/pws/leadandcopper.aspx>

THANKS FOR WATCHING

