

Subject:	Plumbing Replacement to reduce exposure to lead or copper in drinking water	Orig Date:	Prior to 4/2008
Unit + init:	TS: BKD, lead/copper workgroup	Revised date:	6/2016
Purpose & Scope: To explain the plumbing replacement process when it is a viable option for reducing exposure to lead or copper in drinking water.			

A Plumbing Replacement Program (PRP) is an alternative for compliance at non-community water systems when lead or copper exceeds the action level (AL) in tap water samples.

Procedure/Process:

1. Regulator must ensure that initial water quality parameter monitoring and source water monitoring was conducted (these requirements are not waived even if a water supplier chooses to pursue a PRP).
2. Regulator reviews water system configuration and source water samples and confirms with the water supplier that a PRP is a viable alternative to CCTX. Regulator provides guidance materials and explains what is necessary to complete the PRP and notifies the water supplier that the PRP must be completed within one year.
3. The water supplier must notify the regulating agency in writing within six months of exceeding the action level for lead or copper that it intends to proceed with a PRP instead of installing corrosion control treatment (CCTX). The PRP must be completed within one year.
4. The regulator sends an email to compliance.dw@state.or.us and requests plumbing replacement program completion be added to the water system's compliance schedule.
5. Regulator must verify that source water and entry point samples demonstrate the source water is not responsible for the presence of lead in tap water samples.
6. The water supplier submits a description of the PRP to the regulating agency after it's completed.
7. Regulator reviews the PRP description and issues a final determination that either the PRP was effective or that CCTX is necessary.
8. The water supplier must report two 6-month demonstration rounds of lead and copper tap samples after completing the PRP. The re-samples of replacement sites required by the PRP count as the first 6-month round. Samples must be collected at the standard number of sites required by OAR 333-061-0036(2)(c) for both rounds. Sample results must be reported to dwp.dmce@state.or.us. If the PRP was successful, an Entry Structure Diagram form should be sent to compliance.dw@state.or.us noting that

treatment code C550 (“LCCA for L/C”) needs to be added to SDWIS (mark the box “Treatment Changes Only” and do not include a diagram). The regulator must send an email to compliance.dw@state.or.us requesting that two follow-up rounds be added to the system’s lead and copper compliance schedule.

9. When there are two 6-month rounds below the L&C 90th percentile action levels, the water system can be returned to annual monitoring for three years and then triennially (or straight to triennially if demonstration rounds ≤ 0.005 mg/L lead and ≤ 0.65 mg/L copper).
10. If lead and/or copper action levels are exceeded during either of the two 6-month rounds, the system must recommence installation of corrosion control treatment beginning at the step where they left off.

Procedure for Water Supplier

1. Develop a plumbing profile that identifies potential sources of lead or copper (for example, pipes, faucets, water coolers & fountains, etc.) and assists the organization to prioritize sample locations.
2. Develop a sampling plan that identifies: (described in 3Ts guidance document.)
 - Who is responsible for the monitoring process?
 - Who is responsible for collecting samples?
 - What laboratory is responsible for analyzing samples?
 - Who is responsible for maintaining records?
 - Where and when will the samples be collected? This should include all reasonable sites, including those where the action level was exceeded.

You should include:

- All fountains, coolers, sinks and bubblers readily accessible to students (particularly the youngest students).
- At least one sample from each area used for food preparation.
- Other faucets or outlets regularly used to gather drinking or cooking water.

You do not need to include:

- Faucets and outlets used for cleaning, maintenance or other non-consumptive uses.
 - Lab, washroom, art room and shop outlets (unless easily accessed and frequently used for consumption).
 - Irrigation outlets.
3. Collect samples according to the sampling plan and identified in the plumbing profile using the first draw method.

4. All sample sites that exceed lead or copper AL must be evaluated and the plumbing fixture identified and replaced. Fixtures must be replaced with Ultra/Zero Lead Brass.
5. Repeat sample collection after plumbing fixtures have been replaced to determine if the plumbing replacement was effective.
6. If plumbing replacement was not effective, follow-up flush samples (described in 3Ts guidance document) must be collected so that first draw and follow-up flush samples can be compared to determine the source of the lead or copper.
7. When all plumbing replacement and sampling is complete, a written description of the of PRP must be submitted to the Authority that includes:
 - Site identification.
 - Sample Volume
 - Dates of sample collection.
 - Dates of replacement for pipes and/or fixtures.
 - What the pipe and/or fixture was replaced with (i.e. galvanized replaced with copper pipe or low lead fixture was replaced with ultra-low lead fixture).
 - Pre and post plumbing replacement lead and copper sample results.

First Draw Sample Collection Procedure for Plumbing Replacement Programs

- (1) Water samples collected must be 1000 mL (1 liter) in volume.
- (2) Samples must be collected before the facility opens and before plumbing fixtures or any water is used. Water should have sat in the pipes for at least 6 hours.
- (3) Unless specifically directed to do so, do not collect samples in the morning after vacations, weekends, or holidays because samples will not be representative of typical drinking water.
- (4) Assign a unique sample number to each sample collected and record the number on each sample bottle and your recordkeeping form.
Recordkeeping forms should identify:
 - Type of sample collected, for example, first draw, follow-up flush, etc.
 - Date and time of collection.
 - Name of the sample collector.
 - Location of the sample site.
 - Plumbing fixture manufacturer and the fixture's model number, if known.