FREQUENTLY ASKED QUESTIONS
Lead/Copper Rule & Lead/Copper 90th % Action Level Exceedances

General Information

Where is the best place to find forms and fact sheets about Lead and Copper monitoring and other tasks required after a 90th % action level exceedance?

DEQ forms and fact sheets about lead and copper in public water systems is available at www.deq.state.ok.us. The U.S. Environmental Protection Agency website (www.epa.gov) also has general information available regarding lead and copper in drinking water.

How can I find the name of my DEQ District Engineer/Representative or find the local ECLS office?

A list of the local ECSL office for your county is available at www.deq.state.ok.us. DEQ District Engineer/Representative's are also listed at www.deq.state.ok.us. The DEQ Water Quality Division receptionist (405-702-8100) can also assist you in finding the name/phone number of your District Engineer/Representative and the address/phone numbers for the ECLS office.

Lead and Copper Rule

I don't want to do the tasks required by the Lead and Copper Rule.

The lead and copper rule exists to protect the people that drink the water. All community and all non-transient, non-community public water systems are required to periodically test their water for lead and copper. If levels of lead and/or copper are found in the water that is above the allowed limits, all community and non-transient, non-community system are required to perform multiple tasks to remedy the circumstances which contributed to the lead/copper exceedance and to protect public health. A system that fails to perform the tasks required would be in violation of State and Federal rules and regulations which would lead to DEQ to take enforcement actions (and possibly impose fines) to return the public water system to compliance.

How does lead and copper get into drinking water?

In Oklahoma, it is uncommon for elevated levels of lead and copper to be in the water when it is pumped from the source. In Oklahoma corrosive water is a common contributor to lead and copper in drinking water. When corrosive water is in contact with commonly used lead/copper pipes/fixtures, the lead and copper from the pipe can be pulled into the water. Public water suppliers are required to provide non-corrosive water to their consumers.

If the lead and/or copper is coming from the customer's pipes, why is my system responsible for the levels of lead and copper in the water?

When high levels of lead/copper are detected in the water it indicates the water provided (in that sample) either had lead/copper in the water when it was pumped from the source and/or lead/copper was pulled into the water by corrosive water. A public water system is required to control Source Water Lead/Copper (if present) and to provide non-corrosive water.

What is the limit for LEAD in drinking water?

The action level for lead is 0.015 mg/L or 15 чg/L.

What are the health effects of LEAD?

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

What is the limit for COPPER in the drinking water?

The action level for copper is 1.3 mg/L or 1,300 чg/L.

What are the health effects of COPPER?

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Sample Collection

My system allows the customer to collect Tap Water Lead/Copper samples – if the customer collects the sample incorrectly is my system held responsible for the results of that sample?

The Lead and Copper rules allows the system to choose if the occupant will collect Tap Water Lead/Copper samples or if the system will collect the samples. When a system chooses to allow their customers to collect Tap Water Lead/Copper samples, the system must teach their customer how to collect the sample correctly. If the occupant collects the sample incorrectly (for whatever reason) the system is still responsible for the results.

Can my system just collect a Tap Water Lead/Copper sample from the outside spigot?

No. Tap Water Lead/Copper samples must be collected from inside faucet using only cold water.

Are all Tap Water Lead/Copper samples collected the same way?

No. There are different collection methods depending upon how the site was approved as a Tap Water Lead/Copper sample site. For additional information about Tap Water Lead/Copper sample collection, read "Tap Water Lead and Copper Sampling Instructions…" available at www.deq.state.ok.us.

Where can I learn how to properly collect a Tap Water Lead/Copper sample?

Information about Tap Water Lead/Copper sample collection can be found in "Tap Water Lead and Copper Sampling Instructions … " available at www.deq.state.ok.us If you need additional assistance in learning how to collect a Tap Water Lead/Copper sample the local ECSL office or DEQ District Engineer/Representative may be able to assist you.

Sample Sites

Can any type of site be used as a Tap Water Lead/Copper sample sites?

No. The Lead and Copper rule requires that the system finds and uses the sites within the distribution

	system that are classified as being the sites most vulnerable to corrosive water (if corrosive water is present). Tap Water Lead/Copper sample sites are different for community and non-transient, non-community systems. For additional information about Tap Water Lead/Copper sample sites, read "Request Form for Tap Water Lead/Copper Sample Sites" available at www.deq.state.ok.us.
Can a site with a water softener be used as a Tap Water Lead/Copper sample site?	
	No. A site with a treatment device designed to remove inorganic chemicals cannot be used as a Tap Water Lead/Copper sample site. Examples of treatment methods that remove inorganic chemicals are water softeners, reverse osmosis, distillation.
Can a site with another source of water (i.e., a private well) be used as a Tap Water Lead/Copper sample site?	
	No.
All of my sites were approved by DEQ a long time ago, can I still use the sites?	
	Maybe or maybe not. Every time, before samples are collected, a system should make sure their DEQ approved Tap Water Lead/Copper sample sites still meet all rule requirements. Things change over time. If the type of service line/gooseneck or the type/age of the indoor plumbing has changed at a site, the site may or may not meet rule requirements now. If a treatment device designed to remove inorganic chemicals (i.e., water softener, distillation, reverse osmosis) has been added to the site the site cannot be used as a Tap Water Lead/Copper sample site. Additionally, over time, new structures may have been constructed within the distribution system that may be more vulnerable to corrosive water than the sites that were on the original Tap Water Lead/Copper sample site plan – these new/more vulnerable sites would need to be added to the site plan and used as Tap Water Lead/Copper sample sites.
Some of my system's Tap Water Lead/Copper sample sites don't meet rule requirements at this time – do I have to notify DEQ?	
	Yes. When your system learns that an existing DEQ approved Tap Water Lead/Copper sample site no longer meets rule requirements, your system must ask DEQ to inactivate the sample site by submitting a "Request Form for Tap Water Lead/Copper Sample Sites" (available at www.deq.state.ok.us) to DEQ. The "Request Form…" can also be used to update information for existing sites and/or propose new sites.
I just need to add one site to my Tap Water Lead/Copper sample site plan, why do I have to update information on all existing (DEQ approved) Tap Water Lead/Copper sample sites.	
	Before DEQ can determine if an individual new site meets rule requirements, DEQ must know that the most vulnerable sites within the distribution system are being used. The only way the DEQ will know that the existing DEQ approved Tap Water Lead/Copper sample sites are still the most vulnerable sites available is for the system to provide current information about the existing sites.
A lot of my customers won't let my system use their site as a Tap Water Lead/Copper sample site – what should I do?	
	If the occupant at a site is unable or unwilling to participate as a Tap Water Lead/Copper sample site, the site is unavailable and cannot be used and should be "inactivated" (using the "Request Form for Tap Water Lead/Copper Sample Sites") based upon the reason that the occupant is unable or unwilling to participate.

My system doesn't have records of the types of pipe or solder inside the customer's building – what should I do?

Many systems do not have searchable records of the types of indoor plumbing in a particular site. The Lead and Copper Rule requires a system to look at all available records when trying to find the most vulnerable sites within their distribution system. Many systems that do not have records conduct surveys (i.e., door-to-door, by phone, distributed questionnaires) to find the most vulnerable sites within their distribution system.

My system does not have any records of the parts of town that still have lead service lines on the system's side of the meter – what should I do?

When records don't exist/have not been kept current, one of the best sources of information may be the operators and other maintenance personnel that are working on/repairing the service lines now and also those operators/personnel that worked on/repaired the service lines in the past.

90th % Action Level Exceedance

How is a 90th % action level exceedance determined?

Two separate calculations must be performed (one for lead and one for copper).
-- All the analysis results (during the monitoring period) are listed from highest to lowest. -- Each result is given a number showing its place in the highest to lowest ranking.
-- The highest ranking number is the same as the number of results.
-- The highest ranking number is given to the result with the highest concentration.
-- The number of samples is then multiplied by 0.9 to determine which ranked sample is the 90th % sample.
-- The result for the 90th % sample is then compared to the action level for that analyte.
-- If the 90th % sample is above the action level (for that analyte) a 90th % action level exceedance (for that analyte) has occurred.

All the tasks required after a 90th % action level exceedance costs a lot of money – where should I get the money from to pay for all of this?

Some funding may be available thru the Drinking Water State Revolving Fund (DWSRF) or other State/Federal funding methods. Search www.deq.state.ok.us for additional information about DWSRF and other State/Federal funding. Standard funding method, such as fee increases, loans or bonds, may also be needed to cover the costs incurred after an exceedance.

Copper Exceedance Tasks

After a COPPER 90th % action level exceedance occurs, what does my system have to do?

Details of the tasks required for a specific system would be answered by the Notice of Exceedance/Appendix issued to that system. In general, a system with a copper exceedance, is required to:

-- conduct four (4) types of monitoring and report results to DEQ
-- obtain the services of a Professional Engineer licensed to practice in Oklahoma
-- determine (with the system's engineer) if a Corrosion Control Study is needed
-- recommend the types of treatment needed to prevent exceedances from occurring
-- install the treatment methods approved by DEQ
-- after DEQ has approved the installed treatments, maintain and operate the treatment to prevent exceedances from occurring.

Lead Exceedance Tasks

After a LEAD (or lead and copper) 90th % action level exceedance occurs, what does my system have to do?

Details of the tasks required for a specific system would be answered by the Notice of Exceedance/Appendix issued to that system. In general, a public water, with a lead or lead/copper exceedance, is required to:

-- perform multiple forms of Public Education to inform consumers of ways they can reduce their exposure to lead in drinking water and report performance of Public Education to DEQ.
-- conduct four (4) types of monitoring and report results to DEQ
-- obtain the services of a Professional Engineer licensed to practice in Oklahoma
-- determine (with the system's engineer) if a Corrosion Control Study is needed
-- recommend the types of treatment needed to prevent exceedances from occurring
-- install the treatment methods approved by DEQ
-- after DEQ has approved the installed treatments, maintain and operate the treatment to prevent exceedances from occurring.

Public Education

Is Public Education the same as Public Notification?

No. Public Education is required after a lead 90th % action level exceedance to educate consumers of the steps they can take to reduce their exposure to lead. Public Notice is required after a water system has a violation to inform the consumer of the violation.

What is Public Education?

A Public Education document has required information that must be provided to consumers (by various methods) after a LEAD 90th % action level exceedance occurs/continues/re-occurs. The purpose of Public Education is to inform the consumers of actions they can take to reduce their exposure to lead in drinking water.

Why is my system required to do so many types of Public Education?

Multiple forms of Public Education are required to reach as many consumers as possible. Even with mail or direct delivery of Public Education, the information in the Public Education may not get to the hands of every person that needs the information. With multiple forms of Public Education the chances of every person getting the information provided in the Public Education is increased.

How often does Public Education need to be repeated?

Some forms of Public Education are repeated every six months so long as a LEAD 90th % action level exceedance continues or re-occurs. Some forms of Public Education are repeated every twelve months so long as a LEAD 90th % action level exceedance continues or re-occurs. The types of Public Education required vary for each system. To determine the types and frequency of Public Education for a particular system, refer to the Notice of Exceedance and Appendix to Notice of Exceedance that was issued by DEQ to that system.

Why does my system have to report on all the types of Public Education that they do?

The only way that DEQ will know that your system did the types of Public Education required will be for the system to report the performance of the Public Education to DEQ.

Monitoring after a 90th % Action Level Exceedance

Why is Source Water Lead/Copper monitoring required after an exceedance?

Source Water Lead/Copper analysis results provide a snapshot of how much lead and copper is in the water when the water is pumped from the water source.

Why is Tap Water Lead/Copper monitoring required after an exceedance?

Tap Water Lead/Copper analysis results, when compared to Source Water Lead/Copper monitoring results, provide a snapshot of how the water has reacted with the systems treatment processes, distribution system and indoor plumbing before the water is used by the consumer.

What is Water Quality Parameter Monitoring?

Water Quality Parameter monitoring tests a water sample for temperature, pH, alkalinity, calcium, conductivity, phosphate and silicate to determine what the characteristics of the water are at time. Water Quality Parameters results are one of the tools that engineer need to determine which type of treatment(s) could prevent future exceedances from occurring.

Why is Entry Point Water Quality Parameter monitoring required after an exceedance?

Entry Point Water Quality Parameter analysis results provide a snapshot of the water characteristics when the water is pumped from the source – these results can be compared to Distribution System Water Quality Parameter analysis results to better understand what may be changing in the water between the source and the faucet.

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Why is Distribution System Water Quality Parameter monitoring required after an exceedance?

Distribution System Water Quality Parameter analysis results provide a snapshot of the water characteristics when the water is at the customers faucet – these results can be compared to Entry Point Water Quality Parameter analysis results to better understand what may be changing in the water between the source and the faucet.

Can I use an outside spigot to collect a Distribution System Water Quality Parameter sample?

No. Use an indoor faucet, at a DEQ approved Bacteriological sample site, to collect a Distribution System Water Quality Parameter sample.

I don't know how (or don't have the equipment) to test the Water Quality Parameter samples for temperature, pH or alkalinity when the sample is collected – what should I do?

In the beginning, your system may be able to borrow some equipment from neighboring systems to test your samples but your system will probably want to buy your own testing equipment as soon as possible. Your local ECLS office or District Engineer/Representative (at the OKC offices) may be able to help you learn how to use your test equipment properly.

Does my system have to collect Source Water Lead/Copper and Entry Point Water Quality Parameter samples from an entry points that is only used as a backup water source?

Yes. So long as an entry point is listed as an active entry point at www.sdwis.deq.state.ok.us you are required to collect both Source Water Lead/Copper samples and Entry Point Water Quality Parameter samples from the entry point. If you believe an entry point needs to be inactivated contact your local ECLS office or District Engineer/Representative. If you believe the information at the www.sdwis.deq.state.ok website in incorrect, contact Jamie Mungle at 405-702-8167.

What should I do if one of my wells (or entry points) is inoperable when I need to collect Source Water Lead/Copper and Entry Point Water Quality Parameter samples?

If an entry point is inoperable contact your local ECLS office or District Engineer /Representative as soon as possible to discuss the situation. DEQ will decide if a site needs to be inactivated on a case by case basis.

After the Water Quality Parameter samples are tested for temperature, pH and alkalinity is the same sample submitted to the lab for analysis?

Yes. You will collect one sample from the site, test some of the water for temperature, pH and alkalinity (record the results) and then properly submit the remainder of the sample water to the lab for analysis.

Why does my system have to report analysis results to DEQ?

Laboratory electronic submission of Source Water Lead/Copper results, Entry Point Water Quality Parameter results and Distribution System Water Quality Parameter results is a less than perfect process. To make sure your system is given credit for performing required monitoring you must report the results to DEQ.

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What is a Corrosion Control Study?

A Corrosion Control Study is a group of tests (usually performed by an engineer) that can be performed within your system to better understand what methods of treatment will offer the best remedy to the circumstances which contributed to your system's exceedance.

How do I know if my system should conduct a Corrosion Control Study or not?

Your system should consult with the Professional Engineer, providing services to your system, to discuss the possible benefit of conducting a Corrosion Control Study in your system.

What is a Treatment Recommendation?

A system must recommend the type(s) of Source Water Treatment and/or Corrosion Control Treatment that they believe will remedy the circumstances which contributed to the exceedance – this recommendation should be made on the "Treatment Recommendation" form that was provided to the system with the Notice of Exceedance. A Treatment Plan (endorsed by a Professional Engineer licensed to practice in Oklahoma) must be submitted with the Treatment Recommendation to provide the supporting documentation/technical information needed for DEQ to approve (or reject) the type(s) of treatment(s) being recommended.

What is a Treatment Plan?

A Treatment Plan is a document endorsed by the Professional Engineer that is submitted to DEQ with the Treatment Recommendation. The Treatment Plan allows the engineer an opportunity to explain why a particular type of treatment is being recommended and/or why other type(s) of treatment may not work well in that system. The Treatment Plan provides the supporting documentation/technical information needed for DEQ to approve (or reject) the type(s) of treatment being recommended.

Why does a Professional Engineer have to sign the Treatment Plan?

The types of treatment that will work well in one system may not work well in another system – a Professional Engineer is the person that thru training and experience will be able to best determine which type(s) of treatment will remedy the circumstances which contributed to an exceedance in a particular system.

After my system submits a Treatment Recommendation and a Treatment Plan, what happens next?

DEQ will review the Treatment Recommendation and Treatment Plan and either approve the methods recommended or ask for additional information before a decision can be made or reject the recommendation.

What happens if DEQ does not approve my system's Treatment Recommendation/Treatment Plan?

Your system would need to follow the directions provided by DEQ on how to correct the Treatment Recommendation/Treatment Plan or how to re-submit another Treatment Recommendation/Treatment Plan that would be approvable. A water system must have an **approvable** Treatment Recommendation/Treatment Plan submitted to DEQ by the due date listed in the Notice of Exceedance – waiting until the last moment to submit your first Treatment Recommendation/Treatment Plan does not allow your system any time to make any corrections that may be needed on the Treatment Recommendation/Treatment Plan.

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After my system has installed the treatment do we just turn it on and use it?

Not quite… after DEQ approves the type of treatment to be installed the system is required to properly install the treatment. Before the treatment is put into operation DEQ will need to make sure the treatment is properly installed. After DEQ approves the installed treatments, the treatment can be placed into service – see next answer for additional information on how to start using installed treatment safely.

After DEQ approves the installation of the treatment, how do we learn how to operate it?

It may take awhile to figure out the best way to operate the treatment in your system – adjustments may need to be made throughout this learning time – consult with your system's Professional Engineer or the DEQ District Engineer/Representative for assistance.

What are Optimal Water Quality Control Parameters?

After your system installs treatment(s) and has had time to learn how best to use those treatment(s) DEQ will look at analysis results and determine the Optimal Water Quality Control Parameters for your system. Optimal Water Quality Control Parameters act as the boundaries in which your system must maintain and operate the installed treatments.

After DEQ approves the installation of the treatment and we start using it, do we have to continue using it forever?

Yes. After treatment(s) is installed and the installed treatments are approved by DEQ your system must begin operating the installed treatments. After Optimal Water Quality Control Parameters are set by DEQ your system must continue to maintain and operate the installed treatments to remain within the Optimal Water Quality Parameters.