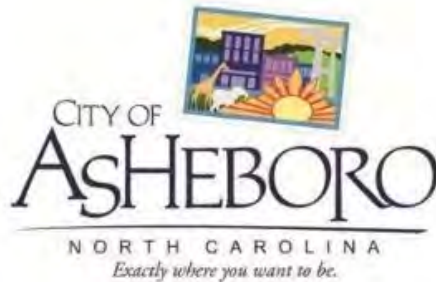


LEAD AND COPPER RULE REVISIONS FREQUENTLY ASKED QUESTIONS



Prepared for:

City of Asheboro

November 2024

Prepared by:

FREese AND NICHOLS, INC.
1017 Main Campus Drive, Suite 1200
Raleigh, NC 27606

TABLE OF CONTENTS

Section Number	Title	Page Number
1	QUESTIONS RELATED TO LEAD SOURCES	1
1.1	What is lead?	1
1.2	How does lead end up in the drinking water?	1
1.3	Is my home likely to have lead plumbing?	1
1.4	What if the city does not supply water to my property, and I have another water source? Am I likely to be exposed to lead?	2
1.5	What if I live in an apartment complex? Am I likely to be exposed to lead?	2
1.6	How is drinking water tested for lead contamination?	2
1.7	At what level does lead-contaminated water need to be reported?	2
1.8	What are other sources of lead exposure?	2
2	QUESTIONS RELATED TO ROUTINE LEAD SAMPLING	3
2.1	Why was my home chosen for lead sampling?	3
2.2	How is sampling performed?	3
2.3	What can I do if my house is not chosen for lead sampling?	3
2.4	Lead was detected in my drinking water; what do I do next?	4
2.5	Is there a safe level of lead concentration in drinking water?	4
3	QUESTIONS RELATED TO LEAD SERVICE LINES AND PLUMBING	5
3.1	What is the service line, and who owns it?	5
3.2	What is the new regulation regarding lead in drinking water?	5
3.3	If Lead is found in the service line, does that mean there is lead in my water?	6
3.4	How do I find out if my home has lead lines?	6
3.5	Where can I find test kits or lead swabs to identify service line materials feeding water to my property? (Authorized Vendors of Entities)	7
3.6	What if I live in an apartment complex?	7
4	QUESTIONS RELATED TO REDUCING LEAD EXPOSURE	8
4.1	Can water filters remove lead?	8
4.2	Does boiling water make it free of lead or safe for consumption?	8
4.3	What can I do to reduce my exposure to lead?	8
5	QUESTIONS RELATED TO HEALTH	11
5.1	Is it safe to use water contaminated with lead for purposes other than cooking and drinking, such as showering, laundry, and irrigation?	11
5.2	Is the city water source safe for consumption?	11
5.3	What are the health issues caused by lead exposure?	11
5.4	Can lead be harmful to my pets?	11
6	QUESTIONS RELATED TO SERVICE LINE LETTERS	12
6.1	Why did I receive a letter about my service line material?	12
6.2	What do I need to do to change my service line?	12
6.3	I received a letter stating I have a galvanized service line. Do I need to replace it?	12
7	REFERENCES	13

TABLE OF FIGURES

Figure Number	Title	Page Number
Figure 3-1	Example of Service Line and Ownership	5
Figure 3-2	Examples of Copper Pipe, Lead Pipe, and Galvanized Pipe	7
Figure 4-1	NSF Certification Symbol	9
Figure 4-2	WQA Certification Symbol	9

1. QUESTIONS RELATED TO LEAD SOURCES

1.1 WHAT IS LEAD?

Lead is a naturally occurring metal that can be harmful if inhaled or swallowed. It can be found in air, soil, dust, food, and water.

1.2 HOW DOES LEAD END UP IN DRINKING WATER?

Lead does not typically come from the raw water source (lake water) that is treated for our drinking water supply. The City follows EPA and State drinking water requirements to monitor water quality leaving the water plant. Historical data shows that the treated water supply that feeds your home does not contain lead at levels above the lead action level of 15 ppb, or the copper action level of 1.3 mg/L.

When lead is present in the distribution system, it most commonly comes from lead piping or plumbing materials that are in contact with the water. Contact occurs within the pipes that carry water from the water plant to buildings within the distribution system, and the plumbing materials within buildings. Water temperature, pH level, and mineral content can potentially worsen lead leaching from pipes, fixtures, and solder into the drinking water (EPA, 2024).

The City monitors for lead and copper in the distribution system as mandated by EPA's Lead and Copper Rule. Historical results show no levels have been detected at or above the lead action level of 15 ppb, or the copper action level of 1.3 mg/L.

The City will continue to develop and update our inventory of city-owned service line materials. Currently, we do not maintain records of private plumbing.

1.3 IS MY HOME LIKELY TO HAVE LEAD PLUMBING?

The national lead ban was enacted in North Carolina in March 1987, so plumbing installed before 1987 is at risk of containing lead in the lines, solder, or fixtures. Licensed plumbers or home inspectors can assist in identifying your home's plumbing materials. You can check the City's record of the service line material that leads from the water main to your home inlet by https://www.ci.asheboro.nc.us/government/departments/water_resources/lead_and_copper_inventory.php. If you think your home's service line material has been mistakenly classified, please report the issue to coawater@ci.asheboro.nc.us.

1.4 WHAT IF THE CITY DOES NOT SUPPLY WATER TO MY PROPERTY, AND I HAVE ANOTHER LOCAL WATER SOURCE? AM I LIKELY TO BE EXPOSED TO LEAD?

If your property does not use City water and relies on a well or another local source, the likelihood of lead contamination still exists. This can come from the well components, the pump, and the pipes leading into your home, especially if they are made of or soldered with lead.

1.5 WHAT IF I LIVE IN AN APARTMENT COMPLEX? AM I LIKELY TO BE EXPOSED TO LEAD?

Living in an apartment complex does not exempt you from the possibility of lead exposure. If the building is older and has not updated plumbing, lead pipes or solder might be present.

1.6 HOW IS DRINKING WATER TESTED FOR LEAD CONTAMINATION?

The City regularly monitors drinking water for lead, as the [Environmental Protection Agency \(EPA\)](https://www.epa.gov/dwreginfo/lead-and-copper-rule) (<https://www.epa.gov/dwreginfo/lead-and-copper-rule>) and [North Carolina Department of Environmental Quality \(NC DEQ\)](https://www.deq.nc.gov/water-resources/lead-copper-rule-guidelines/open) (<https://www.deq.nc.gov/water-resources/lead-copper-rule-guidelines/open>) require. Samples are collected from various homes within the community, focusing on those most likely to have higher lead levels. Samples are collected from inside faucets that are most frequently used for consumption, such as kitchen or bathroom sinks. The water is analyzed in certified laboratories to measure the concentration of lead.

The City reports these findings to the state and the public. The City's lead monitoring results have historically met state and federal safe drinking water requirements. There have been no lead sample results in the City's distribution system exceeding 0.015 mg/L since 1994.

1.7 AT WHAT LEVEL DOES LEAD-CONTAMINATED WATER NEED TO BE REPORTED?

If more than 10% of the City's samples have a lead concentration that exceeds the NC DEQ action level of 15 parts per billion, the utility must notify the public and take corrective actions to reduce the lead levels (EPA, 2024). For reference, 15 parts per billion is equivalent to dissolving a drop of dye into a large swimming pool. The City's 90th percentile results have never exceeded 15 parts per billion.

1.8 WHAT ARE OTHER SOURCES OF LEAD EXPOSURE?

Lead exposure can occur through paint, industrial emissions, soil contaminated by past emissions or leaded gas, and certain imported products or foods.

2. QUESTIONS RELATED TO ROUTINE LEAD SAMPLING

2.1 WHY WAS MY HOME CHOSEN FOR LEAD SAMPLING?

The EPA and NC DEQ require cities to identify homes with known lead or having a higher likelihood of lead plumbing or solder installed based on the construction year before the lead ban. These homes are ranked based on various criteria, such as those with known lead plumbing or lead solder or with a higher chance of lead materials based on construction year. From this pool of high-likelihood homes, a representative sample is selected for lead testing.

It is important to note that being chosen for lead sampling does not necessarily mean that your home contains lead. If your home has lead service lines, you will be informed about it in annual letters starting in November 2024.

2.2 HOW IS SAMPLING PERFORMED?

If selected for lead testing, the resident will be provided a sample kit and instructions on how to collect the water sample. The water sample is required to be 1 liter in volume and to be taken at a tap that has not been used in 6 hours; see the images below.



Customers can pick up and drop off sample kits at the Public Works Facility at 1312 N Fayetteville Street from 8:00 AM to 5:00 PM Monday through Friday. The results of the analysis are provided to the resident and to NC DEQ. **You may contact the City at coawater@ci.asheboro.nc.us to confirm that a City employee or authorized contractor provided the sample kit.** Authorized personnel will NOT request to enter a resident's home and will NOT request any payment.

2.3 WHAT CAN I DO IF MY HOUSE IS NOT CHOSEN FOR LEAD SAMPLING?

To be chosen for lead sampling, your house must be lead-containing or potentially lead-containing. As service lines are replaced, sample sites will be chosen based on interior home plumbing and representation throughout the community.

Residents can also request a one-time sample to be arranged by the City.

If your house was not chosen as a sample site, you can seek water testing through a certified laboratory. This voluntary sampling is at the resident's expense. We recommend contacting one of the certified labs listed below. These labs are approved for water testing and can conduct lead sampling.

Meritech, Inc.
642 Tamco Rd,
Reidsville, NC 27320
(336) 342-4748

Piedmont Triad Regional Water Authority
7297 Adams Farm Rd,
Randleman, NC 27317
(336) 498-5510

2.4 LEAD WAS DETECTED IN MY DRINKING WATER; WHAT DO I DO NEXT?

If lead is detected in your drinking water, immediately reduce your exposure. Run the water tap for 2 -5 minutes before use. Use bottled water or a filter, such as a Brita filter, to remove lead for drinking and cooking. Boiling water does NOT reduce the level of lead in your water.

For more details, please refer to **Question 4.3 What can I do to reduce my exposure to lead?** or visit the CDC's website: <https://www.cdc.gov/lead-prevention/prevention/drinking-water.html>

2.5 IS THERE A SAFE LEVEL OF LEAD CONCENTRATION IN DRINKING WATER?

According to the EPA, no lead in drinking water is considered safe, especially for vulnerable populations such as children and pregnant women (EPA, 2017). The current action level for lead in drinking water is set at 15 parts per billion (ppb) and is proposed to be reduced to 10 ppb by 2028. Still, the goal is to reduce lead concentrations to as low as reasonably possible because any exposure to lead is potentially harmful.

3. QUESTIONS RELATED TO LEAD SERVICE LINES AND PLUMBING

3.1 WHAT IS THE SERVICE LINE, AND WHO OWNS IT?

A service line is a pipe that conveys water between the water main located under the street into individual homes and buildings. The City owns the water main and service lines from the water main to the meter, and the property owner owns the service lines from the meter into the building, as shown in the figure below.

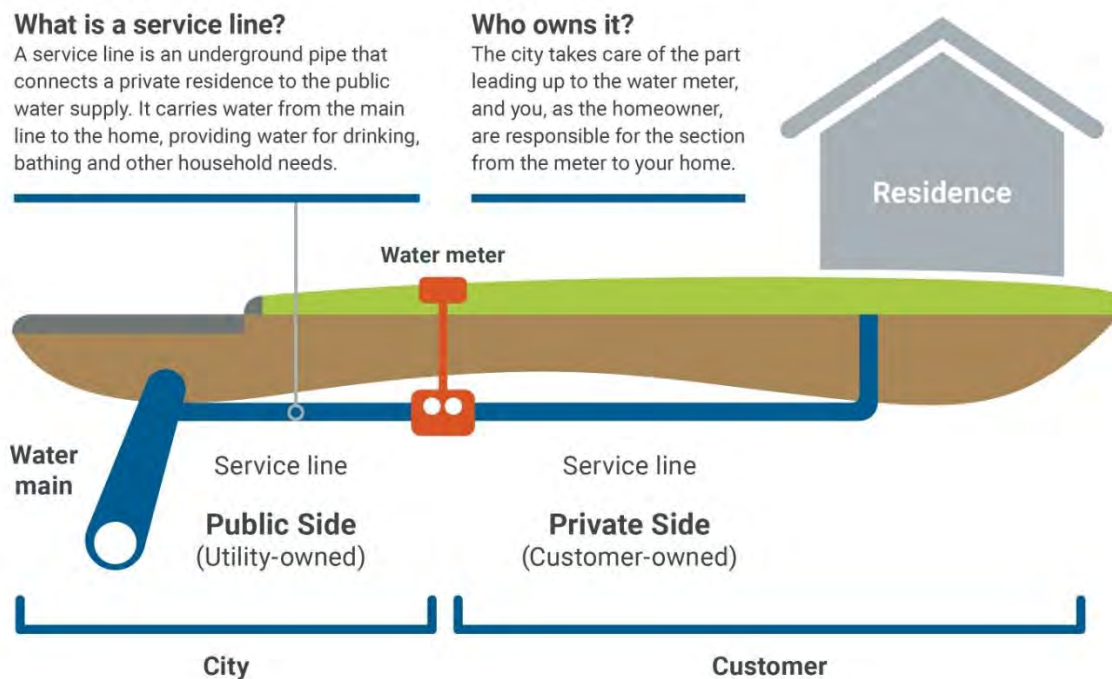


Figure 3-1: Example of Service Line and Ownership

3.2 WHAT IS THE NEW REGULATION REGARDING LEAD IN DRINKING WATER?

Lead is regulated in drinking water through the Lead and Copper Rule. The EPA and NC DEQ released updated standards to protect communities from lead exposure in drinking water. These new standards, the 'Lead and Copper Rule Revisions' and 'Lead and Copper Rule Improvements,' mandate that all drinking water utilities in the United States, including North Carolina, must investigate whether lead service lines are present in their water distribution systems and plan for service line replacements. The new rules also update requirements for water sampling and response actions utilities must take if testing shows lead in their water. Please refer to the EPA [LCRR](https://www.epa.gov/ground-water-and-drinking-) [https://www.epa.gov/ground-water-and-drinking-]

water/revise-lead-and-copper-rule] and [Proposed LCRI](https://www.epa.gov/ground-water-and-drinking-water/proposed-lead-and-copper-rule-improvements) [https://www.epa.gov/ground-water-and-drinking-water/proposed-lead-and-copper-rule-improvements] sites for more information.

While the same rule regulates copper, it does not carry the same health risk as lead and is not a focus of the new rule. The sole purpose of this new regulation is to protect communities from the likelihood of lead exposure from drinking water flowing through lead pipes. The City is in the process of inspecting service lines to verify the line material for connections built before the federal lead ban.

3.3 IF LEAD IS FOUND IN THE SERVICE LINE, DOES THAT MEAN THERE IS LEAD IN MY WATER?

No, just because a service line contains lead, this does not mean lead is in the drinking water. The City will conduct water monitoring at locations where lead lines are found and test for lead in the water inside the home. The City currently conducts routine water monitoring for lead, and historical results show that lead levels meet safe drinking water standards.

Furthermore, the City's water treatment process adds lead inhibitors to prevent lead from leaching from lead pipes into the drinking water. The City has been and continues to be compliant with all Federal and State rules regulating lead and copper in drinking water. The most recent lead and copper distribution system sampling was performed in the summer of 2023. There have been no lead results exceeding 15 µg/L since 1995 which is the current threshold set by the EPA

3.4 HOW DO I FIND OUT IF MY HOME HAS LEAD LINES?

First, locate your plumbing lines. They can usually be seen at the pipe entering the water heater, attic, basement, or other utility areas where pipes are exposed. A certified plumber can help perform an inspection to locate plumbing lines and identify the material. Your service line, which connects your home to the water meter, is buried and will require excavation to expose a portion of the line.

Lead is a dull, soft, non-magnetic material that turns a shiny silver when scratched. A scratch test is a quick method for identifying the service line material entering a home or building. If the scratched area turns out to be roughly the color of a penny, it is likely copper. But if it turns shiny silver, it may be lead or galvanized iron. You can place a magnet on the pipe to distinguish between lead and galvanized iron. If the magnet sticks to the pipe, it is likely iron and not lead. The EPA provides a guide to checking for lead pipe: <https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead-0>.

Once you have identified the material of your service line, coawater@ci.asheboro.nc.us

Example of Copper Pipe



Example of Lead Pipe



Example of Galvanized Pipe



Figure 3-2: Examples of Copper Pipe, Lead Pipe, and Galvanized Pipe

3.5 WHERE CAN I FIND TEST KITS OR LEAD SWABS TO IDENTIFY SERVICE LINE MATERIALS FEEDING WATER TO MY PROPERTY? (AUTHORIZED VENDORS OF ENTITIES)

Scratch and magnet tests are considered the most reliable tests to verify lead plumbing materials. Lead test kits should only be used to verify your findings. They can be purchased from many hardware stores or online retailers.

3.6 WHAT IF I LIVE IN AN APARTMENT COMPLEX?

It is the landlord's responsibility to maintain pipes. If you are concerned about the material of the pipes, you can ask your landlord if they can perform a scratch test or have a plumber verify your line materials.

4. QUESTIONS RELATED TO REDUCING LEAD EXPOSURE

4.1 CAN WATER FILTERS REMOVE LEAD?

Filters certified under NSF/ANSI Standard 53 for total lead removal, NSF/ANSI Standard 58 for reverse osmosis, and NSF/ANSI Standard 42 for fine particulates (Class I) effectively reduce lead in drinking water. Always follow the manufacturer's instructions for installation and maintenance to ensure the filter's effectiveness. Contact NSF International at 800-NSF-8010 or visit [NSF | The Public Health and Safety Organization](https://www.nsf.org/) [https://www.nsf.org/] for information on performance standards for water filters. See **Figure 4-1** for a visual of the NSF Certification Symbol.

4.2 DOES BOILING WATER MAKE IT FREE OF LEAD OR SAFE FOR CONSUMPTION?

It is a common misconception that boiling water can remove lead but does not. Boiling water can increase the lead concentration since it causes some water to evaporate while the lead remains. The most effective way to reduce the likelihood of lead exposure from drinking water is to use a certified water filter to remove lead or to opt for bottled water for drinking and cooking.

4.3 WHAT CAN I DO TO REDUCE MY EXPOSURE TO LEAD?

DO:

- Run your water to flush out lead. Run water for 15 – 30 seconds to flush lead from interior plumbing or until it becomes cold or reaches a steady temperature before using it for drinking or cooking if it has not been used for several hours.
- Use cold water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
- Look into additional treatment of water. You may want to consider purchasing a water filter. Read the package to be sure the filter is approved to reduce lead. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality. When purchasing a water treatment device, ensure it is certified under NSF/ANSI 53 to remove lead. Search for certified products at NSF International or Water Quality Association. Contact NSF International at 800-NSF-8010 or visit www.nsf.org for information on performance standards for water filters.



Figure 4-1: NSF Certification Symbol

NSF - <https://www.nsf.org/certified-products-systems>



Figure 4-2: WQA Certification Symbol

Water Quality Association - <https://find.wqa.org/find-products#/>

- If you are concerned about exposure, contact your local healthcare provider to find out how you can get your child's blood tested.
- Periodically remove and clean the faucet screen/aerator. While removed, run the water to eliminate debris.
- Identify and replace plumbing fixtures containing lead. Brass faucets, fittings, and valves may leach lead into drinking water. All brass plumbing fixtures purchased before 2014 should be replaced. Products purchased after that date meet lead-free requirements.
- Have a licensed electrician check your wiring. Your home electrical system may be attached to your service line or elsewhere in your plumbing. If this connection is electrified, it can accelerate corrosion. Check with a licensed electrician to correct ground faults and evaluate your local electric code to determine if your wiring can be grounded elsewhere.

DO NOT:

- Do not boil water to remove the lead. Boiling water will not reduce lead.
- Do not attempt to change electrical wiring yourself. Improper bonding or grounding can cause electrical shock and fire hazards.

5. QUESTIONS RELATED TO HEALTH

5.1 IS IT SAFE TO USE WATER CONTAMINATED WITH LEAD FOR PURPOSES OTHER THAN COOKING AND DRINKING, SUCH AS SHOWERING, LAUNDRY, AND IRRIGATION?

While lead-contaminated water can pose a risk if ingested, it is generally safe for other household uses such as showering, laundry, and irrigation. Lead does not easily penetrate the skin and is not readily absorbed during typical household activities. However, it is crucial to avoid using contaminated water for preparing baby formula or any other use where it might be ingested, especially by children or pregnant

women. It is important to prioritize actions to reduce or eliminate lead from your water supply to ensure overall safety.

5.2 IS THE CITY WATER SOURCE SAFE FOR CONSUMPTION?

Yes, the water source for the City's water distribution system is safe to drink. Our Public Water System (PWS) meets all water standards the NC DEQ sets.

5.3 WHAT ARE THE HEALTH ISSUES CAUSED BY LEAD EXPOSURE?

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant women, infants (both formula-fed and breastfed), and young children. Some health effects on infants and children include decreased IQ and attention span.

Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney, or nervous system problems. Contact your healthcare provider for more information about your risks.

5.4 CAN LEAD BE HARMFUL TO MY PETS?

Yes, lead contamination also affects animal health. Follow the same protocol listed above to reduce potential pet lead exposure.

6. QUESTIONS RELATED TO SERVICE LINE LETTERS

6.1 WHY DID I RECEIVE A LETTER ABOUT MY SERVICE LINE MATERIAL?

The City developed an inventory of its service lines. Upon review of records the City is not aware of any lead service lines in the service area, there may be galvanized iron service lines with lead components in neighborhoods where the water infrastructure was installed prior to 1960. The City will soon begin field investigation to further update service line inventory. Based on this updated inventory, if the City identifies galvanized service lines, we are required to notify customers annually with letters. Service lines categorized as Galvanized Requiring Replacement (GRR) are for galvanized piping that was or could have been downstream from a lead source. Lead can build up on the interior of the galvanized piping and later release into drinking water even after the original source of lead is replaced. Therefore, water supplied through a GRR service line can potentially increase your likelihood of exposure to lead.

In addition, the City is required to notify customers if their service line material is not verified and remains unknown. Over the next 3 years, we will continue to research service records and conduct field inspections and will notify you if new information is located and the status of your line changes.

6.2 WHAT DO I NEED TO DO TO CHANGE MY SERVICE LINE?

If you want to replace the privately owned portion of the service line, you may contact a plumber and cover the replacement costs. **You must notify the City if you replace the privately owned portion of the service line at coawater@ci.asheboro.nc.us.** They City needs to know about line replacements in order to update our Inventory, and to coordinate potential replacement activities on the City-side.

6.3 I RECEIVED A LETTER STATING I HAVE A GALVANIZED SERVICE LINE. DO I NEED TO REPLACE IT?

The City will replace all the public-owned portions of the service line (water main to the meter) by 2037. While you are not required to replace your service line's private side (from the water meter to your residence), it is highly recommended. The EPA and NC DEQ emphasize that there is no safe level of lead exposure and advise against partial lead service line replacement. Lead pipes can corrode, releasing lead particles into the water supply. Galvanized pipes that have ever been downstream of any lead pipe can adsorb and release lead into the drinking water.

7. REFERENCES

- (1) American Water Works Association. (2014). Communications planning for lead service line replacement programs: A guide for water systems and partners. Retrieved from <https://www.awwa.org/Portals/0/AWWA/Communications/FINALLeadServiceLineCommGuide.pdf>
- (2) U.S. Environmental Protection Agency. (2024). Basic information about lead in drinking water. Retrieved from <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#getinto>
- (3) U.S. Environmental Protection Agency. (2024). EPA's proposed lead and copper rule revisions: Questions and answers. Retrieved May 16, 2024, from <https://www.epa.gov/ground-water-and-drinking-water/epas-proposed-lead-and-copper-rule-revisions-questions-and-answers>

- (4) U.S. Environmental Protection Agency. (2017). Basic information about lead in drinking water.

Retrieved from https://19january2017snapshot.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water_.html#:~:text=These%20non%2Denforceable%20health%20goals,even%20at%20low%20exposure%20levels

- (5) U.S. Environmental Protection Agency. (2023). Lead test kits. Retrieved from

<https://www.epa.gov/lead/lead-test-kits>