

# Lead/Copper Sampling Plan

PWSID AL0001811

Birmingham Alabama VA Medical Center  
700 South 19<sup>th</sup> Street  
Birmingham, AL 35233



*William F. Hayes, MD*  
*for*

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Medical Center Director

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## Lead and Copper Rule (LCR) Summary

Source: Alabama Department of Environmental Management (ADEM)

EPA promulgated the Lead and Copper Rule (LCR) in 1991, and ADEM adopted the rule in 1992. Implementation of this rule is a critical component of ADEM's efforts to protect public health and ensure the safety of our state's drinking water. The following information outlines how the LCR is implemented and identifies ways for the public to find information about the quality of its drinking water.

The LCR has four basic requirements:

1. Require water systems to optimize their treatment system to control corrosion in the distribution system and the customer's plumbing;
2. Determine tap water levels of lead and copper for customers who have lead service lines or lead-based solder in their plumbing system;
3. Rule out the source water as a source of significant lead levels; and
4. If lead action levels are exceeded, the water system is required to take additional actions, which may include:
  - a. Developing and implementing a plan to optimize corrosion control in the finished drinking water;
  - b. Educating their customers about lead and suggesting actions they can take to reduce their exposure to lead through public notices and public education programs;
  - c. Replacing the portions of level service lines under the system's control; and
  - d. Offering to replace lead service lines under their customers' control at an equitable cost to the customer.

The LCR requires water systems to monitor at least every 3 years. Some water systems monitor more frequently. The water system selects the sites based on criteria set out in the rule.

## Lead and Copper Rule (LCR) Summary (cont'd)

Source: Alabama Department of Environmental Management (ADEM)

The LCR prescribes a specific sampling protocol for water systems to utilize for collecting lead and copper samples at a residence or business.

1. Tap monitoring (collecting a water sample from a faucet) for lead and copper shall be the first draw and one liter in volume.
2. The water shall stand motionless in the plumbing system for at least six hours prior to collection. Pre-stagnation flushing shall not be performed.
3. Collection shall be from the cold water kitchen tap or bathroom sink tap from tier 1 sites or from an interior tap typically used for obtaining water for consumption from tier 2 and tier 3 sites.
4. Aerators shall not be removed from taps or cleaned prior to or during the collection of samples.
5. Wide-mouth bottles shall be used to collect samples to allow for a higher flow rate during sample collection which is more representative of the flow that a consumer may use to fill a glass of water.
6. Monitoring may be conducted by the resident after proper instructions and procedures have been provided by the water system.
7. Follow up tap monitoring shall be conducted from the same sites.
8. Should a site no longer be available, an alternate acceptable site may be selected which is in reasonable proximity of the original site.
9. Taps used for monitoring may not include faucets that have point of use or treatment devices installed.

## Lead and Copper Rule (LCR) Summary (cont'd)

Source: Alabama Department of Environmental Management (ADEM)

### EPA Additional Guidance:

EPA published a memo clarifying recommended tap sampling procedure for the LCR on February 29, 2016, to provide recommendations on how public water systems should address the removal of cleaning aerators, pre-stagnation flushing, and bottle configuration for the purpose of the LCR.

More information on the LCR can be found on EPA's website at: <http://www.epa.gov/dwreginfo/lead-and-copper-rule>.

EPA's LCR Quick Reference Guide can be found at: [LCR Quick Reference Guide](#)

EPA's Optimal Corrosion Control Treatment Evaluation Technical Recommendations webpage provides information to help primacy agencies and systems comply with corrosion control treatment (CCT) requirements of the Lead and Copper Rule (LCR), including designation of Optimal Corrosion Control Treatment (OCCT).

Information regarding the Birmingham Alabama VA Medical Center drinking water system can be found at the facility and is also available in ADEM's eFile system. You can also find information at EPA's Enforcement and Compliance History Online (ECHO) web site at: <https://echo.epa.gov/>

## System Information

Birmingham Alabama VA Medical Center  
PWSID AL0001811

System Name: Birmingham Alabama VA Medical Center

PWSID Number: AL0001811

Address: 700 19<sup>th</sup> Street South  
Birmingham, Alabama 35233

Contact: LaSunda Davis, Environmental Engineer  
(205) 933-8101 ext 5544

System Type: NTNC (Non-Transient Non-Community)

Population Served: Approximately 1,500

Water Source: Birmingham Water Works Board

Regulation Agency: Alabama Department of Environmental Management (ADEM)

Primary Laboratory: TTL, Inc.  
Steve Martin  
3516 Greensboro Avenue  
Tuscaloosa, AL 35401  
(205) 345-0816  
(205) 343-0635 fax

Alternate Laboratory: Montgomery Environmental Services Laboratory  
Ginger Taylor  
6000 Richard E. Hanan Drive  
Montgomery, AL 36108  
(334) 206-1723  
(334) 261-1238 fax

# Operator Tap Sample Collection Procedures

Birmingham Alabama VA Medical Center

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Samples are collected as required by the U.S. Environmental Protection Agency and ADEM under the Lead and Copper Rule, and are accomplished through collaboration between the Birmingham Alabama VA Medical Center personnel, contractors and its patients/guests. Sampling is to be performed only by Triple Point Industries, LLC Certified Operators.

Samples are collected from a tap that has not been used for at least 6 hours. To ensure the water has not been used for at least 6 hours, samples are collected early in the morning. Samples are collected from kitchen or bathroom cold-water taps used for drinking water consumption in the past few weeks. Collection procedure is described below.

1. Prior arrangements are made with Medical Center personnel to coordinate the sample collection. Dates are set for sample collection ahead of time.
2. A minimum of 6 hours during which there is no water used from the tap where the sample will be collected and any taps adjacent or close to that tap. Water lines are not to be intentionally flushed before the start of the 6 hour period.
3. Use a kitchen, break room or bathroom cold-water faucet for sampling. Do not collect from faucets utilizing a water softener or point of use filter. Do not remove the aerator prior to sampling.
4. Complete and then review the sample label to include: Sample ID, Time, Date, Location, and collected by.
5. Place the opened sample bottle below the faucet and open the cold water tap as you would do to fill a glass of water.
6. The first draw shall be used to fill the sample bottle to the line marked "1000-mL" and turn off the water.
7. Tightly cap the sample bottle and place the sample in sample collection bag.
8. Samples are submitted for analysis and review. Chain of Custody forms and procedures are used and completed in full by the Certified Operator.

Certified Operator: Jerry W. Campbell

Date: 6-6-16

## Sampling Schedule/Locations

Birmingham Alabama VA Medical Center

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ADEM. Code R. 335-7-11-.04, states that all new community and NTNC water systems shall monitor for lead and copper at the number of established monitoring sites for two consecutive six-month monitoring periods starting the first six-month period the system is in operation. If the Birmingham Alabama VA Medical Center exceeds a lead or copper action level, it shall monitor for lead and copper at the number of established monitoring sites during at least two consecutive six-month compliance periods. The VA Medical Center may reduce monitoring sites and frequency of monitoring to once per year if it receives a written approval from ADEM and has demonstrated satisfactory action levels during two consecutive six-month monitoring periods. All monitoring must be taken from previous sites and must be collected during June, July, August, or September of that year unless the water system receives written approval from ADEM for an alternative monitoring period. After three consecutive years of demonstrating satisfactory action levels, a small or medium water system may reduce monitoring to once every three years. A system with a 90<sup>th</sup> percentile level less than or equal to 0.005 mg/L for lead and 0.65 mg/L for copper for two consecutive six-month periods may reduce monitoring to once every three years.

The number of samples to be collected is based on ADEM. Code R. 335-7-11-.06. This system is a community water system that has a user population of approximately 1,500; therefore a minimum of 20 initial monitoring samples will be collected every six months until a further notification from Alabama Department of Environmental Management (ADEM). Below is a list of the sampling locations at the Birmingham Alabama VA Medical Center. The sampling locations are chosen from representative sites in the distribution system. Lead and Copper Sampling is to be performed bi-annually (January and July) on the 2<sup>nd</sup> Sunday of the Month. Lead and Copper sample results are posted at the facility a minimum of 10 days. Certification of posting is submitted to ADEM.

<u>Floor</u>	<u>Room Number</u>
Blue Clinic:	1517, 1519, 1521, 1526, 1528
Red Clinic:	1334, 1336, 1340, 1358, 1360
6 <sup>th</sup> Floor:	6325
7 <sup>th</sup> Floor:	7106, 7111, 7113
8 <sup>th</sup> Floor A Wing:	8131, 8136, 8145
8 <sup>th</sup> Floor B Wing:	8202A, 8227, 8231

## Calculating the 90<sup>th</sup> Percentile

Birmingham Alabama VA Medical Center  
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The 90<sup>th</sup> percentile is calculated as follows, based on the collection of 20 samples: (See Summary Form on page 10)

- Samples are ranked in order of concentration (mg/l) from lowest to highest.
- The sample with #18 ranking is the 90<sup>th</sup> percentile.

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If 6 or more samples are collected, the 90<sup>th</sup> percentile will be collected as follows:

- Rank samples in order of concentration (mg/l) from lowest to highest.
- Take the total number of samples collected and multiply by 0.90. This result will be the sample to record.
- If the number is not a whole number, round to the nearest whole number. (12.7 would be rounded to 13.0, 12.2 would be rounded to 12.0.)
- If the number is exactly in the middle of two whole numbers, round to the nearest even number.

## Action Level Exceedance

ADEM will be notified upon any exceedance of lead/copper levels in accordance with ADEM. Code R. 335-7-11-.11. Public Education materials will be distributed to deliver the information to the public including results of lead and copper monitoring conducted at the Birmingham Alabama VA Medical Center. The results will be posted at the Medical Center within 30 days of receipt of the results by the water system. The notification will include explanation of the health effects of lead, steps consumers can take to reduce exposure to lead, the water's system contact information, maximum contaminant level goal (MCLG), the action level (AL) for lead and the definition of MCLG an AL.

# 90<sup>th</sup> Percentile Summary Form

Birmingham Alabama VA Medical Center  
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Results of lead monitoring:

	Date Collected	Sample Location	Lead Result
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
*18			
19			
20			

\*90<sup>th</sup> percentile for lead: \_\_\_\_\_

# 90<sup>th</sup> Percentile Summary Form

Birmingham Alabama VA Medical Center  
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Results of copper monitoring:

	Date Collected	Sample Location	Lead Result
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
*18			
19			
20			

\*90<sup>th</sup> percentile for copper: \_\_\_\_\_

# Birmingham Alabama VA Medical Center

## Consumer Notification of Lead/Copper Tap Monitoring Results

This letter is to report the lead and copper results from the samples collected at our facility on (date).

Contaminant	Action Level	Unit of Measurement	90 <sup>th</sup> percentile*	Compliance Violation? (YES or NO)
Lead	0.015	mg/l		No
Copper	1.3	mg/l		No

A complete list of sampling locations and results is attached to this notice.

Under the authority of the Safe Drinking Water Act, the Environmental Protection Agency (EPA) set the Action Level for lead in drinking water at 0.015 mg/l (milligrams per liter) and the Action Level for Copper at 1.3 mg/l. The Action Level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

### Important Health Information about Lead

Utilities must ensure that water from the customer's tap does not exceed the Action Level for lead in at least 90 percent of the locations sampled (90<sup>th</sup> percentile value). Because lead may pose serious health risks, the EPA also set a Maximum Contaminant Level Goal (MCLG) for lead of zero. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Some individual locations may have high lead concentrations while the 90<sup>th</sup> percentile value for the entire facility is below the Action Level. These individual site lead levels may be due to conditions unique to the individual location, such as the presence of lead solder or brass faucets, fittings and valves that may contain lead. Our staff strives to keep the corrosivity of our water as low as possible (corrosive water can cause lead to leach from plumbing materials that contain lead).

Additionally, there are actions you can take to reduce your exposure. We strongly urge you to review the enclosed Fact Sheet and take the steps listed to reduce your exposure to lead in drinking water.

If you have any questions, contact \_\_\_\_\_ at \_\_\_\_\_ (phone).

## Fact Sheet: LEAD IN DRINKING WATER

### Important Information on How to Protect Your Health

Lead is a common metal that has been in many consumer products but is now known to be harmful to human health if ingested or inhaled. It can be found in lead-based paint, air, soil, household dust, food, some types of pottery, and drinking water. Lead is rarely found in natural sources of water such as rivers, lakes, wells or springs.

#### **What Are The Health Effects of Lead?**

When people come in contact with lead, it may enter their bodies and accumulate over time, resulting in damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Lead in water can be a special problem for infants, whose diets may be mostly liquids, such as baby formulas or concentrated juices mixed with water. Smaller bodies can absorb lead more rapidly than bigger ones, so amounts of lead that won't hurt an adult can be very harmful to a child and scientists have linked the effects of lead on the brain with lowered IQ in children. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. Adults who drink this water over many years could develop kidney problems or high blood pressure.

#### **What Are The Sources of Lead?**

The primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated residential soil. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. If you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood.

#### **What Can I Do To Reduce Exposure to Lead in Drinking Water?**

Lead may work its way into drinking water after the water entered the distribution system and is on its way to consumers taps. This usually happens through the corrosion of materials containing lead in the plumbing. These materials include brass faucets, lead solder on copper pipes, lead pipes, or lead service lines connecting the water main to the inside plumbing. Lead pipes are no longer installed for service lines or in household plumbing and lead solder has been outlawed in Virginia since 1985.

There are several steps you can take to reduce your exposure to lead in drinking water. These include:

1. **Run your water to flush out lead.** If water hasn't been used for several hours, allow the water to run at the tap for 15-30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This flushes lead-containing water from the pipes. The water you run from drinking water taps does not have to be wasted. You can use this water for cleaning purposes or for watering plants. You may want to keep a container of drinking water in your refrigerator, so you don't have to run water every time you need it.
2. **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap as lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
3. **Do not boil water to remove lead.** Boiling water will not reduce lead.
4. **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact the National Sanitation Foundation at 800-NSF-8010 or [www.nsf.org](http://www.nsf.org) for information on performance standards for water filters. If you choose to install a lead removal filter, be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
5. **Get your child tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

6. **Identify if plumbing fixtures contain lead.** New brass faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. Visit the National Sanitation Foundation Web site at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures.

**For More Information**

For more information on reducing lead exposure and the health effects of lead, visit EPA's web site at [www.epa.gov/lead](http://www.epa.gov/lead), call the National Lead Information Center at 800-424-LEAD, call your water system, or contact your health care provider.

# Water System Materials Inventory

Birmingham Alabama VA Medical Center

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The VA specification for Facility Water Distribution Systems, Section 22 11 00, establishes requirements for domestic water systems, including piping, equipment and all necessary equipment in VA facilities. Section 2.1 of the specification states the following: "Material or equipment containing a weighted average of greater than 0.25 percent lead are prohibited in any potable water system intended for human consumption, and shall be certified in accordance with NSF 61 or NSF 372. Endpoint devices used to dispense water for drinking shall meet the requirements of NSF 61, Section 9." To the best of our knowledge, the Birmingham VA Medical Center was constructed with materials that meet the VA specification for Facility Water Distribution Systems.

## Contacts

VA Medical Center  
PWSID AL0001811

Name	Title	Phone
Thomas C. Smith, III, FACHE	Medical Center Director	(205) 933-4515
LaSunda Davis	Environmental Engineer	(205) 933-8101 x5544
Terry W. Campbell	Operator	(205) 328-0808
William M. Reece	Operator	(205) 328-0808