



County of Albemarle
COMMUNITY DEVELOPMENT DEPARTMENT

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BTEX TESTING/LUST LAYER

For a new structure containing habitable space to be located within an active contamination area and to be served by a private ground well water as the primary potable water supply, water testing is required.

The water shall be tested for the following contaminants:

- Benzene
- Toluene
- Ethylbenzene
- Xylenes

Water Testing Standards

Water testing kits may be obtained from many local pharmacies. However, all sampling and testing must comply with Albemarle County Code §5-503(C).

Samples shall be collected and analyzed using appropriate testing methods by one of the following:

- The Virginia Department of Environmental Quality (DEQ) or
- A laboratory certified by the Commonwealth of Virginia to perform these services

Please Note:

- Consolidated Laboratories may not be used for BTEX testing
- All testing costs are the responsibility of the landowner.

Determining Whether a Parcel is in a BTEX Zone

To determine if the parcel is located within a "BTEX Zone" please utilize [Albemarle County's GIS System](#).

1. Open Albemarle County's GIS System
2. Acknowledge any system update notices by selecting **OK**
3. Review and accept the terms and conditions by selecting the checkbox, then select **OK**.
4. On the right-hand side of the screen enter the address or Parcel ID in the search box "**Find address or place**".
 - a. If the Parcel ID is being used, do not enter any dashes
 - b. Enter the whole number (including all the zeros)
5. Select the Magnifying Glass icon to search
6. Choose the correct parcel from the drop-down menu that appears
7. The selected parcel will be highlighted in Blue
8. At the top left corner of the map, locate the row of icons.
9. Select the first icon labeled **Map Layers**.
10. Scroll through the list to find **LUST Buffers**.
11. Select the **LUST Buffers**.
12. The map will automatically refresh

If any portion of the selected parcel is located within a red/orange circle (BTEX Zone), testing is required.

Sec. 5-500 – Purpose.

The purpose of this article is to protect the public health, safety, and welfare in areas of the County where there has been a petroleum release or a discharge that has been confirmed by the Virginia Department of Environmental Quality that remains an active contamination area by requiring that private ground water wells in these areas be tested for petroleum contamination. The tests will determine the extent of the contamination, if any, and ensure that any new wells satisfy existing federal or state drinking water quality standards for the contaminants.

In support of this purpose, the Board of Supervisors finds:

A. *Unsafe drinking water.* The release or discharge of petroleum from leaking underground storage tanks may pollute ground water and, at high enough levels, these pollutants may render water unsuitable for drinking and may cause adverse effects on the public health, safety and welfare.

B. *Adverse impacts of new private ground water wells.* Establishing new private ground water wells in the immediate area of a contamination plume could alter the conditions of existing contamination plumes and draw contaminants into areas that are currently free from contamination. (§ 5-500, [Ord. 05-5\(1\)](#), 5-4-05; [Ord. 18-5\(1\)](#), 3-14-18)

State Law reference— Virginia Code § [32.1-176.5](#).

Sec. 5-501 – Definitions

The following definitions apply to this article:

Active contamination area means those lands within the area identified by the Virginia Department of Environmental Quality ("VDEQ") to be contaminated such that, in its judgment, the contamination poses a risk to human health and the environment and warrants corrective action or remediation, and those lands within 2,000 feet of the contaminated area determined by VDEQ to be at risk for contamination.

MCL means the maximum contaminant level, which is the highest level of a contaminant that is allowed in drinking water. The units are expressed in milligrams per liter (mg/L); milligrams per liter are equivalent to parts per million.

(§ 5-501, [Ord. 18-5\(1\)](#), 3-14-18)

State Law reference— Virginia Code § [32.1-176.5](#).

Sec. 5-502 - Applicability.

This article applies to each applicant for a building permit for a structure that will be located within an active contamination area and will be served by a private ground water well as the primary potable water supply.

(§ 5-501, [Ord. 05-5\(1\)](#), 5-4-05; § 5-502, [Ord. 18-5\(1\)](#), 3-14-18)

State Law reference— Virginia Code § [32.1-176.5](#).

Sec. 5-503 - Well testing and reporting.

Each applicant for a building permit to which this article applies shall have the well tested as provided in this section before a building permit for the structure may be issued by the County:

A. *Contaminants to be tested.* The tests shall determine whether the following volatile organic compounds are present in the water: Benzene, Toluene, Ethylbenzene, and Xylenes.

B. *Applicable standards.* Each contaminant identified in subsection (A) shall be tested for compliance with the maximum contaminant level established for that contaminant under the federal Safe Drinking Water Act, as follows:

1. Benzene: 0.005 MCL (mg/L).

2. Toluene: 1 MCL

(mg/L).

3. Ethylbenzene: 0.7

MCL (mg/L).

4. Xylenes (total): 10 MCL (mg/L).

C. *Sampling and testing methods and services.* Samples shall be taken and tests shall be performed using appropriate testing methods by either the Virginia Department of Environmental Quality or by a laboratory certified by the Commonwealth of Virginia to perform the services. No tests shall be conducted by Consolidated Laboratories. The cost of the tests shall be paid by the landowner.

D. *Reporting test results.* The testing laboratory shall notify the landowner of the test results in a written report.

(§ 5-502, [Ord. 05-5\(1\)](#), 5-4-05; § 5-503, [Ord. 18-5\(1\)](#), 3-14-18)

State Law reference— Virginia Code § [32.1-176.5](#).

Sec. 5-504 - Building permit; withholding.

Each applicant for a building permit for a structure to be served by a private ground water well as the primary potable water supply within an active contamination area shall present the report containing the test results required by County Code [§ 5-503](#) before a building permit for the structure is issued by the

County:

A. *No contaminants detected.* The County shall issue the building permit if there are no test contaminants detected at or below the federal Safe Drinking Water Act standards identified in County Code [§ 5-503\(B\)](#), provided that all other applicable requirements are satisfied.

B. *Contaminants detected; exceed applicable standards.* The County shall not issue a building permit if one or more test contaminants are detected and they exceed the federal Safe Drinking Water Act standards identified in County Code [§ 5-503\(B\)](#), unless and until the applicant has identified and provided an approved alternative primary potable

water supply. (§ 5-503, [Ord. 05-5\(1\)](#), 5-4-05; § 5-504,

[Ord. 18-5\(1\)](#), 3-14-18)

State Law reference— Virginia Code § [32.1-176.5](#).