

## **Frequently Asked Questions**

### **Well testing near coal ash ponds**

***Why is the N.C. Department of Environment and Natural Resources (DENR) overseeing testing of private and public water supply wells near coal ash storage ponds?***

Testing water supply wells is part of the N.C. Department of Environment and Natural Resources' (DENR) efforts to protect public health and the environment and determine the extent of groundwater contamination at the state's 32 coal ash ponds.

***How will test results be used?***

The test results will be used to inform well owners about the quality of the water they are using and help state officials produce a risk-based schedule that prioritizes the closure of all 32 ash ponds, as called for in the Coal Ash Management Act of 2014.

***Which wells are being tested?***

During the first round of tests, letters from DENR are being mailed to residents with private water supply wells and public drinking water supply wells within 1,000 feet of a coal ash storage pond. Subsequent testing will be conducted farther away from the coal ash ponds, as necessary.

***Are all wells within a certain distance of a coal ash storage pond being tested?***

No. The N.C. Division of Water Resources in December 2014 invited residents with water supply wells near Duke Energy's coal-fired electricity generating facilities to participate in a program to have their wells tested. Residents have the option of whether they wish to have their wells tested.

***How is well testing being paid for?***

All well testing conducted under the Coal Ash Management Act will be paid for by Duke Energy.

### ***Can well owners choose which company tests their wells?***

Yes well owners who participated during the first round of tests initiated in December were able to choose which company conducted the testing. Each well owner was asked by DENR to choose a contract laboratory to do the testing from an approved list of laboratories provided by the state Division of Water Resources.

However, the list of laboratories had to be scaled back when state officials added another constituent called hexavalent chromium to the list of those for which we were conducting testing. When hexavalent chromium was added to the tested parameters, the options for laboratories was reduced to two labs because only those labs are able to conduct testing that will achieve the results DHHS needs to complete its health risk evaluation.

### ***How did DENR choose what each well should be tested for?***

As outlined in the Coal Ash Management Act of 2014, DENR required that wells be tested for heavy metals and other constituents typically found in coal ash, the waste produced when coal is burned to create electricity.

Many constituents that were tested in the public and private drinking water wells may be naturally occurring or unrelated to coal ash ponds.

### ***What constituents were included in the testing?***

Groundwater samples from supply wells are being collected and tested for constituents associated with coal ash, including: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, cobalt, total chromium, hexavalent chromium, copper, iron, lead, magnesium, manganese, molybdenum, mercury, nickel, potassium, selenium, sodium, strontium, thallium, vanadium, zinc, chloride, sulfate, pH, alkalinity, bicarbonate, carbonate, and total dissolved solids.

### ***How is the state notifying people of the well test results?***

DENR is sending by certified mail test results to those who had their wells tested. The test results also include a health risk evaluation conducted by the N.C. Department of Health of Human Services, and, as necessary, potential well treatment options to remove or reduce contaminants from well water.

***How is the state determining the quality of the water in a well?***

The sample results are being compared to the state standards that are calculated to protect the groundwater, which well owners commonly use for drinking, bathing or cooking.

***Are there different standards used to determine water quality in North Carolina?***

Yes. There are different standards used to determine the quality of the water depending on whether you receive water from a municipal water system that supplies water to multiple people or if you rely on a well where water comes from the ground and supplies individual homes.

For example, the federal Safe Drinking Water Act authorizes standards used to regulate public drinking water supplies. A separate standard for private and public wells is the North Carolina groundwater, or 2L, standards.

***Can you explain the basic differences between the state and federal drinking water standards?***

Federal maximum contaminant levels (MCLs), which are authorized by the Safe Drinking Water Act, are the drinking water standards that regulate public drinking water supplies. North Carolina has developed a separate standard that protects the state's groundwater resources and is used to regulate existing private wells.

Federal standards are set as maximum levels not to be exceeded for certain constituents, which include metals and organic compounds. The maximum "do not exceed" level may not always represent the most health protective standard. Federal standards apply to public water supplies and take into account a vast array of inputs, including the cost and technology available to filter water to a certain level.

North Carolina groundwater standards are set by 15A NCAC 02L and are known as the 2L standards. They are calculated to protect the groundwater resource and human health and are, in most cases, more health protective than the federal drinking water standards. For example, the federal standard for total chromium (developed by the Environmental Protection Agency) is 100 parts per billion, while the North Carolina 2L standard for total chromium in groundwater is 10 parts per billion.

For the testing conducted near the coal ash ponds, the Coal Ash Management Act directs DENR to use the state's 2L groundwater standards.

***Were there any metals or constituents identified for testing that do not have a state groundwater standard?***

Yes. In addition to the constituents for which the state has a groundwater standard, some constituents DENR tested for have an Interim Maximum Allowable Concentration (IMAC). This means that studies have estimated their potential impact to human health but that a groundwater standard has not been established.

For other constituents, there is no federal or state standard or IMAC. In those specific cases, the N.C. Department of Health and Human Services has developed health screening levels and measured the health of the water against the level of those specific metals or other constituents.

***What did the state do with the well test results?***

After DENR received test results, those results were sent to the N.C. Department of Health and Human Services. Staff in the N.C. Department of Health and Human Services then conducted a health risk evaluation of the well sampling results to determine if the water is safe for drinking, bathing and other uses. The results of the sampling and the health risk evaluation from the Department of Health and Human Services are being sent to the individual well owners along with a letter from DENR discussing possible next steps based on information specific to individual wells.

***Who should individual well owners contact if they have questions about the recommendations in the health risk evaluation or well sampling results?***

Please contact staff in the N.C. Department of Health and Human Services' Division of Public Health at 919-707-5000. Media inquiries should be directed to the Department of Health and Human Services' media line, 919-855-4840.

For questions about well sampling, contact DENR's Division of Water Resources at 919-807-6464 or the agency's customer service hotline, 877-623- 6748. For media inquiries contact the Office of Public Affairs at 919-707-8626, 919-707-8602 or 919-707-9014 or 919-707-9033.

***In general, what do the well test results show?***

As of April 28, 2015, 171 samples have been collected from 144 homes. Of the 171 samples collected (which included split samples and samples taken from multiple wells on some properties), the following includes the number and type of exceedances in water supply wells near different Duke Energy coal ash storage facilities:

**Allen Steam Station** (Belmont, N.C.)

Iron – 13

Vanadium – 57

pH – 31

**Asheville** (Asheville, N.C.)

Sulfate – 1

TDS – 1

pH – 4

**Belews Creek** (Stokes County, N.C.)

Iron – 3

Vanadium – 3

pH – 1

**Buck** (Salisbury, N.C.)

Antimony – 1

Iron – 10

Cobalt – 1

Lead – 1

Manganese – 1

Vanadium – 28

Zinc – 2

Sulfate – 1

TDS – 1

pH – 19

**Cliffside** (Cliffside, N.C.)

Cobalt – 2

Iron – 7

Manganese – 2

Vanadium – 2

**Lee** (Goldsboro, N.C.)

Cobalt – 2

Manganese – 2

pH – 4

**Marshall** (Sherrills Ford, N.C.)

Cobalt – 1

Iron – 8

Lead – 2

Manganese – 4

Vanadium – 17

pH – 11

**Mayo** (Roxboro, N.C.)

Iron – 2

Lead – 2

Vanadium – 1

pH – 2

**Roxboro** (Semora, N.C.)

Manganese – 1

Vanadium – 3

pH – 2

**Sutton** (Wilmington, N.C.)

Cobalt – 5

Iron – 3

Manganese – 6

Vanadium – 2

pH – 10

**Weatherspoon** (Lumberton, N.C.)

pH – 1

*Can I assume my water is safe if the tests come back with no exceedences of state water standards?*

DENR is testing for constituents associated with coal ash contamination. However, this is not a comprehensive test of your well water. To learn more about having

your private well tested, go to [www.TestYourWell.nc.gov](http://www.TestYourWell.nc.gov), a website provided by the N.C. Department of Health and Human Services.

The most important thing private well owners can do to ensure the safety of their drinking water is regular water testing.

***Will my well test results be available as public information?***

Yes. All testing that is conducted during this investigation is considered public information.

***The well testing conducted so far has shown some combination of exceedences of health risk levels or state groundwater standards. What does that mean for well owners?***

The N.C. Department of Health and Human Services conducted a health risk evaluation for each individual well owner, based on the test results for this initiative. The Department of Health and Human Services made recommendations to individual well owners about whether they should continue using their well water, based on those results.

DHHS' health risk evaluations are being mailed to residents along with potential well treatment options to remove or reduce contaminants from well water if needed.

***Will well owners be responsible for paying for alternative water supplies?***

DENR will investigate the source of any constituents that exceed groundwater standards. If DENR determines that groundwater standards in a well have been exceeded and that a coal ash pond is the source of that exceedence, DENR will require Duke Energy to provide the residents with an alternative water supply. This is outlined in the Coal Ash Management Act of 2014.

***How will DENR determine the source of a metal or other constituent that did not meet groundwater standards?***

DENR will determine the source of a constituent that did not meet groundwater standards using two methods. The state agency will use information from the groundwater assessment plans Duke Energy was required to produce as part of the

Coal Ash Management Act. These plans will allow DENR to model the horizontal and vertical extent of the groundwater contamination at the coal ash facilities, and will therefore allow the department to determine if offsite wells have been impacted by these plumes. Information on the groundwater assessment plans can be found at DENR's website at:

[http://portal.ncdenr.org/web/wq//coal\\_ash\\_gw\\_assessment\\_plans](http://portal.ncdenr.org/web/wq//coal_ash_gw_assessment_plans). The state agency will also conduct its own background sampling to determine natural conditions in certain locations that have the same geological profile as the drinking water wells near the coal ash storage facilities.

***Will there be more testing farther away from the coal ash storage ponds?***

Yes. DENR plans to oversee testing 1,500 feet from the compliance boundaries of the coal ash storage ponds. As of April 29, 2015, DENR staff members are identifying the wells where additional testing farther from the ash ponds should be conducted.

***Why are state officials conducting testing farther from the coal ash storage ponds?***

There are a few reasons DENR is going to request that testing be conducted farther away from the coal ash storage ponds. One reason is to see what naturally occurring levels of different metals or other constituents are normal for the area. That will help us to determine if the coal ash storage ponds are influencing nearby water supply wells.

If DENR determines that groundwater standards in a well have been exceeded and that a coal ash pond is the source of that exceedence, DENR will require Duke Energy to provide the residents with an alternative water supply. This is outlined in the Coal Ash Management Act of 2014.

In addition, we want to make sure we're conducting as much testing as is necessary to adequately protect public health and the sources of drinking water for people living near the coal ash storage ponds.

The extent of the contamination will help inform the state develop a risk-based schedule that prioritizes the schedule for closing all 32 ash ponds, as called for in the Coal Ash Management Act of 2014.



