

Summary of Well Testing Near Coal Ash Ponds

April 30, 2015 (figures below subject to change)

Explanation

Testing water supply wells is part of the state's efforts to protect public health and the environment and determine the extent of groundwater contamination at the state's 32 coal ash ponds.

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.

During the first round of tests, testing is being conducted for people who use 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. Well owners are able to choose from a selection of state-certified laboratories to sample water from their wells. All well testing conducted under the Coal Ash Management Act will be paid for by Duke Energy.

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.

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.

The N.C. Department of Environment and Natural Resources 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, an explanation of potential well treatment options to remove or reduce contaminants from well water.

There are different standards used for determining the quality of the water, based on the origin of the water supply. There is a state 2L groundwater standard used for public and private wells, a federal standard used to regulate public drinking water supplies, and an interim standard the state uses when a groundwater standard has not been developed. For other constituents, there is no federal or state standard or Interim Maximum Allowable Concentration (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. 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 Department of Health and Human Services sent health risk evaluations to all well owners regardless of whether or not they received a recommendation not to drink their water.

The following list includes a summary of the wells tested as of the date indicated below. It also includes the test results the state has received and the number of wells where exceedences of state groundwater (2L) standards or an interim standard were found. It does not include the data on health risk evaluations or the health screening levels developed by the Department of Health and Human Services. The health information from DHHS is included on the second list.

For a list of Frequently Asked Questions related to the well testing, go to:

http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=24814087&name=DLFE-112740.pdf.

Summary of wells tested (as of April 30, 2015)

Totals

- 303 wells tested
- 163 wells with results back to the state
- 152 wells exceeded a state 2L standard or an IMAC

Allen Steam Station (Belmont, N.C.)

- 117 wells tested to date
- 68 wells with results back
- 66 exceeded a 2L standard or IMAC
- Exceedances for: Iron, Vanadium, pH

Asheville Plant (Asheville, N.C.):

- 8 wells tested to date
- 4 wells with results back
- 4 wells exceeded a 2L standard
- Exceedances for: pH, total suspended solids, Sulfate

Belews Creek Steam Station (Belews Creek, N.C.)

- 11 wells tested to date
- 7 wells with results back
- 4 wells exceeded a 2L standard or IMAC
- Exceedances for: Iron, Vanadium, pH

Buck Steam Station (Salisbury, N.C.)

- 60 wells tested to date
- 35 wells with results back
- 34 wells exceeded a 2L standard or IMAC
- Exceedances for: Iron, Vanadium, pH

Cliffside Steam Station (Mooresboro, N.C.)

- 21 wells tested
- 10 wells with results back
- 8 exceeded a 2L standard or IMAC
- Exceedances for: Cobalt, Iron, Manganese, Vanadium

H.F. Lee Plant (Goldsboro, N.C.)

- 14 wells tested
- 3 wells with results back
- 2 exceeded a 2L standard
- Exceedances for: Cobalt, Manganese, pH

Marshall Steam Station (Terrell, N.C.)

- 32 wells tested
- 20 wells with results back
- 19 exceeded a 2L standard or IMAC
- Exceedances for: Cobalt, Iron, Lead, Manganese, Vanadium

Mayo Steam Station (Roxboro, N.C.)

- 5 wells tested to date
- 1 well with results back
- 1 well exceeded a 2L standard or IMAC
- Exceedances for: Iron, Lead, Vanadium, pH

Roxboro Steam Station (Semora, N.C.)

- 10 wells tested to date
- 3 wells with results back
- 3 wells exceeded a 2L standard or IMAC
- Exceedances for: Manganese, Vanadium, pH

Sutton Plant (Wilmington, N.C.)

- 19 wells tested to date
- 11 wells with results back
- 10 exceeded a 2L standard or IMAC
- Exceedances for: Cobalt, Iron, Manganese, Vanadium, pH

Weatherspoon Plant (Lumberton, N.C.)

- 6 wells tested to date

- 1 well with results back
- 1 well exceeded the 2L standard
- Exceedances for: pH

Summary of Health Risk Evaluations produced by the N.C. Department of Health and Human Services

Totals

- Total wells with letters and health risk evaluations: 146
- HREs with okay recommendation: 9
- Wells with “Do Not Drink” HREs from DHHS: 123
- DHHS resample recommendations: 92

Allen Steam Station (Belmont, N.C.)

- Total wells with letters and health risk evaluations: 59 (all are private wells)
- HREs with okay recommendation: 0
- Wells with “Do Not Drink” HREs from DHHS: 57
 - 40 for vanadium only
 - 7 for chromium 6 and vanadium
 - 8 for iron and vanadium
 - 2 for vanadium, chromium 6 and iron
- DHHS resample recommendations: 45 for chromium 6 and inorganics; 0 for lead and copper.

Asheville Plant (Asheville, N.C.)

- Total wells with letters and HREs: 4 (private)
- HREs with okay recommendation: 2
- Wells with “Do Not Drink” HREs from DHHS: 0
- DHHS resample recommendations: 2 (both for chromium 6 and inorganics)

Belews Creek Steam Station (Belews Creek, N.C.)

- Total wells with letters and HREs: 6 (private)
- HREs with okay recommendation: 2
- Wells with “Do Not Drink” HREs from DHHS: 3 (1 for vanadium only and 2 for iron only)
- DHHS resample recommendations: 2 for both chromium 6 and inorganics

Buck Steam Station (Salisbury, N.C.)

- Total wells with letters/HREs: 32 private; 3 public
- HREs with okay recommendation: 1
- Wells with “Do Not Drink” HREs from DHHS: 32
 - 12 for vanadium only
 - 5 for vanadium and iron

- 9 for chromium 6 and vanadium
- 1 for vanadium and lead
- 1 for manganese, sodium and sulfate
- 1 for zinc
- 1 for iron
- 1 for chromium 6, vanadium and iron
- 1 for cobalt, vanadium and iron
- DHHS resample recommendations: 13 for chromium 6 and inorganics
- 1 for lead and copper

Cliffside Steam Station (Mooresboro, N.C.)

- Total wells with letters/HREs: 10 (private)
- HREs with okay recommendation: 0
- Wells with “Do Not Drink” HREs from DHHS: 7
 - 1 for vanadium only
 - 1 for vanadium and iron
 - 3 for iron
 - 2 for cobalt, iron and manganese
- DHHS resample recommendations: 8 for chromium 6 and inorganics

H.F. Lee Plant (Goldsboro, N.C.)

- Total wells with letters/HREs: 3 (private)
- HREs with okay recommendation from DHHS: 0
- Wells with “Do Not Drink” HREs from DHHS: 3
 - 1 for cobalt
 - 1 for chromium 6
 - 1 for cobalt and manganese

Marshall Steam Station (Terrell, N.C.)

- Total wells with letters/HREs: 19 private; 1 public
- HREs with Okay recommendation from DHHS: 0
- Wells with “Do Not Drink” HREs from DHHS: 17
 - 9 for vanadium only
 - 3 for iron and vanadium
 - 1 for lead and vanadium
 - 1 for chromium 6 and vanadium
 - 3 for iron, manganese and vanadium
- DHHS resample recommendations: 17 (16 for chromium 6 and inorganics; 1 for lead and copper)

Mayo Steam Station (Roxboro, N.C.)

- Total wells with letters/HREs: 1
- Wells with “Do Not Drink” HREs from DHHS: 1 (for lead, iron and vanadium)
- DHHS resample recommendations: 3 (1 for chromium 6 and inorganics; 1 for lead and copper).

(NOTE: A separate notation stated that high sodium could be an issue for people with

sodium health issues).

Roxboro Steam Station (Semora, N.C.)

- Total wells with letters/HREs: 3
- HREs with Okay recommendation from DHHS: 0
- Wells with “Do Not Drink” HREs from DHHS: 3 (2 for vanadium; 1 for chromium 6, manganese and vanadium)
- DHHS resample recommendations: 1 for chromium and inorganics;

(NOTE: A separate notation stated that high sodium could be an issue for people with sodium health issues).

Sutton Plant (Wilmington, N.C.)

- Total wells with letters/HREs: 2 private and 2 public
- HREs with Okay recommendation from DHHS: 3
- Wells with “Do Not Drink” HREs from DHHS: 0
- DHHS resample recommendations: 1 chromium 6 and inorganics

Weatherspoon Plant (Lumberton, N.C.)

- Total wells with letters/HREs: 1
- HREs with Okay recommendations from DHHS: 1
- Wells with “Do Not Drink” HREs from DHHS: 0

Contacts:

For information on the health risk evaluations, contact the DHHS media line at 919-855-4840. Contacts include Kendra Gerlach, Kendra.Gerlach@dhhs.nc.gov, or Alexandra Lefebvre, Alexandra.Lefebvre@dhhs.nc.gov.

For information on well testing not related to health evaluations, contact the DENR Office of Public Affairs at 919-707-8626, 919-707-8602, 919-707-9014 or 919-707-9033. Contacts include Drew Elliot, Drew.Elliot@ncdenr.gov, Jamie Kritzer, Jamie.Kritzer@ncdenr.gov, Susan Massengale, Susan.Massengale@ncdenr.gov or Sarah Young, Sarah.Young@ncdenr.gov.