

## **Summary of well testing near coal ash ponds**

The N.C. Department of Environment and Natural Resources, or DENR, updated through July 7, individual results from testing conducted at public and private water supply wells near Duke Energy's 14 coal-fired electrical generating facility boundaries.

### **Spreadsheet updated**

The updated spreadsheet provides a detailed account of the results at each individual well where tests have been conducted, and the state has confirmed that the well owners have received the results of those tests. The spreadsheet compares the individual results of testing for coal ash-related metals and constituents with state and federal water quality thresholds, if such a threshold exists. The spreadsheet includes an additional 58 results for wells tested since the previous spreadsheet was posted June 11. These specific well test results include 20 additional wells and 38 resampling results since the June 11 update.

### **Well test results summary updated**

DENR also updated its summary of well test results through July 7. The summary of well test results includes information on 27 additional wells since the June 11 report. The summary includes all results sent back to DENR, whereas the spreadsheet includes only results where well owner receipt has been confirmed. Thus, the summary numbers and the spreadsheet numbers are different.

Additionally, 42 resampling results have been reported for wells that previously received resample recommendations from the N.C. Department of Health and Human Services, or DHHS. These well results are listed on the spreadsheet in addition to the well's original sample results and are identified with an "R" at the end of the identification of each well owner.

### **Health risk evaluations summary updated**

DENR has updated the number of health risk evaluations that were produced by DHHS and sent them to homeowners along with the well test results. The updated summary includes information on 327 health risk evaluations that have been received by well owners.

### **How to interpret the results (below)**

The bold number in brackets – for example (+1) - indicates the numbers added since the initial figures were made public June 11.

### **Summary of wells tested (as of July 7, 2015)**

#### Totals

- 446 wells identified for possible testing (+8)
- 285 wells with results back to the state (+43)
- 265 wells exceeded a state groundwater, or 2L, standard or an interim standard known, or IMAC (+41)

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

- 143 wells identified to date (+2)
- 109 wells with results back
- 105 exceeded a state 2L standard or IMAC

- 19 retest results reported
  - Exceedances for: Antimony, Thallium, Zinc, Cobalt, Iron, Vanadium, Sulfate, pH
- Asheville Plant (Asheville, N.C.)
- 14 wells identified to date
  - 4 wells with results back
  - 4 wells exceeded a state 2L standard
  - Exceedances for: pH, total dissolved solids, Sulfate
- Belews Creek Steam Station (Belews Creek, N.C.)
- 27 wells identified to date (+3)
  - 8 wells with results back
  - 6 wells exceeded a state 2L standard or IMAC
  - Exceedances for: Iron, Vanadium, pH
- Buck Steam Station (Salisbury, N.C.)
- 102 wells identified to date (+2)
  - 74 wells with results back (+29)
  - 72 wells exceeded a state 2L standard or IMAC (+28)
  - 9 retest results reported
  - Exceedances for: Antimony, Cobalt, Chromium, Lead, Manganese, Zinc, Sulfate, Iron, Vanadium, pH, Total Dissolved Solids
- Cliffside Steam Station (Mooresboro, N.C.)
- 30 wells identified
  - 22 wells with results back (+5)
  - 14 exceeded a state 2L standard or IMAC (+4)
  - 3 retest results reported
  - Exceedances for: Cobalt, Iron, Manganese, Vanadium, pH
- H.F. Lee Plant (Goldsboro, N.C.)
- 35 wells identified (+1)
  - 11 wells with results back (+1)
  - 10 exceeded a state 2L standard (+1)
  - Exceedances for: Cobalt, Manganese, Vanadium, pH
- Marshall Steam Station (Terrell, N.C.)
- 46 wells identified
  - 33 wells with results back (+7)
  - 32 exceeded a state 2L standard or IMAC (+7)
  - 5 retest results reported
  - Exceedances for: Cobalt, Iron, Lead, Manganese, Vanadium, pH
- Mayo Steam Station (Roxboro, N.C.)
- 6 wells identified to date
  - 2 wells with results back
  - 2 wells exceeded a 2L standard or IMAC
  - Exceedances for: Iron, Lead, Vanadium, Manganese, pH
- Roxboro Steam Station (Semora, N.C.)
- 14 wells identified to date
  - 7 wells with results back
  - 6 wells exceeded a state 2L standard or IMAC
  - 3 retest results reported

- Exceedances for: Manganese, Vanadium, pH, Iron, Chloride, Total Dissolved Solids  
Sutton Plant (Wilmington, N.C.)

- 21 wells identified to date
- 13 wells with results back (+1)
- 12 exceeded a state 2L standard or IMAC (+1)
- 3 retest results reported
- Exceedances for: Cobalt, Iron, Manganese, Vanadium, pH

Weatherspoon Plant (Lumberton, N.C.)

- 8 wells identified to date
- 2 well with results back
- 2 well exceeded the state 2L standard
- Exceedances for: pH, vanadium

Summary of health risk evaluations produced by the N.C. Department of Health and Human Services (As of July 7th)

Totals

- Total wells with letters and health risk evaluations: 327 (+97)
- HREs with okay recommendation: 13 (+1)
- Wells with “Do Not Drink” HREs from DHHS: 301 (+96)
- DHHS resample recommendations: 121 (+19)
- Wells with resampled results: 40 (+21)

Allen Steam Station (Belmont, N.C.) First round tests

- Total wells with letters and health risk evaluations: 128 (+21) (all are private wells)
- HREs with okay recommendation: 3 (+1)
- Wells with “Do Not Drink” HREs from DHHS: 123 (+20)
- 45 for vanadium only
- 64 for chromium 6 and vanadium (+19)
- 8 for iron and vanadium
- 3 for vanadium, chromium 6 and iron
- 1 for vanadium, chromium 6 and thallium
- 1 for chromium 6 and cobalt
- 2 for vanadium, Cr6, iron, lead (+1)
- 1 alert for high sodium
- DHHS resample recommendations: 48 for chromium 6 and inorganics; 0 for lead and copper. (unchanged)

Allen resample results – 20 results counted

- 15 previous vanadium only results re-evaluated as vanadium and chromium 6
- 5 previous vanadium, iron results revalued as vanadium and chromium 6

Asheville Plant (Asheville, N.C.) No change for July 7 numbers

- 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.) No change for July 7 numbers

- Total wells with letters and HREs: 7 (private)
- HREs with okay recommendation: 2
- Wells with “Do Not Drink” HREs from DHHS: 4 (2 for vanadium only and 2 for iron only)
- DHHS resample recommendations: 3 for both chromium 6 and inorganics

Buck Steam Station (Salisbury, N.C.)

- Total wells with letters/HREs: 71 (+32) private; 3 public
- HREs with okay recommendation: 1
- Wells with “Do Not Drink” HREs from DHHS: 71 (+32)
  - 18 for vanadium only (+6)
  - 6 for vanadium and iron (+1)
  - 33 for chromium 6 and vanadium (+19)
  - 1 for vanadium and lead
  - 1 for manganese, sodium and sulfate
  - 1 for zinc
  - 1 for iron
  - 1 for chromium 6, vanadium and iron (+2)
  - 1 for cobalt, vanadium, iron chromium 6
  - 1 for vanadium, manganese, iron
- DHHS resample recommendations: 14 for chromium 6 and inorganics (+1)
- 1 for lead and copper

Buck Steam Station resample results – 9 results counted

- 6 re-evaluated as vanadium and chromium 6
- 2 re-evaluated as vanadium
- 1 re-evaluated as vanadium and iron

Cliffside Steam Station (Mooresboro, N.C.)

- Total wells with letters/HREs: 21 (+6)
- HREs with okay recommendation: 1
- Wells with “Do Not Drink” HREs from DHHS: 17 (+5)
  - 1 for vanadium only
  - 1 for vanadium and iron
  - 4 for iron
  - 2 for cobalt, iron and manganese
  - 3 for chromium 9 (+3)
  - 1 for vanadium, cobalt, iron
  - 1 for cobalt
  - 1 for iron and chromium
- DHHS resample recommendations: 9 for chromium 6 and inorganics

Cliffside Steam Station resample results – 3 results counted

- 3 recommended for retesting for hexavalent chromium

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

- Total wells with letters/HREs: 16 (+5) (private)

- HREs with okay recommendation from DHHS: 0 (unchanged)
- Wells with “Do Not Drink” HREs from DHHS: 14 (+4)
  - 5 for cobalt
  - 1 for chromium 6
  - 2 for cobalt and manganese
  - 1 vanadium
  - 1 cobalt, iron, manganese
  - DHHS resample recommendations: 5 (chromium 6 and inorganics) (+1)

Marshall Steam Station (Terrell, N.C.)

- Total wells with letters/HREs: 33 (+8) private; 1 public
- HREs with Okay recommendation from DHHS: 0
- Wells with “Do Not Drink” HREs from DHHS: 31 (+8)
  - 11 for vanadium only (+1)
  - 3 for iron and vanadium
  - 1 for lead and vanadium
  - 7 for chromium 6 and vanadium (+3)
  - 3 for iron, manganese and vanadium
  - 4 for chromium 6 (+3)
  - 2 for vanadium, iron, chromium 6 (+1)
- DHHS resample recommendations: 17 (16 for chromium 6 and inorganics; 1 for lead and copper)

Marshall resample results – 6 results counted (+4)

- 1 previous vanadium only results re-evaluated as vanadium and chromium 6 (+2)
- 1 previous vanadium, iron results re-evaluated as vanadium (+1)
- 1 previous vanadium only results re-evaluated as chromium 6 only (+1)

Mayo Steam Station (Roxboro, N.C.) No change for July 8 numbers

- Total wells with letters/HREs: 1
- Wells with “Do Not Drink” HREs from DHHS: 1 (for lead, iron and vanadium)
- DHHS resample recommendations: 2 (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: 6 private (+1), 2 public (+2)
- HREs with Okay recommendation from DHHS: 0 (unchanged)
- Wells with “Do Not Drink” HREs from DHHS: 8 (+1)
  - 2 for vanadium
  - 1 for chromium 6 manganese and vanadium
  - 1 for vanadium, chromium 6 and lead
  - 1 for chromium 6 (+1)
  - 1 for manganese and chloride
  - 1 for manganese and iron

- DHHS resample recommendations: 1 for chromium and inorganics; 1 for lead (unchanged)
- 4 Wells with high sodium

#### Sutton Plant (Wilmington, N.C.)

- Total wells with letters/HREs: 11 (+2) private and 2 public
- HREs with Okay recommendation from DHHS: 3 (unchanged)
- Wells with “Do Not Drink” HREs from DHHS: 8 (+2)
  - 3 for manganese and cobalt
  - 1 for vanadium, manganese, cobalt, iron, sodium
  - 1 for manganese, cobalt and sodium
  - 1 for manganese, cobalt and iron
  - 1 for manganese
  - 1 for vanadium
- DHHS resample recommendations: 3 chromium 6 and inorganics

#### Sutton resample results – 2 results counted (+2)

- 1 re-evaluated as cobalt, iron and manganese (+1)
- 1 re-evaluated as cobalt and manganese (+1)

#### Weatherspoon Plant (Lumberton, N.C.)

- Total wells with letters/HREs: 2
- HREs with Okay recommendations from DHHS: 1
- Wells with “Do Not Drink” HREs from DHHS: 0
- 1 Resample for chromium 6 and organics

#### Weatherspoon resample results – 1 results counted (+1)

- 1 previous vanadium and chromium 6 results ordered for retesting for chromium 6

### Contacts

For information on health risk evaluations, contact the DHHS media line at 919-855-4840.

Contacts include Kendra Gerlach at [Kendra.Gerlach@dhhs.nc.gov](mailto:Kendra.Gerlach@dhhs.nc.gov) or Alexandra Lefebvre at [Alexandra.Lefebvre@dhhs.nc.gov](mailto:Alexandra.Lefebvre@dhhs.nc.gov).

For information on well testing not related to health risk evaluations, contact the DENR Office of Public Affairs at 919-707-8624, 919-707-8602, 919-707-9033 or 919-707-9014. Contacts include Crystal Feldman, [Crystal.Feldman@ncdenr.gov](mailto:Crystal.Feldman@ncdenr.gov), Mike Rusher, [Mike.Rusher@ncdenr.gov](mailto:Mike.Rusher@ncdenr.gov), Sarah Young, [Sarah.Young@ncdenr.gov](mailto:Sarah.Young@ncdenr.gov), or Susan Massengale, [Susan.Massengale@ncdenr.gov](mailto:Susan.Massengale@ncdenr.gov).