

North Carolina Renewable Power (NCRP) Information/Bullet Points

Brief Summary of Air Pollution Violations and Permitting at North Carolina Renewable Power

NCRP Background

1. North Carolina Renewable Power (NCRP) is owned by Georgia Renewable Power, which runs a similar power generation plant in Georgia.
2. NC RP bought a coal-fired power generation plant (Cogentrix) that closed in 2009.
3. Since 2015, NCRP has operated a power plant that burns biomass to generate electricity which is purchased by Duke Energy.
4. NCRP produces energy from burning biomass that has included:
 - wood chips from sawmills,
 - poultry litter (bedding and feces from poultry operations) and
 - poultry cake (pressed and dewatered waste from slaughterhouses), although they may not be using this now.
5. When NCRP began operating they were burning lower percentages of poultry litter (around 25%) and have increased the amounts of litter since. The company has stated that they want to burn 85 to 100% Poultry Waste.
6. In the 6 years since NCRP began operation, the power plant has a chronic and ongoing record of Clean Air Act violations.
7. NCRP is seeking a new air permit from North Carolina Department of Environmental Quality to authorize continued operations by turning its current violations into the facility's status quo.
8. If the North Carolina Department of Environmental Quality (NCDEQ), Division of Air Quality (DAQ) issues NCRP a permit as it is currently drafted, the plant will continue to emit the same high levels of harmful air pollution.

Air Quality – NCRP Pollution, Violations and Permitting

- Burning these fuels (wood chips, poultry litter) is actually turning out to be dirtier than coal on a per-megawatt basis for most pollutants.
- The NCRP facility was (and still is) emitting pollutants at rates that exceeded the Clean Air Act's major source threshold, but the facility never obtained the Title V major source permit necessary to protect air quality and public health.
- DEQ should have required NCRP to apply for a Title V permit before construction and operation.
- NCRP has agreed with regulators that it would work to reduce emissions to comply with the law, but has failed to do so, the company is being required to apply for a Title V permit, which is why there is a public hearing.
- In the last 5 years, NCRP has:
 - Violated emission limits for fine particulate matter, sulfur dioxide, and nitrogen oxides;
 - Routinely failed to operate required monitoring technology;
 - Improperly removed necessary air pollution control;
 - Failed to conduct required emissions testing in a timely manner;
 - Committed numerous other monitoring and recordkeeping violations.
- Title V, major source permits, require the installation of the "best available control technology;" but NCRP is proposing no new pollution control and wants to keep on emitting the same high levels of air pollution.
- This draft permit is a "retroactive" major source permit (Title V) that must require the use of the "best available control technology" to reduce emissions.

- NCRP provided regulators with outdated and incomplete information about available control technologies; as a result, NCRP argues that it should not need to install any new emission controls and simply keep operating and emitting the same emissions that have been illegal.
- The operation will release higher levels of air pollution than similar facilities because NCRP is arguing that even with existing controls that are used at other facilities, NCRP should have far less stringent emission limits.
- The draft permit fails to require adequate monitoring to protect air quality and public health. Example: A comparable operation in another state must follow lower emission limits that are applied on an hourly basis, while NCRP's drafter permit sets limits based on a 30-day averaging period. This means that spikes in harmful emissions over hours or days may be considered lawful rather than violations.
- The facility underestimates emissions of hazardous air pollutants, which are those that Congress has listed as toxic and/or carcinogenic even in very small quantities. This means, the facility is evading even more stringent pollution control technology.

Deficiencies, Violations, Special Orders By Consent Detailed List

From the first year of its operation in 2015, NCRP has been repeatedly cited by NCDEQ/DAQ, with Notice of Deficiency and Notice of Violation, due to various issues, including, exceeding emissions limits, poor maintenance and "deficient monitoring, record keeping and reporting." Since 2015 NCRP has had a dozen NOV/NOD letters and has paid over \$58,000 in fines. Obviously, the fines are not working, and NC Renewable Power should not be allowed to continue violating our laws. How have they been able to continue violating the Clean Air Act and polluting our communities? IF NC DEQ won't shut down NCRP will they ever shut any industrial polluter down? Or is NC DEQ a shill for business and industry?

- NOD – May 15, 2015, NCRP was issued a NOD for **a late report.**
- NOV/NRE – June 29, 2016, NCRP was issued a NOV/NRE for exceeding SB3 limits for PM2.5, SO2, and NOx; for having excessive COMS downtime in violation of NSPS Subpart Db, and for **failing to conduct source testing within 180 days of startup of the boilers.**
- SOC and Penalties – August 1, 2016, SOC 2016-002 was **issued to address violations cited** in the NOV/NRE on June 29, 2016. The order also. **NCRP paid \$9,000 for these violations under the SOC.**
- NOD – September 12, 2016, NCRP was issued a NOD for **failure to submit a Notice addressed issues relating to CO emissions of Compliance Status within 120 days of initial tune-up of the boilers.**
- NOV/NRE – November 16, 2016, the facility was issued a NOV/NRE for **exceeding the PSD avoidance limit for CO emissions.**
- SOC (2nd) and Penalties – February 27, 2017, SOC 2017-001 was issued **to address exceedances of the PSD avoidance limit for CO emissions.** The facility is required to. **submit a PSD permit application within 30 days of issuance the SOC** The facility is also required to pay \$15,000 plus stipulated penalties under the SOC.
- NOV/NRE – March 13, 2017, NCRP was issued a NOV/NRE for **exceeding SB3 limits for NOx, for having excessive COMs downtime in violation of NSPS Subpart Db, and for exceeding the PSD avoidance limit for CO emissions.**
- NOV/NRE – June 25, 2017, NCRP was issued a NOV/NRE for **exceeding SB3 limits for NOx and for exceeding the PSD avoidance limit for CO.**
- NOV – June 30, 2017, NCRP was issued a NOV for **various violations related to deficient maintenance practices, control device removal, and deficient monitoring, recordkeeping and reporting.**
- Penalties – July 25, 2017, a civil penalty was assessed in the amount of \$11,555, including costs, for the violations cited in the NOV/NREs dated March 13 and June 15, 2017. The civil penalty was paid in full on September 8, 2019.
- NOV/NRE – November 27, 2018, NCRP was issued a NOV/NRE **for exceeding SB3 limits for NOx.**
- Penalties – February 28, 2019, a civil penalty was assessed in the amount of \$8,596, including costs, for the violations cited in the NOV/NRE dated November 27, 2018. The civil penalty was paid in full on April 5, 2019.

- NOV/NRE – April 16, 2020, NCRP was issued a NOV/NRE of the **general duty requirement for NOx, SO2, and CO CEMS (Continuous Emissions Monitoring Systems) during the 4th Quarter of 2019.**
- Penalties – September 18, 2020, a civil penalty was assessed in the amount of \$3,449, including costs, for the violations cited in the NOV/NRE dated April 16, 2020. The civil penalty was paid in full on November 20, 2020.
- NOV/NRE – December 19, 2020, NCRP was issued a NOV/NRE of the **general duty requirements for the COMS (Continuous Opacity Monitoring System) during Q1-Q2 and Q2-Q3 of 2020.**
- Penalties – April 26, 2021, a civil penalty was assessed in the amount of \$10,407, including costs, for the violations cited in the NOV/NRE dated December 19, 2020. The civil penalty was paid in full on April 24, 2021.

TOTALS – (Some of these notices cite multiple issues of deficiencies and/or violations)

3 – NOD (Notice of Deficiency)

7 – NOV/NRE (Notice of Violation/Notice of Recommendation of Enforcement)

1 – NOV (Notice of Violation)

2 – SOC (Special Orders By Consent)

\$58,007 – PAID – Civil Penalty Assessments

Violations of 1st SOC (Special Order By Consent)

- Exceeded limitations of CO
- Exceeded limits on CO when firing nonCISWI wood
- Failed to do testing for Particulate Matter (PM) emissions within 180 days after firing poultry litter in boilers
- Exceeded PM2.5 limit
- Exceeded SO2 limit
- Exceeded NOX limit
- Around 43% of downtime for COMS monitor on Combined Stack (emissions)

From 2nd SOC page 3-4 – 1.R.-1.S.

1. R. Operation of the BOILERS under the First SOC has resulted in:

1. The exceedance of the PSD avoidance limitation for CO pursuant to Section 2.2(A)(2)(a) of Permit No. 05543T23; and

2. The exceedance of Section 2.2(A)(2)(a) of Permit No. 05543T23, limiting CO emissions from the BOILERS to 0.45 lb/mmBtu when firing nonCISWI wood.

1. S. The violations identified in Paragraph I.(R) above is in addition to violations identified in Paragraph I.(M) of the First SOC, as follows:

1. Failure to conduct the initial performance test for particulate matter ("PM") emissions within 180 days after initial firing of poultry litter in the BOILERS, as required in Section 2.1.A.3.d. of Permit No. 05543T23.
2. One exceedance of the PM2.5 limit (0.011 lb/mmBTU, stack test: 3-run average), exceedances of the SO2 limit (0.025 lb/mmBTU, 30-day rolling average) and exceedances of the NOx limit (0.125 lb/mmBTU, 30 day rolling average); and
3. Approximately 43% downtime of the COMS monitor on Combined Stack 1 (SC 1) during the third quarter of 2015.

Environmental Justice

Census Block Data – By Race and Poverty – DEQ EJ Tool

(Note: Robeson County population is 64.46% BIPOC)

Geography	NCRP Block Group 1, Census Tract 9608.02, Robeson County, NC	Neighboring Block Group 2, Census Tract 9611, Robeson County, NC	Neighboring Block Group 1, Census Tract 9616.01, Robeson County, NC
MOE Total Population Estimate for Race and Ethnicity	205	178	412
Total Population Estimate for Race and Ethnicity	1,475	1,434	2,854
% Non-White and Hispanic or Latino (of any race)	90.58	72.59	66.33
% White	9.42	27.41	33.67
% Black	77.69	31.52	40.47
% American Indian or Alaska Native	6.44	19.94	16.12
% Asian	0	1.32	0
% Native Hawaiian and Pacific Islander	0	0	0
% Some Other Race	0	1.32	0.88
% 2 or more Races	1.29	1.95	0
% Hispanic or Latino	5.15	16.53	8.86
% Non-White compared to County	20.99	-3.03	-11.4
% Non-White compared to State	145.31	96.6	79.63
Total Population Estimate for Poverty	1,475	1,434	2,842
MOE Total Population Estimate for Poverty	205	178	408
% Poverty in Block Group	40	42.4	21.39
% Poverty compared to County	44.42	53.08	-22.76
Poverty % compared to State	172.14	188.46	45.55
Poverty % African American	40%	66%	22.5%
Poverty % American Indian	65%	33%	49.5%
Poverty % Hispanic	N/A	53%	32.6%
Poverty % Asian	100%	N/A	N/A
Poverty % Under 18 Years Old	58%	66.9%	42.5%
Poverty % Over 64 Years Old	15.3%	16.5%	24%
Poverty % Female	43.4%	48.5%	31.1%

Cumulative Impacts

Local Industrial Sites Within 1-Mile and 2-Mile Radius

(Information below in Bold is added, all other information is from NCDEQ)

Within the one-mile radius, there are 21 facility permits or incident reports (as of September 3, 2021), **and within a two-mile radius, which includes further industrial impacts to those living on edge of the original mile radius) there are 101 facility permits or incident reports.**

3 – air quality permit sites

4 – NPDES wastewater treatment facility permits

2 – Coal ash structural fills

- 2 – Permitted solid waste landfills
- 2 – Inactive hazardous sites
- 1 – Pre-regulatory landfill site
- 1 – Brownfield program sites
- 1 – Hazardous waste sites
- 2 – Above ground storage tank incidents
- 1 – Underground storage tank active facilities
- 1 – Land use restrictions or notices

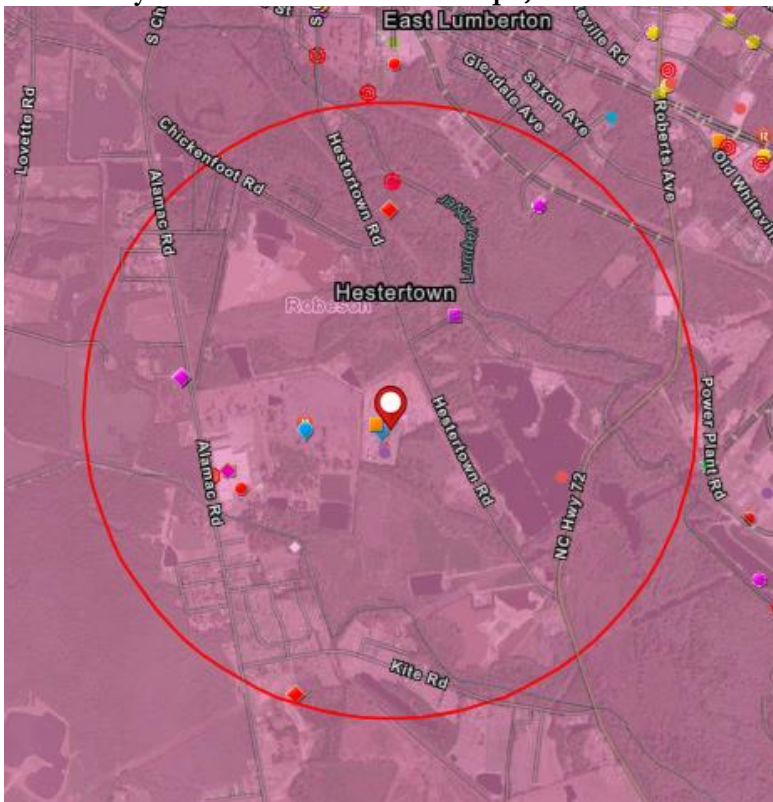
- 7 – NPDES WWTP facility permits
- 2 – Coal Ash Structural Fills (CCB)
- 2 – Permitted Solid Waste Landfills
- 5 – Inactive Hazardous Sites
- 1 – Pre-Regulatory Landfill Sites
- 2 – Brownfields Program Sites
- 1 – Hazardous Waste Sites
- 37 – Underground Storage Tank Incidents
- 9 – Above Ground Storage Tank Incidents
- 16 – Underground Storage Tank Active
- 8 – Land Use Restrictions and/or Notices

11 – Air Quality Permit Sites

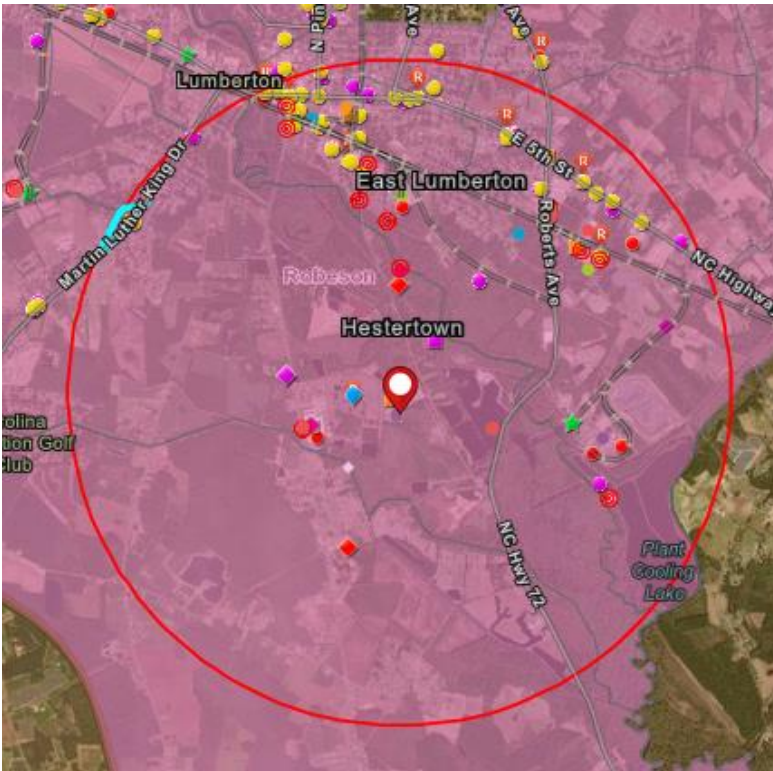
It is important to note that there may be multiple permits associated with one facility and incidents vary in size, significance, and timeframe. **(It is also important to note that some facilities have multiple permits and/or incident reports because they have multiple sources of pollution and/or incidents on the same site. Such as the NCRP site which is an inactive hazardous waste site because it is a documented Brownfields program site and has an air quality permit with numerous violations and Special Orders By Consent).**

1-Mile and 2-Mile Radius Maps

Note: The Purple, which NCDEQ did not apply in its released EJ Screening, denotes NC DEQ’s Potentially Underserved Block Groups, 2019.



1-Mile Radius Map Around NCRP



2-Mile Radius Map Around NCRP

Health Concerns

Robeson County – EJ Tool – Health Dashboard (Per 100,000)

EJ Tool – Health Dashboard	State	Community Data
Average of Heart Disease Deaths	163.7	218.1
Average Deaths caused by Cancer	169.1	191.7
Average Deaths caused by Diabetes	22.8	46.5
Average of Pre-Term Birth Rate	10	10.8
Average of Infant Death Rate 2011-2015	7.2	11.5
Child Mortality Rate 2011-2015	57.8	97
Average Deaths Caused by Stroke	43.1	48.1
Average Cardiovascular Disease Deaths	221.9	281.7
Hospitalization due to Asthma (Ages 0-14)	28	108
Hospitalizations due to Asthma (Total)	90	267
Number of Primary Care Physicians	4.812	6.888

Cumulative Impacts

Brownfields – Former Cogentrix Coal-Fired Energy Production

- The NCRP site is considered a “Brownfields” site because the soil and groundwater were heavily contaminated with coal ash and coal residue dumped on the site by the company, Cogentrix, that burned coal to produce energy, ending in 2009. The site has gone through Phase I and Phase II Assessments, with samples of Soil and Groundwater showing contamination from many metals and two Semi-Volatile Organic Compounds (VOC)/Volatile Organic Compounds (VOC). This site is still polluted, and there is not an active clean-up.
- **Contaminants – Short/Long Term exposure can cause problems with areas and systems of the body, those issues are in (Parenthesis)**
 - **Soil Contamination**
 - Toluene – VOC (Immunological, Neurological)
 - TPH-DRO – Semi-VOC (Developmental, Hematological, Hepatic, Immunological, Renal)
 - Arsenic (Skin, Digestive, Liver, Nervous System, Upper Respiratory)
 - Cobalt (Cardiovascular, Development, Blood, Upper Respiratory)
 - Iron
 - Vanadium (Cardiovascular, Gastrointestinal, Renal, Reproductive, Upper Respiratory)
 - **Groundwater Contamination**
 - Arsenic
 - Cobalt
 - Chromium (Immunological, Renal, Upper Respiratory)
 - Iron
 - Lead (Neurological, Renal)
 - Manganese (Neurological)
 - Vanadium
 - Zinc (Gastrointestinal, Hematological, Upper Respiratory)

DOCUMENTATION: Notes from NCDEQ Waste Management Documents Laserfiche:

[https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand={\[WM\]:\[Program_ID\]}%20=%20%2218031-14-078%22}&cr=1](https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand={[WM]:[Program_ID]}%20=%20%2218031-14-078%22}&cr=1)

Under file: Congentrix-Lumberton_Phase II Envl Baseline Assessment_AEM

Pages 4.1-4.3

Pages 4.2 SOIL ANALYTICAL RESULTS

The soil sample analytical results are summarized in Table 2 with comparison to applicable North Carolina standards PSRGs. There are three PSRG values for each constituent. The Residential and Industrial PSRGs are the maximum constituent soil concentrations allowable in residential and industrial land use, respectively. Both the Residential and Industrial PSRGs are intended to be protective of human health from direct contact. The protection of groundwater PSRG represents the maximum value in soil that is protective of the underlying groundwater. Additionally, analytical results for TAL Metals were also compared to published soil background data (*Elements in North American Soils*, Dragun 1991, 2nd Edition).

A trace concentration (7.1 µg/kg) of toluene was detected in the soil sample collected at boring W-5, located at the northwest corner of the maintenance building. The detection of toluene exceeds the applicable PSRGs, and it is the only VOC detection in soil at the site. No SVOCs were detected in any of the soil samples collected at the site. TPH-DRO was detected in soil samples collected from B-1, -2, and -3 located adjacent to the ASTs at depths of 3 to 4 feet (B-1 and B-2) and 6 to 7 feet (B-3). TPH-DRO values ranged between 11.9 mg/kg and 19.4 mg/kg, which exceeds the applicable PSRGs. A number of metals were detected in the soil samples collected. However, only the following metals exceeded their applicable PSRGs:

- Arsenic—Three soil samples (at locations B-4, W-5, and W-6) exceeded the Residential PSRG of 0.67 mg/kg.
- Cobalt—One soil sample (at location W-4) exceeded the Protection of Groundwater PSRG of 0.9 mg/kg.
- Iron—19 of the 23 soil samples collected exceeded the Protection of Groundwater PSRG of 150 mg/kg.
- Vanadium—Seven soil samples exceeded the Protection of Groundwater PSRG of 6 mg/kg.

All of the vanadium, arsenic, and cobalt exceedences were located in the northern portion of the site, surrounding the former coal storage pile area. Note that arsenic only exceeded the residential PSRG. Iron was detected in soil across the entire Site. Concentrations of metals detected in soil are within typical background ranges published for soil in North Carolina and the Eastern United States. (NOTE: Arsenic and Vanadium not naturally occurring in Robeson County.)

4.3 GROUNDWATER ANALYTICAL RESULTS

The groundwater sample analytical results are compared with the applicable North Carolina standards [2L standard as defined in NC Statute 15A NCAC 2L (2L), or Interim Maximum Allowable Concentration (IMAC) if a 2L standard does not exist]. No VOCs or SVOCs were detected in groundwater at the site. Also, TPH-DRO was not detected in groundwater collected from the three monitoring wells (LMW-4, LMW-5, and W-1) used to evaluate the ASTs and OWS.

Sulfate was measured in all wells sampled and ranged between 2.1 milligrams per liter (mg/L) and 164 mg/L, all of which are below the 250 mg/L 2L standard. The highest concentrations of sulfate in groundwater were detected in samples collected from wells near the former coal storage pile area.

A number of metals were detected in the groundwater samples collected. However, only the following metals exceeded their applicable PSRGs:

- Arsenic—Unfiltered groundwater samples collected from temporary monitoring wells LMW-1A and W-10 exceeded the 2L standard of 10 micrograms per liter (µg/L).
- Cobalt—Groundwater from four monitoring wells exceeded the IMAC standard of 0.1 µg/L.
- Chromium—At least one groundwater sample collected from seven monitoring wells exceeded the 2L standard of 10 µg/L.
- Iron—All groundwater samples collected exceeded the 2L standard of 300 µg/L.

- Lead—At least one groundwater sample collected from five monitoring wells exceeded the 2L standard of 15 µg/L.
- Manganese—Groundwater from seven monitoring wells exceeded the 2L standard of 50 µg/L.
- Vanadium—Groundwater from six monitoring wells exceeded the IMAC standard of 0.3 µg/L.
- Zinc—Groundwater from monitoring well W-4 exceeded the 2L standard of 1,000 µg/L.

Excluding those groundwater samples where an initial exceedance of the 2L or IMAC standard was followed by a dissolved analysis below the standard, all of the cobalt and manganese groundwater exceedances were located in the northern portion of the site, surrounding the former coal storage pile area. The wells with dissolved vanadium exceedances were located in the middle or southern portion of the site.

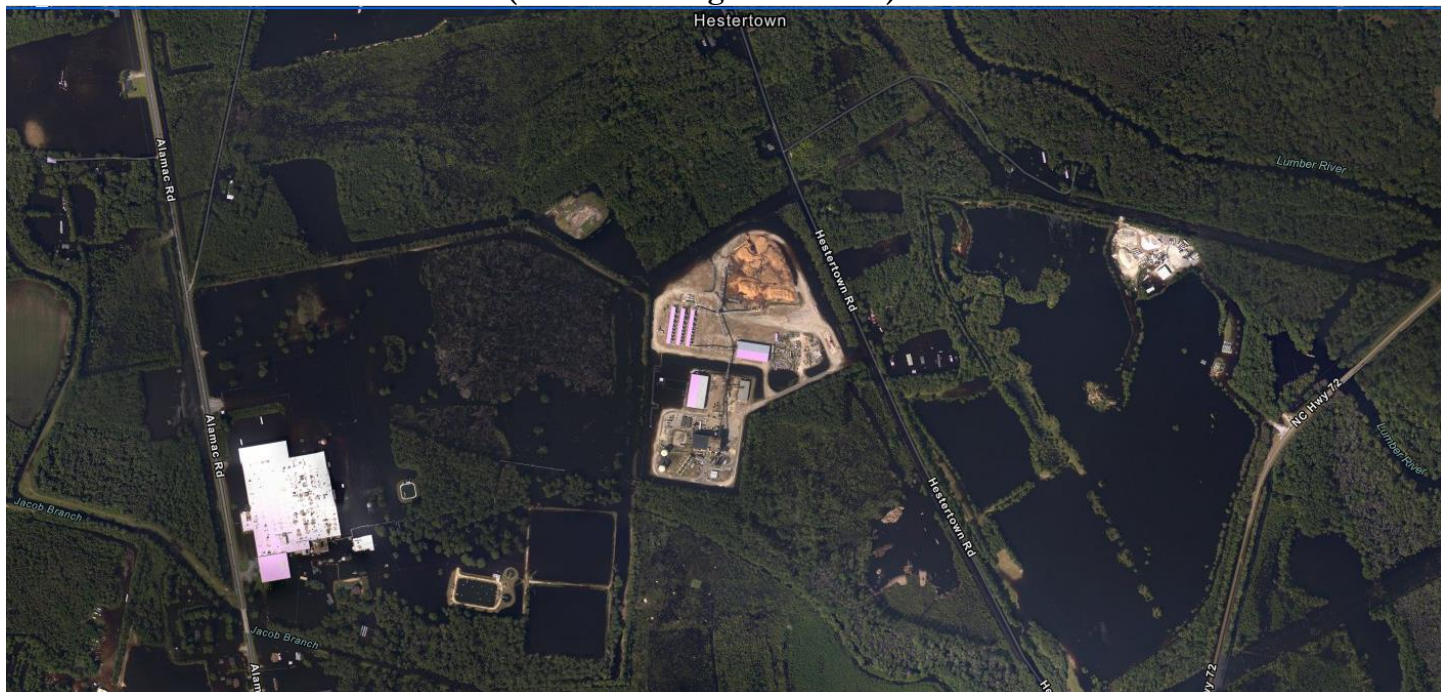
AEM measured pH in groundwater at all existing and temporary monitoring wells. In the vicinity of the former coal storage pile, pH values ranged from 3.91 to 5.77. The acidic condition observed in groundwater could easily be the underlying cause for the metals listed above to leach from the soil. If leaching due to low pH, the metals would tend to be dissolved. The elevated metals in unfiltered samples vs. non-elevated in filtered samples would mean that soil particles (undissolved) created the high concentrations. However, many factors influence the outcome, including nominal particle size and electrical properties of the minerals. Based on laboratory results and the comparison of filtered to unfiltered results, the general trends of dissolved metals and particulate metals can be better revealed. *(Note: Robeson County soil/sand and water is commonly acidic, which is a good reason not to dump coal ash in the area.)*

Cumulative Impacts

Floodplain, Poultry Litter, Ash

- The NCRP location is in the 100 year floodplain and areas of the site flooded during recent hurricanes. .
- There is a building for housing poultry litter on-site, although in the past, there appears to be litter piles stacked around the property in the loading area for the conveyors. What is being done to prevent poultry litter from being stacked in piles at the site?
- Because of the differences and variability in material (wood/litter/cake), controlling for air pollution is complex, and can concentrate pollutants in the waste ash.
- The ash (fly and bottom) being created through the burning of biomass is being stored on-site. As ash builds up where is the excess being sent and for what use? Fertilizer? Soil Amendments? Concrete?
- If the plan is to sell and use for fertilizer and soil amendments, what companies are purchasing the waste material?
- Overall the permit needs to better address issues with ash produced, can the ash testing be expanded to include other pollutants.

NCRP Site after Hurricane Florence (Note: Flooding not at Peak)



Blue Pin NCRP –

All Grey Areas - Approximate Flood Extent Combined For Hurricanes Matthew (2016 and Florence (2018)

