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Chickahominy Power Station - List of Public Commenters

| Last | First Middle | Date Rec'd | City | State |
|---------------|---------------|------------|------------------|-------|
| Zeller | Lou | 3/27/2019 | Glendale Springs | NC |
| Bottino | Tiziana | 3/20/2019 | | |
| Boise | Gretchen | 3/20/2019 | Salem | VA |
| Sheehe | Shelley | 3/20/2019 | Williamsburg | VA |
| Soules | Nathan | 3/20/2019 | Leesburg | VA |
| Fleenor Ph.D. | Matthew | 3/20/2019 | Salem | VA |
| Riley | Brent | 3/20/2019 | Roanoke | VA |
| Twitmyer | Jane M | 3/20/2019 | Roseland | VA |
| Honeycutt | Cinthia | 3/20/2019 | | |
| Anderson | Peter | 3/20/2019 | Charlottesville | VA |
| Shauneseey | Donna | 3/20/2019 | Charlottesville | VA |
| Adams | Barbara | 3/20/2019 | Richmond | VA |
| Munley | Frank | 3/20/2019 | Salem | VA |
| Munley | Cynthia | 3/20/2019 | Salem | VA |
| Hadwin | Thomas | 3/20/2019 | Waynesboro | VA |
| Williams | Kimberly | 3/20/2019 | Norfolk | VA |
| Riesenhuber | Theresia | 3/20/2019 | | |
| Fields | Tess | 3/20/2019 | Washington | DC |
| Thomas | Christopher | 3/20/2019 | Richmond | VA |
| Partington | David | 3/20/2019 | Floyd | VA |
| McConnell | Charlotte | 3/20/2019 | | |
| Caplan | Gregory | 3/20/2019 | | |
| Cathcart | Freedra | 3/20/2019 | Roanoke | VA |
| Walker | Amy C. | 3/20/2019 | Quinton | VA |
| Brown | Charles | 3/20/2019 | | |
| Johns | Morgan | 3/20/2019 | Richmond | VA |
| Fjord Ph.D. | Lakshmi | 3/20/2019 | Charlottesville | VA |
| Hanuman | Kenda | 3/20/2019 | Buckingham | VA |
| Berthoud | Heidi Dhivya | 3/20/2019 | Buckingham | VA |
| Cain | Frank | 3/20/2019 | Richmond | VA |
| Malady | Stephanie | 3/20/2019 | | |
| Falceto | Nicole | 3/20/2019 | | |
| Hill | Pamela | 3/20/2019 | Midlothian | VA |
| Miles-Nichols | Duane and Sue | 3/19/2019 | Glen Allen | VA |
| Dunleavy | Theresa | 3/19/2019 | Norfolk | VA |
| Rockett | Tina | 3/19/2019 | Virginia Beach | VA |
| Robinson | Amanda | 3/19/2019 | | |
| Daniels | Shauna | 3/19/2019 | Henrico | VA |
| Rea | Cynthia | 3/19/2019 | Herndon | VA |
| Mack | Lara | 3/19/2019 | Linville | VA |
| Wohler | Margaret | 3/19/2019 | Alexandria | VA |
| Manchester | Johnna | 3/19/2019 | Henrico | VA |
| Sims | Jessica | 3/19/2019 | Richmond | VA |
| Burger | Scott | 3/19/2019 | Richmond | VA |
| Wilson | Haley | 3/19/2019 | Roanoke | VA |

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|--------------|--------------------|-----------|---------------------|----|
| Healy | Patrick | 3/19/2019 | | |
| Keller | Suzanne | 3/19/2019 | Richmond | VA |
| Yarbrough | Claiborne | 3/19/2019 | Henrico | VA |
| Schaale | Jan | 3/19/2019 | Claremont | VA |
| Tandy | Chris | 3/19/2019 | Leesburg | VA |
| Miller | Kim | 3/19/2019 | | |
| Cosby | William | 3/19/2019 | Richmond | VA |
| Gamlin | Pamela | 3/19/2019 | Henrico | VA |
| Pruett | Caroline | 3/19/2019 | Henrico | VA |
| Wilson | Lynn-Peace | 3/19/2019 | Sandston | VA |
| Hazard | Carol | 3/19/2019 | Providence Forge | VA |
| Black | Michelle | 3/19/2019 | Charles City County | |
| Chrysler | Emily L. | 3/18/2019 | North Chesterfield | VA |
| McKenney | Melissa | 3/15/2019 | Henrico | VA |
| Goodman | Brenda | 3/14/2019 | | |
| Stewart | Sarah | 3/14/2019 | Richmond | VA |
| Totaro | Virginia Wray | 3/14/2019 | Midlothian | VA |
| Barber | Melissa | 3/14/2019 | Henrico | VA |
| Gay | Jennifer | 3/14/2019 | Richmond | VA |
| Isaacs | Patricia E. | 3/12/2019 | Henrico | VA |
| McClory | Kate | 3/11/2019 | Richmond | VA |
| Kreydatus | Matthew | 3/10/2019 | Henrico | VA |
| Ryan | Kelsey | 3/9/2019 | Richmond | VA |
| Gill | Karen | 3/8/2019 | Richmond | VA |
| Gatlin | Kyle | 3/8/2019 | | |
| Crawford | Kendyl | 3/8/2019 | | |
| Wallace | Harrison | 3/8/2019 | Richmond | VA |
| Kalhorn | Jesse | 3/7/2019 | | |
| Anderson | Peter | 3/7/2019 | Charlottesville | VA |
| Alberto | Melissa | 3/7/2019 | Alexandria | VA |
| Hameed | Atifa | 3/7/2019 | Richmond | VA |
| Lovelace | Sarea | 3/6/2019 | Richmond | VA |
| Green | Nicole | 3/6/2019 | Williamsburg | VA |
| DuMont | Kristin | 3/6/2019 | Richmond | VA |
| Bull | Jessica | 3/6/2019 | | |
| Kreydatus | Beth (Elizabeth A) | 3/6/2019 | Henrico | VA |
| Fuhrmann | Steve | 3/5/2019 | Providence Forge | VA |
| Finley-Brook | Mary | 3/5/2019 | Richmond | VA |
| Freeman | Jef | 3/5/2019 | | |
| O'Shea | Kathleen | 3/5/2019 | North Chesterfield | VA |
| Porter | Shelly (Michelle) | 3/5/2019 | | |
| Jebo | Tracy | 3/5/2019 | Henrico | VA |
| Flanigan | Shane | 3/5/2019 | | |
| Shippee | Bob | 3/5/2019 | | |
| Skiff | Katie | 3/5/2019 | Richmond | VA |
| O'Shea | Brian | 3/5/2019 | | |

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Chickahominy Power Station - List of Public Commenters

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|---------|--------------------|-----------|--------------------|----|
| Barlow | Barbara J | 3/5/2019 | | |
| Roach | Beth | 3/5/2019 | Richmond | VA |
| Adams | Kelly | 3/4/2019 | Richmond | VA |
| Ball | Richard (Dr. Dick) | 3/4/2019 | Annandale | VA |
| Main | Ivy | 3/4/2019 | | |
| Torbeck | Mary-Stuart | 3/4/2019 | Richmond | VA |
| Jonas | David | 3/1/2019 | Charlottesville | VA |
| Smith | Kristie | 3/1/2019 | | |
| Bingham | Carmen | 3/1/2019 | Richmond | VA |
| Pollard | Albert | 3/1/2019 | Irvington | VA |
| Besa | Glen | 2/28/2019 | North Chesterfield | VA |
| Burger | Riley | 2/14/2019 | Philadelphia | PA |
| Adkins | Stephen | 3/14/2019 | | |

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Sinclair, Alison <alison.sinclair@deq.virginia.gov>

FW: Balico LLC; Registration No. 52610

1 message

bredl@skybest.com <bredl@skybest.com>
To: alison.sinclair@deq.virginia.gov

Wed, Mar 27, 2019 at 2:19 PM

TO: Alison Sinclair
FROM: Lou Zeller, BREDL
RE: Balico Chickahominy permit

I apologize for the email error. My comments are attached.

Thank you for all you do,

Lou

Louis A. Zeller, Executive Director
Blue Ridge Environmental Defense League, Inc.
Main Office: PO Box 88 Glendale Springs, NC 28629
Phone: 1-336-882-2691
Mobile: 1-336-977-0652
Email: BREDL@skybest.com
Website: www.BREDL.org
Founded in 1984, we have projects and chapters in Alabama, Georgia, Tennessee, South Carolina, North Carolina and Virginia

From: bredl@skybest.com <bredl@skybest.com>
Sent: Wednesday, March 20, 2019 5:03 PM
To: 'alison.sinclair@deq.virginia.gov' <alison.sinclair@deq.virginia.gov>
Cc: Sharon Ponton <ponton913@msn.com>; Mark E. Barker <mebarker@cox.net>
Subject: Balico LLC; Registration No. 52610

March 20, 2019

Alison Sinclair
Virginia Dept. of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
alison.sinclair@deq.virginia.gov

RE: Balico LLC; Registration No. 52610
Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Herndon, VA 20171

Comments Attached

190320_BREDL comments_Chickahominy Power Station.pdf
169K

Blue Ridge Environmental Defense League

www.BREDL.org 8260 Thomas Nelson Highway, Lovingsston, Virginia 22949 BREDL@skybest.com(434) 420-1874

March 20, 2019

Alison Sinclair
Virginia Dept. of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
alison.sinclair@deq.virginia.gov

RE: Balico LLC; Registration No. 52610

Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Herndon, VA 20171

Dear Ms. Sinclair:

On behalf of the Blue Ridge Environmental Defense League and our members in the Commonwealth of Virginia, I write to provide comments on the permit for the proposed Chickahominy Power facility in Charles City County. For the reasons detailed below, we oppose the permitting of this facility.

Background

According to Balico LLC's application, the Chickahominy Power plant ("CPLLC"), if permitted, would be constructed as a 1650 Megawatt combined-cycle electric generation facility utilizing three combustion turbines fueled with natural gas. The plant would use supplementally-fired heat recovery steam generators and steam turbines. Air pollution control would include dry low nitrogen oxides burner technology, oxidation catalysts, and evaporative-inlet air cooling.¹

Comments

Air Pollution

Combustion turbines are remarkable for their lack of efficiency in converting chemical energy to mechanical energy. Part of the output is lost in the compressor where intake air is compressed up to 30 atmospheres of pressure, before the fuel is burned. Accordingly, "More than 50 percent of the shaft horsepower is needed to drive the internal compressor and the balance of recovered shaft horsepower is available to drive an external load."² Combined cycle units that utilize heat recovery steam generators have an efficiency of 38 to 60 percent. This means that from 40 to 62

¹ CPLLC's August 24, 2017 Application amends CPLLC's April 5, 2017 Application, which replaced CPLLC's initial March 13, 2017 Application. The August 24, 2017 filing also amends Exhibit I, Responses to 20 VAC 5-302-20. On April 13, 2017, CPLLC filed supplemental Exhibit 4 to its Application, a map identifying the location of the proposed facility for notice purposes. On August 16, 2017, CPLLC filed supplemental Exhibit 5, a July 2017 Environmental Assessment of the Project Site. CPLLC identifies 1,650 MW as the net nominal generating capacity of the proposed Facility at 95 degrees Fahrenheit ambient temperature.

² US EPA Air Pollution Emission Factors, AP-42, Stationary Gas Turbines, Section 3.1.2 Process Description

percent of the fuel burned produces no electric power. But air pollution and global warming gases are created by combustion whether power is produced or not.

Moreover, how the turbines are operated affects air pollution emissions and efficiency. This may result in underestimated levels of toxic air pollution. According to the US Environmental Protection Agency:

Available emissions data indicate that the turbine's operating load has a considerable effect on the resulting emission levels. Gas turbines are typically operated at high loads (greater than or equal to 80 percent of rated capacity) to achieve maximum thermal efficiency and peak combustor zone flame temperatures. With reduced loads (lower than 80 percent), or during periods of frequent load changes, the combustor zone flame temperatures are expected to be lower than the high load temperatures, yielding lower thermal efficiencies and more incomplete combustion.³

The products of incomplete production—carbon monoxide and PM-10—increase with reduced operating loads. Before issuing this permit, the DEQ must assess the impacts of operating factors. Best available control technology for criteria pollutants and maximum achievable control technology for hazardous air pollutants are the standards which must be required for the Chickahominy Power plant.

Climate Change

The use of natural gas as a fuel is not an acceptable alternative to coal-fired power. The gas at the proposed Chickahominy plant would largely be supplied by hydrofracking. According to the Union of Concerned Scientists:

The drilling and extraction of natural gas from wells and its transportation in pipelines results in the leakage of methane, primary component of natural gas that is 34 times stronger than CO₂ at trapping heat over a 100-year period and 86 times stronger over 20 years. Preliminary studies and field measurements show that these so-called "fugitive" methane emissions range from 1 to 9 percent of total life cycle emissions. Whether natural gas has lower life cycle greenhouse gas emissions than coal and oil depends on the assumed leakage rate, the global warming potential of methane over different time frames, the energy conversion efficiency, and other factors. One recent study found that methane losses must be kept below 3.2 percent for natural gas power plants to have lower life cycle emissions than new coal plants over short time frames of 20 years or fewer. And if burning natural gas in vehicles is to deliver even marginal benefits, methane losses must be kept below 1 percent and 1.6 percent compared with diesel fuel

³ *Id.* Page 3.1-3

and gasoline, respectively. Technologies are available to reduce much of the leaking methane.⁴

Natural gas is not a “bridge fuel” because it does not reduce the emissions of greenhouse gases.

Environmental Justice

The most recent available census data reveals that Charles City County with a total population of just over 7,000. The county’s population is 43.3% white, 45.9% African American and 6.9% Native American.⁵

Many studies have shown that hazardous and solid waste facilities, industrial plants, and power stations of many types have traditionally been sited disproportionately in communities of color and low-income neighborhoods. In addition to being aesthetically unappealing, power plants emit toxic air pollution which has a negative effect on the health and well-being of plant neighbors. Low-income communities often lack the economic or political clout to fight these facilities. A review of environmental justice and equity law by the American Bar Association and the Hastings College of Law revealed the following:

Poor communities of color breathe some of the least healthy air in the nation. For example, the nation’s worst air quality is in the South Coast Air Basin in Southern California, where studies have shown that Latinos are twice as likely as Whites to live within one mile of an EPA Toxic Release inventory listed facility, and Latinos, African Americans, and Asian populations in the region face 50% higher cancer risks than Anglo-Americans in the region. Advocates nationwide argue that because poor people of color bear a disproportionate burden of air pollution, their communities should receive a disproportionate share of money and technology to reduce toxic emissions, and that laws like the Clean Air Act should close loopholes that allow older, polluting facilities to escape pollution control upgrades.⁶

Walter Fauntroy, District of Columbia Congressional Delegate to Congress, prompted the General Accounting Office to investigate environmental justice issues. The GAO released its findings that three-quarters of the hazardous waste landfill sites in eight southeastern states were located in primarily poor, African American and Latino communities. United Church of Christ's Commission for Racial Justice published *Toxic Wastes and Race in the United States*, which revealed that race was the single most important factor in determining where toxic facilities were located, and that it was the intentional result of local, state and federal land-use policies. Dr.

⁴ Environmental Impacts of Natural Gas, <http://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/environmental-impacts-of-natural-gas#bf-toc-1>

⁵ <https://www.census.gov/quickfacts/fact/table/charlescitycountyvirginia/PST045217>

⁶ Environmental Justice for All: A Fifty State Survey of Legislation, Policies and Cases (fourth ed.), Steven Bonorris, Editor, Copyright © 2010 American Bar Association and Hastings College of the Law. With citation, any portion of this document may be copied and distributed for non-commercial purposes without prior permission. All other rights are reserved. <http://www.abanet.org/enviro/resources.html> or www.uchastings.edu/cslgl

Robert Bullard published *Dumping in Dixie: Race, Class, and Environmental Quality*, in which he showed the importance of race as a factor in the siting of polluting industrial facilities.⁷

Virginia Law Requires Equitable Development

The Hastings study also focused on individual state law and found that Virginia statutes governing energy development articulate support for environmental justice. One of the stated objectives is “developing energy resources and facilities in a manner that does not impose a disproportionate adverse impact on economically disadvantaged or minority communities.”⁸

The Virginia statutes direct various state agencies to work together to create a comprehensive 10-year energy plan that reinforces the EJ and other objectives.⁹ The state’s 10-Year Plan, among other things, must include the following information: an analysis of siting of energy facilities to identify any disproportionate adverse impact of such activities on economically disadvantaged or minority communities. In considering which parcels of land are suitable for energy facility development, the agencies must consider, in addition to technical matters, “potential impacts to natural and historic resources and to economically disadvantaged or minority communities and compatibility with the local land use plan.”¹⁰ State law is clear in this matter. To date, the county the Planning Commission and the State Corporation Commission have failed with respect to its statutory obligation to ensure that the Chickahominy Power plant does not have a disproportionate impact on Charles City County’s African American community. Unless and until state law is complied with, DEQ cannot approve this permit.

Conclusion

The Virginia Department of Environmental Quality lacks adequate regulatory basis for this facility and cannot issue a permit for the Chickahominy Power plant until the applicant demonstrates it has met all statutory requirements.

Respectfully submitted



Louis A. Zeller
Executive Director

⁷ Natural Resources Defense Council, <https://www.nrdc.org/stories/environmental-justice-movement>

⁸ VA. CODE ANN. § 67-101 (2009); *see also Id.* at § 67-102, stating that to achieve the objectives of § 67-101, it shall be the policy of the Commonwealth to “ensure that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities.”

⁹ *Id.* at § 67-201

¹⁰ *Id.* at § 67-201(d)

March 20, 2019

Alison Sinclair
Department of Environmental Quality
Piedmont Regional Office
4949 Cox Road, Suite A
Glen Allen, VA 23060

via email to: Alison.Sinclair@DEQ.virginia.gov

Comments on Draft Prevention of Significant Deterioration Permit for the Construction and Operation of an Electric Power Generation Facility in Charles City, VA by Balico LLC/Chickahominy Power, Registration No. 52610

Dear Ms. Sinclair:

Balico LLC/Chickahominy Power has applied for a Prevention of Significant Deterioration Permit (“Permit”) to construct and operate a new 1,650 MW capacity gas-fired electric generating facility in Charles City County. The Department of Environmental Quality (DEQ) has classified this proposed facility as a major source of air pollution. If permitted to operate, the proposed Chickahominy power facility threatens to impose significant adverse impacts on Virginia citizens and natural resources. We respectfully ask that this draft Permit be submitted to the Air Pollution Control Board (the Board) for public comment and hearing.

Statement of Interest

The undersigned environmental organizations represent thousands of members from across the Commonwealth who all share a direct interest in a healthy environment, a reduction in the risk of catastrophic climate change impacts, and a commitment to the principles of environmental justice. These principles dictate that no group of people—particularly historically disadvantaged groups such as minorities and lower-income populations—bear a disproportionate share of environmental degradation and pollution.

The operation of a new 1,650 MW gas-fired electric generating facility in Virginia is adverse to the interests of all Virginians as the Commonwealth seeks to meet its obligations to the U.S. Climate Alliance and to future generations—who will suffer the impacts of climate change more acutely than the present one. Moreover, many present-day Virginians are likely to suffer health consequences resulting from a significant new source of emissions of PM, NO_x, CO, SO₂, VOC, H₂SO₄, acrolein, formaldehyde, beryllium, cadmium, chromium, lead, mercury, and nickel.

Environmental Justice Review Must be Supplemented with Local Information and Submitted to the Air Pollution Control Board for Further Analysis

First, we are concerned that final approval of the Permit may allow the emission of pollutants in a manner that disproportionately impacts environmental justice communities in Charles City County.

The U.S. Environmental Protection Agency (EPA) defines *environmental justice* as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.”¹ The EPA further specifies that “[f]air treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.”²

Identifying environmental justice populations can be a challenging task, due both to situations where an affected population is tightly clustered and situations where an affected population is spread widely across the geographic unit studied. The Federal Interagency Working Group on Environmental Justice advises that “[t]o sufficiently identify small concentrations (i.e., pockets) of minority populations, agencies may wish to supplement Census data with local demographic data. Local demographic data and information (including data provided by the community and Tribes) can improve an agency’s decision-making process.”³

DEQ has run an EJSCREEN analysis at 1, 2, and 5 mile radii around the proposed Chickahominy Power site, estimating minority population percentages of 42, 45, and 34, respectively.⁴ These numbers are above state averages, falling in the 61st, 65th, and 52nd percentiles for Virginia.

An initial review of U.S. Census information reveals that Charles City County is majority-minority, with the white (non-Hispanic) population of the county comprising 42.1% of the population, while minorities comprise the remaining 57.9% of the county.⁵ Persons identifying as black or African-American comprise a plurality of the population, at 45.9%. In addition, persons identifying as American Indian or Alaska Native comprise a significant 6.9% of the county.

These numbers indicate that further environmental justice analysis is necessary. EPA cautions that Census block data alone can miss minority hotspots,⁶ and the agency warns “EJSCREEN is a pre-decisional screening tool, and ... should not be used to identify or label an area as an ‘EJ Community.’”⁷ Accordingly, DEQ and the Board should follow federal guidance and seek local demographic data provided by the community and Tribes.

¹ *Learn About Environmental Justice*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (last updated Nov. 7, 2018).

² *Id.*

³ FED. INTERAGENCY WORKING GRP. ON ENVTL. JUSTICE & NEPA COMM., PROMISING PRACTICES FOR EJ METHODOLOGIES IN NEPA REVIEWS 21 (2016), *available at* https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf.

⁴ DEP’T OF ENVTL. QUALITY, ENGINEERING ANALYSIS, PERMIT NO. 52610-001, APPENDIX C – ENVIRONMENTAL JUSTICE REPORTS (Jan. 30, 2019), *available at* <https://www.deq.virginia.gov/Programs/Air/PublicNotices/AirPermits.aspx>.

⁵ U.S. CENSUS BUREAU, *Quick Facts: Charles City County, Virginia*, <https://www.census.gov/quickfacts/charlescencyvirginia> (last visited Mar. 18, 2019).

⁶ U.S. ENVTL. PROT. AGENCY, EJSCREEN TECHNICAL DOCUMENTATION 8, 9 (2017), *available at* https://www.epa.gov/sites/production/files/2017-09/documents/2017_ejscreen_technical_document.pdf.

⁷ *Id.*

It should be noted that DEQ approved a new source PSD permit for another large (1,060 MW) gas-fired electric generating facility in 2018—the C4GT facility. The proposed Chickahominy and C4GT facilities would be sited within one mile of each other, creating further potential for a localized pollution hotspot.

DEQ notes in its Chickahominy engineering analysis that the combined estimated ozone impacts from NO_x and VOC emissions of the Chickahominy facility and the C4GT facility would not place Virginia at risk of violating the 8-hour ozone NAAQS of 70 ppb.⁸ However, this analysis does not discuss the impact of the combined emissions within smaller geographic units or within the 1, 2, and 5 mile radii analyzed in the EJSCREEN. Moreover, this analysis relies upon ozone data collected at the DEQ Shirley Plantation monitoring station, which lies approximately 10 miles southwest of the proposed electric generating facilities. It is unclear from this analysis whether ozone levels in directly impacted communities closer to the proposed facilities would comply with the 8-hour ozone NAAQS if both facilities were in operation. No other analysis of the combined air pollution from the C4GT and Chickahominy facilities has been provided.

Under the Commonwealth Energy Policy found in Virginia Code § 67-102 (A)(11), the Board must act to “[e]nsure that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities.” In addition, the Board must consider the potential for disproportionate adverse impacts on environmental justice communities by analyzing “[t]he suitability of the activity to the area in which it is located.”⁹

Because an environmental justice analysis is not complete and the Board is obligated by statute to act to prevent disproportionate adverse impacts on environmental justice communities, the draft Permit should be submitted to the Board for further analysis, public comment, and hearing.

The Board Must Analyze the Reasonableness of the Facility’s Greenhouse Gas Emissions

We are also concerned that permitting a major new source of greenhouse gas emissions is adverse to the climate policies currently under development in the Commonwealth and counter to recommendations in the most recent report of the Intergovernmental Panel on Climate Change. This report finds that human-caused emissions of CO₂, like electric generating facilities, “would need to fall by about 45 percent from 2010 levels by 2030, reaching ‘net zero’ around 2050” to avoid the most catastrophic impacts from global warming.¹⁰

The proposed Chickahominy facility would emit 5,779,348 or 6,479,692 tons of CO₂e per year, depending on which turbines are chosen.¹¹ The facility’s expected lifetime is “36 years or

⁸ DEP’T OF ENVTL. QUALITY, ENGINEERING ANALYSIS, PERMIT NO. 52610-001, APPENDIX B (Jan. 30, 2019), available at <https://www.deq.virginia.gov/Programs/Air/PublicNotices/AirPermits.aspx>.

⁹ VA CODE ANN. § 10.1-1307 (E).

¹⁰ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SUMMARY FOR POLICYMAKERS OF IPCC SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C APPROVED BY GOVERNMENTS (Oct. 8, 2018), available at <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>.

¹¹ DEP’T OF ENVTL. QUALITY, ENGINEERING ANALYSIS, PERMIT NO. 52610-001 at 5 (Jan. 30, 2019), available at <https://www.deq.virginia.gov/Programs/Air/PublicNotices/AirPermits.aspx>.

more.”¹² If the facility is permitted and operates for its expected lifetime, it is difficult to imagine that Virginia will reach net zero CO₂ emissions by 2050, unless those six million tons are completely offset (all other carbon-emitting sources in Virginia notwithstanding).

Moreover, the Board is currently finalizing a carbon budget trading program that would cap CO₂ emissions from virtually all Virginia fossil fuel-fired electric generating facilities.¹³ As a fossil fuel-fired unit with a generating capacity greater than 25 MWe, the Chickahominy facility would be regulated under this program.¹⁴ The 2020 base budget for total emissions of all regulated units is 28 million tons per year.¹⁵

The Board must consider new greenhouse gas emissions when it considers the reasonableness of permitting new fossil fuel-fired power stations under Virginia Code § 10.1-1307. With specific regard to the proposed Chickahominy facility, the Board should consider whether it is reasonable to permit a single electric generating station whose emissions would represent approximately 23% of the entire 2020 base budget and approximately 33% of the 2030 base budget (19.6 million tons).

Permitting the operation of a new 1,650 MW fossil fuel-fired electric generating facility may also undermine the purpose and intent of Executive Directive 11, which is to respond to the climate crisis by reducing Virginia’s use of fossil fuels and to encourage development of Virginia’s clean energy sector.¹⁶

In addition, finalizing the Permit may prevent the Commonwealth from meeting its obligations under the U.S. Climate Alliance. Governor Northam has continued former Governor McAuliffe’s commitment to greenhouse gas reductions and compliance with the terms of the Paris Accord.¹⁷ Under this agreement, Virginia has committed to:

- Implement policies that advance the goals of the Paris Agreement, aiming to reduce greenhouse gas emissions by at least 26-28 percent below 2005 levels by 2025
- Track and report progress to the global community in appropriate settings, including when the world convenes to take stock of the Paris Agreement, and
- Accelerate new and existing policies to reduce carbon pollution and promote clean energy deployment at the state and federal level.¹⁸

These additional policy considerations are not required under the Clean Air Act, but they should be analyzed during the Board’s required reasonableness analysis under Virginia Code

¹² *Id.* at 22.

¹³ CO₂ Budget Trading Program, 35 Va. Reg. Regs. 1409 (proposed Feb. 4, 2019) (to be codified at 9 Va. Admin. Code §5-140-6010 *et seq.*).

¹⁴ *Id.* at 1416.

¹⁵ *Id.* at 1422.

¹⁶ See Gov. Terence McAuliffe, Executive Directive 11 (May 16, 2017), available at http://jlarc.virginia.gov/pdfs/fiscal_analysis/FIR/2017_ED11.pdf.

¹⁷ See *Governors*, U.S. CLIMATE ALLIANCE, <https://www.usclimatealliance.org/governors-1> (last visited Mar. 19, 2019).

¹⁸ *Alliance Principles*, U.S. CLIMATE ALLIANCE, <https://www.usclimatealliance.org/alliance-principles> (last visited Mar. 19, 2019).

§ 10.1-1307. At minimum, DEQ and the Board should analyze and notify the public what—if any—existing, more carbon-intensive electric generating facilities the C4GT and Chickahominy facilities are likely to displace and explain how the new facilities' emissions will be offset in order to reach net zero CO2 emissions by 2050.

As the Air Board's near-final carbon regulation brings the Commonwealth closer to becoming the first Southern state to regulate greenhouse gas pollution from the power sector, these complex policy questions must be answered. Because the Board is obligated under statute to analyze whether the activities to be permitted are reasonable, the draft Permit should be submitted to the Board for further analysis, public comment, and hearing.

Thank you for the opportunity to comment on this important matter.

Respectfully,

Peter Anderson, Virginia Program Manager
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Sierra Club's Comments on Chickahominy PSD permit

1 message

Tess Fields <tess.fields@sierraclub.org>
To: Alison.Sinclair@deq.virginia.gov
Cc: Dori Jaffe <dori.jaffe@sierraclub.org>

Wed, Mar 20, 2019 at 3:57 PM

Good afternoon,

Attached please find Sierra Club's Comments on the Draft Prevention of Significant Deterioration Permit for the Proposed Chickahominy Power Combined Cycle Power Plant (Registration No. 52610) and relevant exhibits.

Regards,
Tess Fields



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Proudly represented by Progressive Workers Union (PWU)

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3 attachments

- Sierra Club Comments on Chickahominy PSD Permit with exhibits.pdf**
16061K
- Ex 7_Shirley Plantation NO2 Monitor Summary Values 2014 to 2018.xlsx**
14K
- Ex 8_Chickahominy_Inventory.xlsx**
87K

15



March 20, 2019

Ms. Alison Sinclair
Virginia Division of Air Environmental Quality
Piedmont Regional Office
4949 Cox Road
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Via e-mail to Alison.Sinclair@DEQ.virginia.gov

Re: Sierra Club Comments on the Draft Prevention of Significant Deterioration Permit for the Proposed Chickahominy Power Combined Cycle Power Plant (Registration No. 52610)

Dear Ms. Sinclair:

On behalf of its more than 20,000 Virginia members, Sierra Club respectfully submits these comments and requests for Board consideration on the Virginia Department of Environmental Quality's ("VDEQ") draft prevention of significant deterioration ("PSD") permit and stationary source permit to construct and operate the proposed Chickahominy combined cycle power plant project to be located Charles City County, Virginia (Registration Number 52610).¹ This plant is proposed by be constructed by Balico LLC/Chickahominy Power (hereinafter referred to as "Chickahominy Power").

REGULATORY FRAMEWORK

The Clean Air Act aims to "protect and enhance the quality of the Nation's air resources."² To this end, the Act employs a variety of programs—including the Prevention of Significant Deterioration (PSD) program, which governs air pollution in areas where the air quality meets or is cleaner than the national ambient air quality standards.³ The PSD program establishes maximum allowable

¹ These comments were prepared with the assistance of Victoria Stamper, Boise, ID. Ms. Stamper is an independent air quality consultant and engineer with extensive experience in the Clean Air Act and new source review permitting. Ms. Stamper's Curriculum Vitae is included as Ex. 1.

² 42 U.S.C. § 7401.

³ 42 U.S.C. § 7470.

increases of pollutants over baseline concentrations and establishes preconstruction requirements.⁴ The preconstruction requirements described in the Clean Air Act state that no new major stationary source or major modification to an existing major source may commence until a permit is issued that establishes that the new source or the modification to the existing source will meet a number of conditions required by the Clean Air Act.⁵ For a new major source such as the Chickahominy Power Plant, those requirements include that a source must install best available control technology (“BACT”) for all pollutants that it would emit in significant amounts.⁶ A new major source that triggers PSD review for a traditional PSD pollutant also triggers a PSD review for Greenhouse Gas (“GHG”) emissions if the source would emit or have the potential to emit 75,000 tons per year of GHGs on a CO₂ equivalents (CO₂-e) basis.⁷ BACT is defined, in part, under Virginia and federal PSD rules as

an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated New Source Review (“NSR”) pollutant that would be emitted from any proposed major stationary source or major modification that the board, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.⁸

In addition, an owner of a proposed source must demonstrate that

allowable emissions increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to a violation of: 1. Any ambient air quality control standard in any air quality region; or 2. Any applicable maximum allowable increase over the baseline concentration in any area.⁹

Importantly, if a proposed new or major stationary source could cause or contribute to a violation of any ambient air quality standard (including the National Ambient Air Quality Standards (NAAQS)) or the maximum allowable increases over baseline concentration (i.e., PSD increments), the Virginia Air Quality Board must deny the proposed construction unless the source obtains sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact.¹⁰

⁴ 42 U.S.C. § 7473; 42 U.S.C. § 7475.

⁵ 40 C.F.R. § 52.21(a)(2); 9 Virginia Administrative Code § 5-80-1625.A–B.

⁶ 9 Virginia Administrative Code § 5-80-1705.B.

⁷ 40 C.F.R. § 52.21(b)(49)(iv)

⁸ 9 Virginia Administrative Code § 5-80-1615.C. *See also* 40 C.F.R. § 52.21(b)(12).

⁹ 9 Virginia Administrative Code § 5-80-1715.A.

¹⁰ 9 Virginia Administrative Code § 5-80-1715.B.2.

Virginia administers the PSD program through an approved state implementation plan (SIP). Like its federal counterpart, Virginia's PSD program requires would-be permittees to analyze all potential impacts of its proposal on visibility, soils, and vegetation.¹¹ It also adopts the five-step "top down" BACT analysis propounded by the EPA, further developed by its Environmental Appeals Board,¹² and upheld by the federal courts.¹³ The Air Pollution Control Board's *Air Permitting Guidelines* expressly incorporate the top-down BACT approach¹⁴ and direct permit writers to the EPA's *New Source Review Workshop Manual*¹⁵ for additional guidance.¹⁶ Failing to conduct a complete BACT analysis, including failure to consider all potentially applicable control alternatives, is an abuse of the permitting authority's discretion.¹⁷

¹¹ 9 Virginia Administrative Code § 5-80-1755.

¹² The EPA's Environmental Appeals Board adjudicates appeals from federally-issued PSD permits (as well as state permits issued under federal delegation) and has developed a body of case law on BACT requirements. Because state PSD programs must "implement standards and limitations as stringent as those set by the EPA" and must be interpreted "with an eye to furthering the goals of the [federal] PSD program," state courts and agencies turn to the Board's rulings in applying their respective state PSD programs. *Utah Chapter of the Sierra Club v. Air Quality Board*, 226 P.3d 719, 727, 733 (Utah 2009). *Accord Sierra Club v. Wisconsin Department of Natural Resources*, 787 N.W.2d 855, 862 (Wis. Ct. App. 2010), *rev. denied*, 797 N.W.2d 523 (2011); *Cities of Annandale and Maple Lake NPDES/SDS Permit*, 731 N.W.2d 502, 520 (Minn. 2007). In fact, some states have indicated that the Board's decisions establish a regulatory "floor" for state PSD program: while its decisions are not always binding on a state permitting authority, *Utah Chapter of the Sierra Club*, 226 P.3d at 733, this is largely a function of the fact that state programs may "in certain respects [be] stricter than the federal program." *See Snyder v. Pennsylvania Department of Environmental Protection*, Docket No. 2015-027-L, 2015 WL 9590755, *7 (Pa. Env. Hrg. Bd. 2015). In short, a permitting authority is required to follow the EPA's analytical framework unless it has clearly articulated (and provided a statutory foundation for) its own alternative. *Creek Generation LLC*, Petition No. IV-2008-1, 9 (E.P.A. December 15, 2009), available at <http://1.usa.gov/1q45FX9> (*Cash Creek D*).

¹³ *See generally Sierra Club v. Environmental Protection Agency*, 499 F.3d 653 (7th Cir. 2007).

¹⁴ *See Virginia Air Pollution Control Board, Air Permitting Guidelines – New and Modified PSD Sources*, Doc. ID APG-309, 4-1 (November 2, 2015), available at <http://1.usa.gov/1SgbYjt> (enclosed as Attachment 1).

¹⁵ *See Environmental Protection Agency, New Source Review Workshop Manual* (1990), available at <http://1.usa.gov/1UWvgOp> (enclosed as Attachment 2).

¹⁶ Virginia Air Pollution Control Board, *Air Permitting Guidelines* at 4-1.

¹⁷ *See Louisville Gas & Electric Co.*, 2009 WL 7698409, 13 (E.P.A. 2009) (enclosed as Attachment 98) (citing *Prairie State Generation*, 13 E.A.D. ____, PSD Appeal No. 05-05, slip op. at 19 (E.A.B. 2006); *Knauf Fiber Glass*, 8 E.A.D. 121, 142 (E.A.B. 1999); *Masonite Corp.* 5 E.A.D. 551, 568-569 (E.A.B. 1994)).

PROPOSED PROJECT

The Chickahominy Power Plant (“Chickahominy”) is a proposed natural gas-fired combined cycle power plant located near Roxbury, in St. Charles County, Virginia. Chickahominy would have a generating capacity of 1,650 nominal net megawatts (MW), and consist of either (1) three General Electric (GE) 7HA.02 combustion turbine generators, each with heat recovery steam generators, or (2) three Mitsubishi Hitachi Power Systems (MHPS) M501JAC combustion turbine generators with heat recovery steam generators.¹⁸ VDEQ proposed in the draft permit that this source is subject to PSD permitting requirements for nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), PM less than 10 microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}), greenhouse gases (GHG or CO₂-e), volatile organic compounds (VOCs), sulfuric acid mist (H₂SO₄), and sulfur dioxide (SO₂) under the federal and state PSD regulations.¹⁹

COMMENTS

Sierra Club provides the following comments on the draft permit for Chickahominy and its compliance with the PSD permitting requirements.

I. COMMENTS ON VDEQ’S PROPOSED EMISSION LIMITS FOR TUNING AND WATER WASHING

VDEQ proposed short term limits to meet BACT on either a pollutant-mass-per-fuel-heat-input basis or as a limit on concentration of the pollutant in the gas stream. These short-term averaging times and limits, including the NO_x limit of 2.0 parts per million dry volume (ppmvd) at 15% oxygen (O₂) which applies on a one-hour averaging time basis,²⁰ are generally in line with what has been required to meet BACT at other combined cycle power plants. However, VDEQ’s draft permit would exempt periods of tuning and water washing from the short term average NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} BACT limits and instead impose a pound per calendar limit (for NO_x and CO) or time limits on tuning or water washing (for VOCs and PM) when those events occur.²¹ VDEQ failed to justify the relaxed emission limits for tuning and on-line water washing events as satisfying BACT.

Comment No. 1: There is No Adequate Justification in the Permit Record for the Alternative BACT Emission Limits for Tuning and On-Line Water Washing Events.

A review of other permits for similar sources with the same turbine type found that air permits generally do not have exemptions for tuning or on-line water washing events. For example, a 2015 air permit issued for the CPV Towantic combined cycle power plant in Connecticut, an 805-MW

¹⁸ Permit Application at 1-1.

¹⁹ As discussed in VDEQ’s January 30, 2019 Engineering Analysis for the Chickahominy Plant at 2.

²⁰ Draft Permit at 12 (Condition 33).

²¹ *Id.*

power plant equipped with two GE 7HA.01 combustion turbines with dry low NO_x combustors, selective catalytic reduction (SCR), and oxidation catalyst has hourly emission limits similar to those proposed for Chickahominy, but the permit has no exemptions or alternative emission limits for tuning, maintenance, or on-line water washing.²² Similarly, a 2018 air permit for the Harrison County combined cycle power plant—a West Virginia plant using one GE 7HA.02 combined cycle turbine and equipped with the same pollution controls²³—has hourly emission limits but the permit has no exemptions or alternative emission limits for tuning (or maintenance) or on-line water washing.²⁴ Further, a 2018 air permit issued for the proposed NTE Connecticut combined cycle power plant—a Killingly, Connecticut plant using one MHPS M501JAC combustion turbine equipped with the same pollution controls—has hourly emission limits but no exemptions/alternative emission limit for tuning or water washing.²⁵ Given that there are other permits for the same types of combustion turbines with short-term average BACT limits (including one-hour average limits for NO_x) without any alternative limits for tuning and water washing, VDEQ must justify the need for alternative and less-stringent emission limits (pound/calendar day limits rather than limiting the concentration of a pollutant in the gas stream over each hour of operation) for tuning and water washing at Chickahominy. VDEQ must explain why circumstances at the Chickahominy units are different than the circumstances at these similar plants with identical combustion turbine technology and why alternative limits for tuning and water washing events are justified in light of the fact that similar source permits do not have such alternative limits.

In addition, Chickahominy did not even request an alternative BACT limit for tuning and water washing for particulates,²⁶ and yet VDEQ inexplicably allowed for such exemptions, on its own, in the draft permit.²⁷ There is absolutely no justification in the permit record for alternative PM BACT limits for tuning and water washing events.

Comment No. 2: If VDEQ Can Justify Alternative Emission Limits for Tuning and Water Washing, VDEQ Must Impose Limits on the Duration and Frequency of Such Events to Ensure These Exemptions from Concentration-Based BACT Limits are Limited to the Maximum Extent Possible.

In the event VDEQ can put forth adequate justification for alternative emission limits for tuning and water washing at Chickahominy, VDEQ must ensure that the frequency and duration of any

²² November 30, 2015 Permit Number 144-0023 for CPV Towantic, LLC, at 2, 4-5, and 7 (attached as Ex. 2).

²³ As discussed in the permit application for the Harrison County power plant, available at http://dep.wv.gov/daq/Documents/December%202016%20Applications/033-00264_APPL_R14-0036.pdf.

²⁴ March 27, 2018 Permit No. R14-0036 for Harrison County Facility, at 3, 13 (attached as Ex. 3).

²⁵ December 10, 2018 Permit Number 089-0107 for NTE Connecticut LLC, at 2, 5-6, and 7 (attached as Ex. 4).

²⁶ *Id.* at 5-31.

²⁷ Draft Permit at 12-13 (Condition 33) and at 14-15 (Condition 34).

alternative emission limits are minimized to the greatest extent possible.²⁸ While VDEQ may argue that the pound-per-calendar-day emission limits are reflective of BACT because they reflect the BACT concentration limits at maximum operating capacity over an entire day,²⁹ BACT emissions limits are required to reflect the maximum degree of emission reduction achievable,³⁰ imposed over averaging times that are protective of the NAAQS.³¹ For NO_x and CO emissions, that means BACT should be imposed over an hourly averaging time to protect the 1-hour average NAAQS for these pollutants. The alternative emission limits for NO_x and CO that apply on a pound-per-calendar-day basis are not protective of the short-term average NAAQS. Further, although the alternative limits for tuning and water washing reflect the pounds of pollutants that would be allowed at the maximum steady-state capacity under the BACT limits over a calendar day,³² these limits do not ensure the maximum degree of emission reduction is achieved and thus they are generally not consistent with BACT. This is particularly true because, based on the information provided by Chickahominy Power in the permit application, there is no need for a 24-hour exemption from the short-term average, concentration-based BACT limits for tuning and water washing events that generally will not last anywhere near 24 hours. Thus, assuming VDEQ can adequately justify the need for alternative BACT limits, it must ensure that those alternative emission limits are minimized in quantity and duration. Chickahominy Power provided information in its permit application to justify such restrictions, but, without explanation, VDEQ did not impose such restrictions in the draft permit.

The Chickahominy permit application indicates that there are three levels of tuning:

- (1) combustion inspections,
- (2) hot gas path inspections, and
- (3) major overhauls.³³

The permit application states that tuning may take “up to 18 hours in a calendar day.”³⁴ It is not likely that all three of these types of tuning would occur for a full 18 hours a day, and yet VDEQ’s draft permit does not differentiate between the different types of tuning and allows a tuning event

²⁸ This is stated as EPA’s policy for startup and shutdown exemptions, but the same policy would hold true for any BACT exemptions. *See State Implementation Plans: Response to Petition for Rulemaking: Restatement and Update of EPA’s SSM Policy Applicable to SIPS; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*, 80 Fed. Reg. 33,840 at 33,914 (June 12, 2015).

²⁹ *See* Permit Application at 5-31.

³⁰ *See* 40 C.F.R. §52.21(b)(12).

³¹ *See* November 24, 1986 EPA Memorandum with Subject “Need for a Short-term Best Available Control Technology (BACT) Analysis for the Proposed William A. Zimmer Power Plant,” attached as Ex. 5.

³² As discussed in the Permit Application at 5-31.

³³ Permit Application at 5-20.

³⁴ *Id.* at 5-35 (Emphasis added).

to be exempt from hourly BACT limits for an entire calendar day. Further, the permit application indicates that on-line water washing events would take no longer than 60 minutes per turbine.³⁵ Yet VDEQ proposed an alternative calendar day emissions cap rather than the units having a 1-hour average alternative BACT limit.³⁶ While VDEQ did impose limits on the duration of tuning and water washing events as alternative limits for VOCs, PM, PM₁₀, and PM_{2.5},³⁷ it did not impose any such duration limits on the alternative limits for NO_x and CO—if a tuning event or washing event occurs, the unit is allowed a pound-per-calendar-day limit in lieu of short term average BACT. Further, with respect to VDEQ's limits on duration of events for VOCs and PM limits, the draft permit allows tuning events to occur up to 18 consecutive hours, when that is likely a longer duration than warranted for all three types of tuning events for which Chickahominy Power has requested a separate emission limit. Indeed, the permit application implies that some tuning events would last only 8 hours or less.³⁸ Thus, VDEQ must request more information on the duration as well as frequency of the tuning events expected at Chickahominy and, assuming alternative emission limits can be justified for such periods, impose different emission limits for those time periods and activities. This is similar to how VDEQ addressed startup and shutdown activities, where VDEQ proposed to limit the duration of startup and shutdowns and imposed limits on pounds-per-duration of startup or shutdown.³⁹

Further, to limit the frequency of the exemptions from BACT limits for tunings and water washes, the draft permit must impose limits on the frequency of such events. The permit application indicates that the maximum time per year that burner tuning would need to occur at each combustion turbine is 96 hours.⁴⁰ Yet, VDEQ did not impose any limit on the total number of hours of burner tuning that would be allowed per year at each combustion turbine.

For water washing, the Chickahominy permit application indicates that the maximum amount of time needed to conduct water washes in a year is 52 hours.⁴¹ This is, on average, once per week. VDEQ is essentially proposing alternative emission limits for water washing that allow Chickahominy to be exempt from the hourly average BACT limits one day a week on average for water washing events that, according to the permit application, only last 60 minutes per turbine. If any exemption from BACT limits for water washing is justified (which is questionable given the other similar source permits do not have such BACT exemptions/alternatives), it must be limited to no longer than 60 minutes (similar to the startup and shutdown alternative emission limits of the draft permit) and the total number of hours conducting water washing must be limited as well to no more than the 52 hours per year—the time the company has claimed is the maximum amount of time that water washing will occur at Chickahominy.

³⁵ *Id.* at 5-30.

³⁶ Draft Permit at 13 (Condition 33.b) and 14 (Condition 34.b).

³⁷ Draft Permit at 13 (Condition 33.b) and 14 (Condition 34.b) and at 6 (Condition 10).

³⁸ Permit Application at 5-35.

³⁹ Draft Permit at 5-6 (Condition 9), 13 (Condition 33.d) and 14 (Condition 34.d).

⁴⁰ Permit Application at 5-30.

⁴¹ *Id.* at 5-37.

Comment No. 3: The Draft Permit Fails to Require Advance Notification to VDEQ of Tuning and Water Washing Events and Fails to Require Adequate Recordkeeping and Reporting for these Events.

VDEQ's draft permit also fails to include reporting and recordkeeping requirements pertaining to the tuning or water washing events time periods. The Chickahominy permit application states that the company would notify VDEQ at least 24 hours in advance of a planned tuning event,⁴² and yet the permit application requires no such advance notification or even recordkeeping of these events. Advance notification of tuning events, as well as recordkeeping and reporting, is imperative to ensure that the owner/operator cannot justify an exemption from hourly BACT limits simply by claiming a period of higher emissions was due to a tuning or water washing event. Further, advance notification, recordkeeping, and reporting is also extremely important to the enforceability of the permit terms—so it is clear to the source owner/operator, VDEQ, and the public which emission limits apply to each hour of operation. Thus, to the extent that VDEQ can justify including alternative emission limits for tuning and on-line water washing as BACT, advance notification to VDEQ and recordkeeping and reporting requirements for those events must be required in the permit.

VDEQ must also require recordkeeping of the events that led to the decision to conduct a tuning event to ensure such exemptions from short term BACT limits are justified. The Chickahominy permit application states that the company will conduct tuning “only when necessary to maintain compliance with short term emission limits.”⁴³ The draft permit should therefore require recordkeeping and reporting of short-term average emission rates before and after tuning events to verify that such tuning events were justified and, in fact, effective.

Summary: Alternative Emission Limits for Tuning and On-Line Water Washing Must Be Properly Justified and If Allowed, Limited in Duration and Quantity.

VDEQ failed to justify imposing different and less stringent emission limits for NO_x, CO, VOCs, and PM/PM₁₀/PM_{2.5} during episodes of tuning or on-line water washing. Similar sources with hourly BACT limits and identical model combustion turbines did not have alternative emission limits for tuning and water washing allowed in air permits. The NO_x and CO pound-per-calendar-day emission limits of the draft permit for tuning and water washing events are less stringent than even requested in the Chickahominy permit application, and the company did not request alternative emission limits for particulate matter. Thus, the permit record does not support the alternative emission limits for tuning and water washing as proposed in the draft permit. If VDEQ can justify such limits, it must impose requirements to limit the duration and frequency of such events, and it must also impose adequate reporting and recordkeeping as discussed above.

⁴² *Id.* at 5-35.

⁴³ *Id.* at 5-36.

II. COMMENTS ON VDEQ'S PROPOSED EMISSION LIMITS FOR STARTUPS AND SHUTDOWNS

Comment No. 4: The Draft Permit Fails to Adequately Justify the Numeric Pound-Per-Event Limit.

VDEQ's draft permit would exempt periods of startup and shutdown from the short term average NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} BACT limits.⁴⁴ The draft permit includes time limits on the various types of startups (e.g., cold startup, warm startup, hot startup) that are 66 minutes or less in duration and on shutdowns, which are only allowed to occur for 15 minutes.⁴⁵ During these periods, the units would be exempt from the short-term average concentration-based BACT limits and would instead be subject to limits on pounds of a pollutant per startup/shutdown event.⁴⁶ However, the permit record does not adequately justify the numeric pound-per-event limits of the draft permit. The permit application indicates that NO_x, CO and VOC emissions are based on "Gemma data,"⁴⁷ however, that data and its assumptions do not appear to be in the permit record.⁴⁸

Comment No. 5: The Draft Permit Fails to Include Limits on the Number of Allowed Startups and Shutdowns Per Year.

Further, the draft permit does not include any limits on the number of allowed startups and shutdowns per year. As discussed above, EPA's policy on alternative emission limits for startup and shutdowns requires that such events be limited in duration and frequency to the maximum extent possible.⁴⁹ The permit application includes information on the number of expected startups and shutdowns per year,⁵⁰ and VDEQ should impose such limits as permit terms to ensure that excess emissions during startup and shutdown are minimized.

Comment No. 6: The Draft Permit Fails to Require Reporting of Startup and Shutdown Events.

While the draft permit requires recordkeeping of startup and shutdown events, it fails to require reporting of such events to VDEQ.⁵¹ Such reporting is extremely important to the enforceability of the permit terms—so it is clear to the source owner/operator, VDEQ, and the public, which emission limits apply to each hour of operation. It is also important to ensure that that the

⁴⁴ Draft Permit at 12-14 (Conditions 33 and 34).

⁴⁵ *Id.* at 5-6 (Condition 9).

⁴⁶ *Id.* at 12-14.

⁴⁷ Permit Application, Appendix B at B-4 (Table B-1.3) and B-14 (Table B-2.3).

⁴⁸ *See U.S. Steel Corp.*, Petition No. V-2009-03, 2011 WL 3533368, *14–28 (EPA January 31, 2011) (vacating air permit where state agency did not disclose the origin of emission factors it relied upon and failed to explain why it believed those factors to be representative).

⁴⁹ *See* 80 Fed. Reg. 33,840 at 33,914 (June 12, 2015).

⁵⁰ Permit Application, Appendix B at B-4 (Table B-1.3) and B-14 (Table B-2.3).

⁵¹ Draft Permit at 6 (Condition 9).

owner/operator has taken all possible steps to minimize emissions during startup and shutdown, as required by EPA for alternative emission limits.⁵² Thus, VDEQ must require timely reporting of all periods of startup and shutdown of Chickahominy as well as information about the operation of pollution controls during such periods to VDEQ.

III. COMMENTS ON VDEQ'S PROPOSED EMISSION LIMITS FOR GREENHOUSE GAS EMISSIONS

Comment No. 7: VDEQ Failed to Adequately Justify its Proposed BACT Limits for Greenhouse Gases.

VDEQ addressed BACT for greenhouse gases (GHG) by proposing a limit on CO₂-e emissions in terms of pounds-per-net-megawatt-hour (lb/MWh net) that ranges over years of operation of the plant from 824 lb/MWh net to 884 lb/MWh net and by proposing heat rate requirements in terms of British-Thermal-Units-per-net-kilowatt-hour (Btu/kWh net) that range over the years of operation of the plant from 6,550 to 7,172 Btu/kWh net.⁵³ Unlike BACT for other pollutants, VDEQ did not propose different CO₂-e BACT limits for the two types of combustion turbines that could be constructed under this permit. The data collected by VDEQ on emission limits and the actual emissions for other similar combustion turbines demonstrate that the BACT limits proposed by VDEQ do not reflect the maximum degree of reduction in emissions that can be achieved at Chickahominy.

First, it must be noted that the Chickahominy units will not have duct burners to increase generating capacity, which is a very important factor in setting CO₂-e BACT limits for the combustion turbine generators. It seems to be more common to design combined cycle plants with duct firing to increase the generating capacity of the units. However, combined cycle units with duct firing have higher heat rates in terms of Btu/kWh and have higher lb CO₂-e/MWh rates due to more fuel burned per unit of electricity produced. Specifically, one analysis showed that duct burners increase the heat rate by about 4.7% compared to no duct firing.⁵⁴ In Draft Permit Condition 8, where VDEQ describes the GHG control strategies, VDEQ should also indicate that the absence of duct burners at the Chickahominy combine cycle units is inherently part of the CO₂-e BACT determination. Stating this clearly in the permit is necessary to make sure that, if Chickahominy Power ever decides to add duct firing to the combined cycle units, it is treated as a revision to the BACT determination, which would necessitate a PSD permit revision regardless of whether adding such duct firing would result in a significant emission increase of any NSR regulated pollutant.

⁵² See 80 Fed. Reg. 33,840 at 33,914 (June 12, 2015).

⁵³ Draft Permit at 5 (Condition 8) and 15 (Condition 35).

⁵⁴ See, e.g., 2/2/2006 Power Engineering article, To Cool or Not to Cool, available at <https://www.power-eng.com/articles/print/volume-110/issue-2/features/to-cool-or-not-to-cool.html>. Specifically, Table 2 shows that the heat rate for Case 3 with duct-firing (6668 Btu/kWh) is about 4.7% higher than the heat rate for Case 1 with no duct-firing (6371 Btu/kWh).

Second, it is not clear why VDEQ did not propose two different CO₂-e BACT determinations depending on the combustion turbines installed at this facility (i.e., GE 7HA.02 combustion turbine generators or MHPS M501JAC combustion turbine generators). Notably, in its evaluation of similar source BACT heat rate requirements, VDEQ evaluated data for sources with GE turbines separately from sources with MHPS turbines.⁵⁵ And the data presented by VDEQ shows varying heat rates and/or lb/MWh limits that, in part, seem to pertain to the specific combustion turbine. Thus, it makes sense for VDEQ to establish different CO₂-e BACT determinations for the two turbine types that could be constructed under this permit, as VDEQ did for BACT for other pollutants.

Third, VDEQ should also impose a limit on pounds of CO₂-e per gross MWh in lieu of, or in addition to, lb/per net MWh. The mass of CO₂-e per gross electricity production is what matters in terms of the climate impacts from CO₂-e emissions, as it reflects the total amount of emissions due to the operation of the power plant, not just total CO₂-e emissions due to the amount of electricity sent to the grid for sale. An appropriately stringent limit on pounds of CO₂-e per gross MWh would encourage Chickahominy Power to limit the parasitic load and would promote overall improvements in efficiency.

A review of the existing BACT limits and emission rates for combined cycle units with the MHPS M501JAC combustion turbine generators shows that the lowest BACT heat rate limit for greenhouse gases is that imposed by VDEQ for the Dominion Greensville Power Station, which are initially set at 6,457 Btu/kWh.⁵⁶ This is more stringent than the initial heat rate required in the Chickahominy BACT determination, which is 6,550 Btu/kWh net.⁵⁷ Yet, VDEQ dismissed this lower rate, which VDEQ itself imposed as BACT for a similar source, because they did not yet have data that the limit was being achieved at the Dominion Greensville plant. VDEQ's reasoning is flawed because that lack of data did not prevent VDEQ from imposing the limit on the Greensville plant in the first place. Moreover, testing was recently performed at the Greensville plant and VDEQ (as the permitting and enforcement authority for the Greensville plant) could have easily requested that data from Dominion.

Not only is the initial test Btu/kWh net limit for the Greensville plant more stringent than the initial heat rate for Chickahominy, but the Year 6, Year 12, Year 18, and Year 24 Btu/kWh net limits for the Greensville plant are all lower than the VDEQ's proposed heat rate limits for those same operational years at the Chickahominy units.⁵⁸ This information from the Greensville permit is extremely relevant to the BACT determination for Chickahominy. VDEQ must ensure that the CO₂-e BACT limits it imposes on the Chickahominy combustion turbine generators are at least as

⁵⁵ VDEQ Engineering Analysis at 17-18.

⁵⁶ *Id.* at 22. Importantly, this heat rate is required to be met without duct burning and so it for a similar unit to the Chickahominy units.

⁵⁷ *Id.* See also Draft Permit at 5 (Condition 8).

⁵⁸ See June 17, 2016 Air Permit Registration No. 52525 for the Greensville Power Station at 5 (Condition 8), attached as Ex. 6, and compare to the net heat rates identified in the greenhouse BACT analysis for the Chickahominy power station (in the VDEQ Engineering Analysis at 22). See also Draft Permit at 5 (Condition 8).

stringent as the most stringent emission limit required for all similar sources. If VDEQ determines such a limit, as it imposed on the similar Greenville plant, is not justified as BACT for the Chickahominy units, it must document in the permit record why such limits would not be achievable.⁵⁹

In addition to the Greenville heat rate limits being more stringent than what VDEQ proposed as BACT for the Chickahominy units, the lb CO₂-e/MWh net limits for the Greenville Power Station are also more stringent than the lb CO₂-e/MWh net limits imposed in the Draft Permit for Chickahominy for Years 1-24.⁶⁰ Specifically, the Greenville BACT limits range from 812-859 lb CO₂-e/MWh net for Years 1-24, while VDEQ's proposed BACT limits for Chickahominy Power are higher, ranging from 824-868 lb CO₂-e/MWh for Years 1-24.⁶¹ Further, based on the data presented by VDEQ in its Engineering Analysis, there are other similar plants with lower CO₂-e BACT limits as well, including the CPV Towantic combustion turbine (a GE 7HA.01 combustion turbine), which began operating in mid-2018 and has an initial CO₂-e BACT limit of 809 lb/MWh net (compared to the 824 lb/MWh net limit proposed by VDEQ for the Chickahominy units).⁶²

More stringent CO₂-e BACT limits have been imposed for sources very similar to the Chickahominy units, and VDEQ cannot ignore those lower emission limits in its GHG BACT determination without providing "clear justification" that the lower emission limits imposed on similar sources to meet BACT are not appropriate for the Chickahominy units.⁶³ VDEQ has not put forth any such clear justification to ignore the more stringent CO₂-e BACT limits required for similar sources, and thus VDEQ's CO₂-e BACT analysis and limits are significantly flawed.

Last, it also must be stated that the ton per year CO₂-e limits in Draft Permit Condition 36 cannot be considered as reflective of BACT, because these CO₂-e emission limits of 1,901,202 tons per year for the GE turbines and of 2,123,519 for the MHPS turbines simply reflect the worst-case hourly emission rate multiplied by 8,760 hours in a year with the expected startup and shutdown CO₂-e emissions added in.⁶⁴ If VDEQ does not impose a limit on lb CO₂-e per MWh gross, then it should impose a ton per year limit but one that is reflective of BACT, not a limit based on worst-case CO₂-e emissions.

⁵⁹ See U.S. EPA, October 1990, New Source Review Workshop Manual at B.26-B.29.

⁶⁰ See June 17, 2016 Air Permit Registration No. 52525 for the Greenville Power Station at 15 (Condition 40), attached as Ex. 6, and see Draft Permit for the Chickahominy plant at 15 (Condition 35).

⁶¹ *Id.*

⁶² VDEQ Engineering Analysis at 23.

⁶³ U.S. EPA, October 1990, New Source Review Workshop Manual at B26-B29.

⁶⁴ Permit Application, Appendix B at b-3 to B-5 and at B.12-B.15.

IV. COMMENTS ON MODELING DEFICIENCIES AND FAILURE TO ENSURE CHICKAHOMINY WILL NOT CAUSE OR CONTRIBUTE TO NAAQS VIOLATIONS

The modeling analysis for the Chickahominy permit is deficient for several reasons, including that Chickahominy Power failed to model worst-case emissions allowed under the tuning and water washing alternative emission limits and because the company failed to model worst-case startup NO_x emissions. Further, the cumulative NAAQS analysis is deficient because Chickahominy Power failed to adequately model the nearby planned C4GT/Novi Energy combined cycle power plant. Because of these deficiencies, VDEQ must require revised modeling before it can determine whether Chickahominy will cause or contribute to a violation of the NAAQS.

Comment No. 8: Chickahominy Power Failed to Model Worst Case Emissions Allowed under the Alternative Emission Limits for Tuning and Water Washes.

Despite requesting alternative emission limits to BACT for tuning and on-line water washing, Chickahominy Power did not conduct any NO_x or CO modeling for the alternative emission limits applicable during these events. The modeling section of the Chickahominy permit application does not explain why, but we surmise that Chickahominy Power may have assumed the base-load modeling of BACT limits addressed tuning and water washing emissions because the company claimed the pound-per-calendar-day limits that apply to those events were equivalent to BACT limits at maximum capacity.⁶⁵ While that may be the basis for those limits, the fact that the limits had to be imposed over a 24-hour calendar day rather than over the 1 hour (for NO_x) or 3 hour (for CO) averaging time of the BACT limits reflects how much higher than BACT emission levels the company expects NO_x and CO emissions could be during tuning events.

For both the tuning events and water washing events, the permit application states that the “dry low-NO_x combustors may not be as effective during tuning and water washing.”⁶⁶ Dry low-NO_x combustors, when operating correctly, significantly reduce NO_x emissions—typically to 9 parts per million (ppm).⁶⁷ If the dry low-NO_x combustors are not working as well during tuning or water washing, NO_x emissions from the combustion turbines could reach 25 ppm or higher. The SCR, assuming it is operated during such events, would only be designed to achieve about 78% NO_x control⁶⁸ and thus emissions could be significantly higher than the 2 ppm BACT limit if the dry low-NO_x combustors were not working as effectively during tuning or water washing events. For tuning events, the Chickahominy permit application indicates that the unit will be operated at low,

⁶⁵ Permit Application at 5-37.

⁶⁶ *Id.* at 5-35.

⁶⁷ See, e.g., EPA’s Catalog of CHP Technologies, Section 3. Technology Characterization – Combustion Turbines, at 3-16, available at https://www.epa.gov/sites/production/files/2015-07/documents/catalog_of_chp_technologies_section_3_technology_characterization_-_combustion_turbines.pdf.

⁶⁸ This percent control was based on the 9 ppm NO_x rate from the low-NO_x combustors and the 2 ppm BACT limit.

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mid, and high loads.⁶⁹ Thus, the varying levels of fuel input—and, consequently, mass emissions of NO_x and CO—over those events would mean that the pound-per-calendar-day limit, which is based on emissions at maximum fuel input while meeting BACT limits, would enable a unit to emit at very high hourly NO_x and CO rates for some part of the day because total calendar day emissions will likely be balanced out by lower NO_x and CO rates at low or mid load during other parts of the day. Similarly, Chickahominy Power has indicated water washing events would last 60 minutes, and yet VDEQ proposed to allow compliance with a pound-per-calendar-day limit when these events occur. Clearly in these situations, emissions could be much higher over the water washing hour and balanced out with lower emissions over the rest of the day. VDEQ must require a determination and modeling of the worst-case hourly emissions that would be allowed under the alternative emission limits for these events.

Further, as discussed above, nothing in the draft permit would limit the frequency of the tuning and water washing events. The Chickahominy permit application indicates water washing events could occur 52 times per year,⁷⁰ meaning on average, a combustion turbine could be allowed to comply with a pound-per-day limit rather than a short term average ppm limit once a week. However, the permit does not limit water washes or tuning events. These events and exemptions from short term NO_x and CO limits are allowed to occur quite frequently, thus mandating that peak hourly emissions during such events be modeled for compliance with the NAAQS.

Moreover, under the terms of the draft permit, if a startup and/or shutdown occurs during a calendar day with a tuning or water washing event, those startup and shutdown emissions are allocated separate emission limits and those emissions do not count against the tuning/on-line water washing emission limits.⁷¹ Thus, if a startup and shutdown occurred with a tuning or water washing event, emissions from those timeframes would not count towards compliance with the pound-per-calendar-day limits, which allows the combustion turbine to emit even higher rates in a calendar day than the alternative tuning and water washing limits would normally allow.

For all of these reasons, it is imperative that VDEQ require modeling of worst-case emissions allowed under the alternative pound-per-calendar-day limits for NO_x and CO for tuning and water washing events. Such modeling must be done for the 1-hour NO₂ NAAQS, the 1-hour and 8-hour CO NAAQS, and, given the frequency of these events allowed under the permit, the annual NO₂ NAAQS. VDEQ cannot determine whether Chickahominy will cause or contribute to a violation of the NAAQS under the emissions allowed under its draft permit until such modeling has been conducted.

Comment No. 9: The Modeling of Emissions Allowed During Startup is Flawed.

Chickahominy Power failed to properly model worst-case hourly NO_x or CO emissions allowed under the terms of the draft permit for cold starts of the GE 7HA.02 combustion turbine generators. According to the Permit Application, Chickahominy Power modeled startup emissions for

⁶⁹ Permit Application at 5-36.

⁷⁰ *Id.* at 5-37.

⁷¹ Draft Permit at 13 (Condition 33.b) and at 14 (Condition 34.b).

averaging times for which the duration of the startup is shorter than the averaging period, and the remaining time in the averaging period was assumed to be associated with 100% load (and presumably BACT emission limits).⁷² However, for cold startups of the GE 7HA.02 combustion turbine generators (which reflect the worst-case emissions for startups), Chickahominy Power limited the modeled NO_x and CO emissions by assuming the allowable emissions for cold startups could not be emitted in an hour because the Draft Permit allows cold startups to last up to 66 minutes. Chickahominy Power's modeling of cold startups does not reflect worst-case impacts from cold starts of the GE 7HA.02 combustion turbine generators.

Of all of the separate limits for startups and shutdowns, the draft permit allows the highest NO_x and CO emissions for cold starts from GE 7HA02 combustion turbine generators. Specifically, the draft permit allows 312 lbs of NO_x per cold start event per turbine and it allows 924 lbs of CO per cold start event per GE 7HA.02 turbine.⁷³ The draft permit states that cold startups shall not exceed 66 minutes per occurrence.⁷⁴ The permit application indicates that a cold start can take 66 minutes,⁷⁵ but nothing in the permit application indicates that NO_x or CO emissions occur at the same rate over a cold startup time period or that cold startups will always last a full 66 minutes. Indeed, in a permit recently issued for the nearby C4GT combined cycle power plant—which has proposed, as one option, to install the same GE 7HA.02 combustion turbine generators—only allows up to 60 minutes for a cold startup of the GE turbines.⁷⁶ Further, it does not make sense to assume the 1-hour average NO_x limit or the 3-hour average CO limit will be complied with immediately after the 66 minute mark after a cold startup, because compliance with a 1-hour or 3-hour average BACT limits under the permit is for discrete periods between the beginning of an hour and the end of that hour.⁷⁷ The short-term limits do not apply on a rolling 60-minute or 180-minute basis. In other words, if a cold startup occurs from 9:15 A.M. for 66 minutes until 10:21 A.M., neither the hour starting at 10 A.M. nor the hour starting at 11 A.M. would be counted for compliance with the 1-hour NO_x limit or the 3-hour CO limit. Compliance with those short term BACT limits would not be required under the terms of the permit until 11:00 A.M.

Yet, in the company's modeling of cold startups for the GE 7HA.02 combustion turbine generators, the allowable NO_x and CO emissions were reduced by the ratio of 60 minutes/66 minutes.⁷⁸ This modeling is not a realistic worst-case assessment of the maximum emissions that could be allowed

⁷² Permit Application at 6-6.

⁷³ Draft Permit at 13 (Condition 33.d).

⁷⁴ *Id.* at 5 (Condition 9.a.ii).

⁷⁵ Permit Application at 3-2.

⁷⁶ See Draft PSD Permit Registration No. 52588 for the C4GT plant at 2 (under Equipment List) and at 5 (Condition 9.a.ii), attached as Ex. 9. Sierra Club has been unable to locate the final version of this permit on VDEQ's website.

⁷⁷ Draft Permit at 19 (Condition 45).

⁷⁸ Permit Application at 6-7. (60/66)*the allowable 312 lbs of NO_x per cold startup event per GE 7HA.02 turbine = 283.64 lb/hr, which was modeled for each turbine to reflect the cold startup impacts.

in an hour with cold startups of the GE 7HA.02 combustion turbine generators. Instead, the company must be required to model the entire allowable 312 lbs of NO_x and 924 lbs of CO as being emitted at each turbine over an hour. Such emissions would clearly be allowed to occur in one hour under the draft permit. That is the only reasonable approach for evaluating whether the maximum allowable hourly emissions for cold startups under the terms of the draft permit will cause or contribute to a NAAQS violation.

Comment No. 10: The Background 1-Hour NO₂ Concentrations Used in the 1-Hour NO₂ NAAQS Modeling Have Not Been Justified.

Chickahominy Power did not accurately reflect background NO₂ concentrations in its 1-hour NO₂ modeling assessments. Specifically, although Chickahominy Power identified the background 1-hour average NO₂ concentration as 42 parts per billion (ppb) based on the Shirley Plantation monitor, the company did not use that 1-hour NO₂ background concentration in the modeling of startup emissions. Instead, Chickahominy Power used NO₂ background concentrations that varied by hour of day and by seasons.⁷⁹ None of those NO₂ concentrations over season and hour of the day, which are listed in Table 6-16 of the permit application, even approached the 42 ppb background concentration for the Shirley Plantation monitor listed in Table 6-15 of the permit application. The highest of the NO₂ concentrations developed by the company for season and hour of day was 27.4 ppb, which is only 65% of the 2016 background concentration that would be used to assess compliance with the 1-hour NAAQS of 42 ppb.⁸⁰ Even using the most recent three years of data for the Shirley Plantation NO₂ monitor of 2016-2018, the background concentration would be 35.7 ppb based on the three-year average of the 98th-percentile daily maximum hourly concentrations.⁸¹ The background concentrations used by Chickahominy Power as varying by hour of day and season are not reflective of the current background concentration that would be used to assess the area's compliance with the 1-hour NO₂ NAAQS.

Chickahominy Power stated the Shirley Plantation monitor is in the same county as the proposed Chickahominy plant, within 14 kilometers of the proposed plant, and generally downwind of the proposed Chickahominy plant and upwind of the industrialized site in the city of Hopewell.⁸² Thus, the company found that the NO₂ concentration measured at the Shirley Plantation monitor "should be very representative of background air quality data" for the proposed project.⁸³ Chickahominy Power has not provided any justification for not using the very representative background concentration in the form that is used to assess compliance with the NAAQS, nor has the company justified its use of background 1-hour NO₂ concentrations varying by hour and by season. Further,

⁷⁹ Permit Application at 6-25.

⁸⁰ Compliance with the 1-hour NO₂ NAAQS is based on the three-year average of the 98th percentile daily maximum monitored hourly NO₂ concentration. *See* 40 C.F.R. §51.11(f).

⁸¹ *See* spreadsheet with Shirley Plantation NO₂ monitor summary data attached as Ex. 7 downloaded from EPA's Outdoor Air Quality Data Website at <https://www.epa.gov/outdoor-air-quality-data/download-daily-data>.

⁸² Permit Application at 6-24.

⁸³ *Id.*

the record does not contain the hourly and seasonal concentration data that underlie the seasonal and time of day background concentrations that the company used in the modeling in Table 6-16, nor does it explain how those monitor values were derived.

The use of a proper background 1-hour NO₂ concentration is extremely important given how close the modeling of the Chickahominy plant when equipped with GE 7HA.02 turbines is to the 1-hour NO₂ NAAQS. Chickahominy Power reported a modeled concentration of 1-hour NO₂ of the plant with GE 7HGA.02 turbines of 180.23 µg/m³, which is almost 96% of the 1-hour NO₂ NAAQS of 188 µg/m³.⁸⁴ But this modeling result was based on use of NO₂ background concentrations that vary by season and by hour of the day and that do not reflect the actual background concentration data that would be used to assess compliance with the 1-hour NO₂ NAAQS. VDEQ must require Chickahominy Power to assess whether the Chickahominy plant will cause or contribute to a 1-hour NO₂ NAAQS violation based on a proper background concentration representative of the data that is used to assess compliance with the 1-hour NO₂ NAAQS.

Comment No. 11: The Cumulative NO₂ Modeling is Flawed Because Chickahominy Power Failed to Model Allowable NO_x Emissions from the Proposed C4GT Charles City Combined Cycle Power Plant.

VDEQ recently proposed a permit for another gas-fired combined cycle power plant, the C4GT Charles City Combined Cycle Power Plant, which is planned to be located within a mile of Chickahominy. Given the proximity of these sources, it is imperative that the Charles City Power Plant's emissions be included in the cumulative modeling done for Chickahominy. Based on the background source inventory for Chickahominy that we obtained from VDEQ, it appears that the cumulative modeling for Chickahominy did include the C4GT power plant. However, a careful review of the emissions listed as modeled for the C4GT plant in comparison to the permit limits shows that the cumulative modeling for Chickahominy understated allowable NO_x emissions from the C4GT power plant.

Specifically, according to the background source inventory for Chickahominy, the C4GT combustion turbine generators were modeled at NO_x rates of 3.67786 grams per second for the annual NO₂ and 1-hour average NO₂ NAAQS modeling,⁸⁵ equating to 24.13998 pounds per hour. The short-term average NO_x BACT limit for the two C4GT combustion turbine generators is 2.0 ppmvd at 15% oxygen,⁸⁶ equating to about 0.00739 pounds per million British Thermal Units heat input (lb/MMBtu). The maximum heat input capacity allowed at the C4GT combustion turbine generators is 3,957 MMBtu/hr if Option 1 is selected and GE 7HA.02 combustion turbine generators are installed and is 4,107 MMBtu/hr if Option 2 is selected and Siemens SGT6-8000H

⁸⁴ Permit Application at 8-2.

⁸⁵ See Background Source Inventory spreadsheet, obtained by Sierra Club from VDEQ, at tabs labeled "Annual_NO2" and "1hr_NO2," at cells I4 and I5. A copy of the Background Source Inventory is attached as Ex. 8.

⁸⁶ See Draft PSD Permit Registration No. 52588 at 3 (Condition 1), attached as Ex. 9. Sierra Club has been unable to locate the final version of this permit on VDEQ's website.

combustion turbine generators are installed.⁸⁷ Thus, for normal source operation, the two C4GT combustion turbine generators should have been modeled at 29.24223 lb/hr (for the GE 7HA.02 units) or at 30.35073 lb/hr (for the Siemens SGT6-8000H units). Clearly, the cumulative modeling for Chickahominy understated emissions from the C4GT combustion turbine generators and thus the cumulative NO₂ analysis is significantly flawed, especially given how close these plants will be to each other. Further, as stated above, the 1-hour NO₂ modeling for Chickahominy already shows 1-hour NO₂ concentrations that are almost 96% of the 1-hour NO₂ NAAQS of 188 µg/m³.⁸⁸ That modeling is based on background 1-hour NO₂ concentrations that are significantly lower than what is currently considered the background concentration for the area and that fails to reflect worst-case hourly startup NO_x emissions from the Chickahominy plant.

Further, given the proximity of the C4GT plant to Chickahominy, the fact that both plants will presumably be using the same transmission lines and possibly the same substation, VDEQ needs to take into account the likelihood that both plants could come off line concurrently and that cold startup emission rates could occur at both plants at the same time. The C4GT plant draft permit allows 273 pounds of NO_x per cold startup event per turbine for the GE 7HA.02 units,⁸⁹ and it appears that the C4GT plant will be equipped with those turbines.⁹⁰ VDEQ must require the modeling of a scenario of cold startups occurring at both plants.

Moreover, the C4GT plant permit appears to have similar exemptions from short term average NO_x BACT limits for tuning and water washing, allowing up to 683 pounds of NO_x per turbine per calendar day for those events, with no limit on the number or total hours of such events at the plant.⁹¹ Given how frequently these events could occur at both the Chickahominy and G4CT power plants, VDEQ must require a cumulative modeling analysis of the worst-case allowable hourly emissions from these events to ensure protection of the 1-hour NO₂ NAAQS.

For all of these reasons, the cumulative NO₂ NAAQS analysis is significantly flawed due to the failure to adequately model allowable short-term average NO_x emissions from the nearby C4GT plant and the failure to model concurrent worst case NO_x emissions from both the C4GT plant and Chickahominy.

Summary of Flaws in Modeling for the Chickahominy Permit

In summary, for the various reasons discussed above, VDEQ cannot find that Chickahominy will not cause or contribute to a violation of the NO₂ NAAQS without new modeling that addresses (1)

⁸⁷ *Id.* at 2, under Equipment List. The total hourly heat input includes the heat input of the duct burners, as the 2.0 ppmvd NO_x limits apply with or without duct burning.

⁸⁸ Permit Application at 8-2.

⁸⁹ *See* Draft PSD Permit Registration No. 52588 at 12 (Condition 34.d).

⁹⁰ *See* March 7, 2019 GE Press Release, NOVI Energy Selects GE's HA Gas Turbine for Charles City Combined Cycle Plant in Virginia, at <https://www.genewsroom.com/press-releases/novi-energy-selects-ge%E2%80%99s-ha-gas-turbine-charles-city-combined-cycle-plant-virginia>.

⁹¹ *See* Draft PSD Permit Registration No. 52588 at 7 (Condition 10) and at 12 (Condition 34.b).

worst case emissions from tuning and water washing, (2) worst case hourly emission rates allowed under the terms of the permit for cold startups (with worst case being allowed for the GE 7HA.02 combustion turbine generators), (3) proper background NO₂ concentration data from the Shirley Plantation monitoring site, and (4) the short-term NO_x emissions allowed by the permit for the C4GT power plant, and the worst- case NO_x emissions allowed for this nearby plant together with the worst-case NO_x emissions allowed for the Chickahominy power plant.

**REQUEST FOR DIRECT CONSIDERATION BY
THE AIR POLLUTION CONTROL BOARD**

The substantial legal and factual issues set forth in the comments above warrant direct consideration by the State Air Pollution Control Board under 9 Virginia Administrative Code § 5-80-25. In support of this request for Board consideration, the Sierra Club states:

1. The undersigned's mailing address and telephone number are:
Dori E. Jaffe
Sierra Club
50 F St NW, Eighth Floor
Washington, D.C. 20001
(202) 675-6275

2. The undersigned is acting as a representative of the Sierra Club, whose mailing address and telephone number is:

Virginia Chapter—Sierra Club
442 East Franklin Street, Suite 302
Richmond, Virginia 23219
(804) 225-9113

3. The Sierra Club is a nonprofit conservation organization with more than 600,000 dues-paying members nationwide and 20,000 members in Virginia. The Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out those objectives. Through its Clean Power Solutions campaign, the Sierra Club's Virginia Chapter encourages investments in the Commonwealth's substantial renewable energy potential. The Sierra Club's members reside within proximity of the proposed plant, and they live within the airsheds and other areas potentially affected by its operations. As such, the Sierra Club and its members have immediate, pecuniary, and substantial interests in the outcome of this permitting proceeding and would be adversely affected by the construction and operation of the facility.

4. All substantive comments set forth above are incorporated by reference. We maintain that these comments must be addressed in order to bring the proposed permit into conformance

with the Clean Air Act, the Virginia Air Pollution Control Law, and Virginia's State Implementation Plan. These comments raise substantial (and presumably disputed) issues relevant to the issuance of the permit in question. Furthermore, the actions requested in the above comments are not inconsistent with the Virginia Air Pollution Control Law or any other federal law or regulation promulgated thereunder; the actions requested are in fact *necessary* in order to satisfy the requirements of the law.

5. Due to the substantial nature of the legal and factual issues raised in the comments above, the Director should submit the proposed permit action to the Board under either 9 Virginia Administrative Code § 5-80-25(C) or 9 Virginia Administrative Code § 5-80-25(F), as appropriate, and the Board should grant consideration of this permitting action—either at the suggestion of the director under 9 Virginia Administrative Code § 5-80-25(C) or 9 Virginia Administrative Code § 5-80-25(F), or acting independently under 9 Virginia Administrative Code § 5-80-25(D).

To the extent an evidentiary or other public hearing to contest this permit action is permitted under 9 Virginia Administrative Code § 5-80-35 or any other provision of Virginia law, the Sierra Club requests such a hearing to facilitate the presentation of additional evidence and legal argument concerning the proposed action. In support of this request, Paragraphs 1–5 above are incorporated by reference.

Sierra Club appreciates the opportunity to comment on this draft permit.

Sincerely,



Dori E. Jaffe
Senior Attorney
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Washington, DC 20001
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*Counsel for the Virginia Chapter of
the Sierra Club*



Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Concerns re Chickahominy Power Station

1 message

Christopher Thomas <chris@nihilitta.com>
To: alison.sinclair@deq.virginia.gov

Wed, Mar 20, 2019 at 2:06 PM

Dear Ms. Sinclair,

I would like to register my concern about the Chickahominy Power Station and request that this project be reviewed by the Air Pollution Control Board.

APPLICANT NAME AND REGISTRATION NUMBER: Balico LLC; 52610

FACILITY NAME AND ADDRESS: Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Hemdon, VA 20171

Issues around environmental justice, increased carbon emissions, and the health and welfare of the most vulnerable citizens in the area are all issues that need to be addressed.

Thank you for your time and attention.

Chris Thomas

4101 Hanover Ave., Richmond, VA 21321

703.785.0119

- This permit should be rejected because we are looking to limit our greenhouse gas emissions from our fossil-fuel sector. DEQ monitors carbon not methane. Although methane emissions are lower than carbon dioxide emissions, it is a major greenhouse gas because each methane molecule has 86 times the global warming potential of a carbon dioxide molecule.
 - In a time of increasing threats from climate change, Virginia needs to be driving down our greenhouse gas emissions not increasing them.
- There is already a higher incidence than normal of both chronic obstructive pulmonary disease and asthma in this county, and any additions to polluting this atmosphere is of great concern. Virginia Department of Health maps show that relative to other areas of Virginia, Charles City County and the surrounding region show higher incidences of asthma.
- This is the LARGEST proposed fracked gas plant in the country. At 1,650 Megawatts, it is bigger than nearby Chesterfield Power Station.
 - In a time of declining fracked gas need, rising energy efficiencies, and more accessible renewable options - do we really need to commit to this large scale plant that would be in operation for the next 40 years?
- The closest monitoring station, at Shirley Plantation, sits in the opposite direction from prevailing winds relative to the Chickahominy Power Station.
 - Violations will be difficult to detect.
 - With two proposed fracked gas plants and one landfill on site, it will be difficult to determine which site is in violation.
 - How will DEQ ensure that violations are being captured and appropriately charged?



Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Public Comment For Balico LLC 52160 Chickahominy Power Station

1 message

VTForestryMom <vtforestrymomvt@gmail.com>
To: Alison.Sinclair@deq.virginia.gov

Wed, Mar 20, 2019 at 1:16 PM

To:
Alison Sinclair, Piedmont Regional Office, 4949 Cox Rd., Ste. A, Glen Allen, VA 23060:
Phone: (804) 527-5155; E-mail: Alison.Sinclair@DEQ.virginia.gov; Fax: (804) 527-5106

From:
Amy C Walker, 3640 Milton Mews Ct, Quinton, VA 23141

RE: Balico LLC Active Air Permit, Public Comment, Chickahominy Power Station, Reg No 52160

Dear Mrs. Sinclair,

I would like the following comments documented regarding the Chickahominy Power Station. I am strongly opposed to the construction of the power station in the proposed location. I find it a disservice to the citizenry of New Kent County that the study circumference was not expanded to at least 5-7 miles as the population numbers would have exponentially increased due to the large subdivisions on the New Kent side of Rt 60. The number of children would have increased exponentially as well, as these are all densely populated suburban single family subdivisions. This lack of acknowledgement of population centers is disturbing, particularly those so densely populated with children (Patriot's Landing, Five Lakes, Woodhaven Shores)

I am a current resident of New Kent County, and would be located within approximately 7 miles of the proposed power station. While I have been a resident of New Kent County for nearly a decade, we have recently built a brand new home in Quinton. I am a severe asthmatic and would never have built a home within such proximity of a power station. I note the allowable discharge components and limits, exceptions, and testing regimes; do not eliminate the fact that various compounds would be released into the air that I will be breathing into my already compromised lungs. As can be seen in the 1 mile vs 2 mile radius information provided, settling of the components away from the stacks can be noted. Before this permit is approved, I would request a study circumference of 5-7 miles be provided publicly so that myself and residents of the single family subdivisions may understand what would be airborne and/or settling on them and provide comment as they feel appropriate.

The noted compliance information and monitoring regime provides no assurance to me that this power station will be required to meet safety standards at all times. More assurance of monitoring and stricter guidelines for discharges at all times needs to be instituted versus a 12-month total or averages. Averages and year long totals allow for extreme high values for short periods of time that may exceed safety standards. There is a permitted air discharge facility in a neighboring county that has exceeded permitted discharge levels time and again; noting again facility discharge levels are not always within permitted requirements, and even if caught, the discharges continue until eventual action is taken. These high level discharges, even short sporadic ones, could severely affect individuals such as myself with already compromised breathing.

I will refer once more that my residence is approximately within 7 miles of the proposed power station. The potential negative impact on our home price has not been identified in these studies, but is a very real factor; as the 'plumes' will be potentially visible from our home. A study of the impact on home prices within the 5-7 mile radius of the power station should also be conducted in order to truly reflect the economic impact of the station. (The actual need for the station within Charles City County should be further examined as part of the economic impact by the Commonwealth as discussed by previous commenters.)

Respectfully Submitted
Amy Walker



Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Please review the air permit for the Chickahominy Power Station - Fracked Gas is the wrong choice

1 message

Heidi Dhivya Berthoud <campaigns@good.do>
Reply-To: Heidi Dhivya Berthoud <heidi1008@gmail.com>
To: alison.sinclair@deq.virginia.gov

Wed, Mar 20, 2019 at 9:05 AM

Dear Ms. Sinclair

I would like to register my concern about the Chickahominy Power Station and request that this project be reviewed by the Air Pollution Control Board.

APPLICANT NAME AND REGISTRATION NUMBER: Balico LLC; 52610
FACILITY NAME AND ADDRESS: Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Herndon, VA 20171

Issues around environmental justice, increased carbon emissions, and the health and welfare of the most vulnerable citizens in the area are all issues that need to be addressed. This is the time to move forward, away from fossil fuels, towards renewables. The hour is beyond late.

Thank you for your time and attention.
NAME: Heidi Dhivya Berthoud
ADDRESS: 366 Wyland Rd Buckingham VA 23921
PHONE NUMBER: 434 979 9732

Yours sincerely,
Heidi Dhivya Berthoud
Buckingham, Virginia, 23921, United States

This email was sent by Heidi Dhivya Berthoud via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at campaigns@good.do, however Heidi Dhivya provided an email address (heidi1008@gmail.com) which we included in the REPLY-TO field.

Please reply to Heidi Dhivya Berthoud at heidi1008@gmail.com.

To learn more about Do Gooder visit www.dogooder.co
To learn more about web protocol FC 3834 visit: www.rfc-base.org/rfc-3834.html



Sinclair, Allison <alison.sinclair@deq.virginia.gov>

RE: Draft PSD permit public notice

1 message

Sarah Stewart <sstewart@richmondregional.org>
 To: "alison.sinclair@deq.virginia.gov" <alison.sinclair@deq.virginia.gov>

Thu, Mar 14, 2019 at 4:57 PM

Alison,

RRPDC staff inquired with staff of member localities about this permit. No comments were received. RRPDC staff have no comments about the proposed project at this time.

Thank you,

Sarah

Sarah Stewart, AICP

Richmond Regional Planning District Commission

9211 Forest Hill Ave., Suite 200 | Richmond, VA 232235

www.richmondregional.org

804.323.2033 | Fax 804.323.2025

From: Martha Shickle**Sent:** Thursday, January 31, 2019 10:08 AM**To:** Sarah Stewart <sstewart@richmondregional.org>**Subject:** Fwd: Draft PSD permit public notice

Martha Shickle

Executive Director- RRPDC

mshickle@richmondregional.org

540.336.1323

From: Sinclair, Allison <alison.sinclair@deq.virginia.gov>**Sent:** Thursday, January 31, 2019 9:52:43 AM**To:** meredith_bond@fws.gov; Don Shepherd; John Notar; Melanie Pitrolo; Jill Webster; Jim_Northup@nps.gov; Andrea Stacy; Holly Salazer; Jalyn Cummings; tspeaks@fs.fed.us; Clyde Thompson; aq_permits@fws.gov**Cc:** vit@henrico.us; scott.stevens@jamescitycountyva.gov; swanner@surrycountyva.gov; administration@princegeorgecountyva.gov; dhunter@princegeorgecountyva.gov; countyadministrator@chesterfield.gov; haleyl@chesterfield.gov; rahathaway@newkent-va.us; cttiller@newkent-va.us; fairfield@henrico.us; mjohnson@co.charles-city.va.us; chickahominyindiantribe@gmail.com; gsmith@co.charles-city.va.us; pamunkeytribe@pamunkey.org; james.icenhour@jamescitycountyva.gov; Del L. Bagby; district09@senate.virginia.gov; district03@senate.virginia.gov; Dance, Rosalyn R.; Ruff Jr, Frank; Peace, Christopher; delEBrewer@house.virginia.gov; Ingram, Riley; jgore@hopewellva.gov; rarrington@hopewellva.gov; Martha Shickle**Subject:** Draft PSD permit public notice

You requested that DEQ notify you of the opportunity to comment on proposed major stationary source permits, or you are being notified because you are a government or tribal representative in an affected jurisdiction.

The Piedmont Regional Office of the Virginia Department of Environmental Quality has made a preliminary determination concerning the application for a Major Stationary Source New Source Review Permit for Chickahominy Power, LLC pursuant to 9 VAC 5, Chapter 80, Article 8 of the [Virginia Regulations for the Control and Abatement of Air Pollution](#). The Chickahominy Power, LLC Station will be located on Chambers Rd, 3600 ft east of the intersection with Roxbury Rd, in Charles City County, Virginia. The public will be notified of the opportunity to comment by means of a notice placed in the New Kent-Charles City Chronicle on Thursday, January 31, 2019 (see attached). A Public Hearing will be held on Tuesday, March 5, 2019. The comment period closes on March 20, 2019. All comments must be received at this regional office prior to the close of business on that date.

If you have questions concerning this project, or you would like a copy of the proposed permit or supporting documentation, please contact me at (804) 527-5155 or by email at Alison.Sinclair@DEQ.Virginia.gov .

Allison Sinclair

Air Permit Writer Sr. II

DEQ Piedmont Regional Office

4949-A Cox Road



Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Balico LLC/Chickahominy Power

1 message

Finley-Brook, Mary <mbrook@richmond.edu>
To: "alison.sinclair@deq.virginia.gov" <alison.sinclair@deq.virginia.gov>

Thu, Feb 28, 2019 at 9:30 PM

APPLICANT NAME AND REGISTRATION NUMBER: Balico LLC; 52610
FACILITY NAME AND ADDRESS: Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Herndon, VA 20171

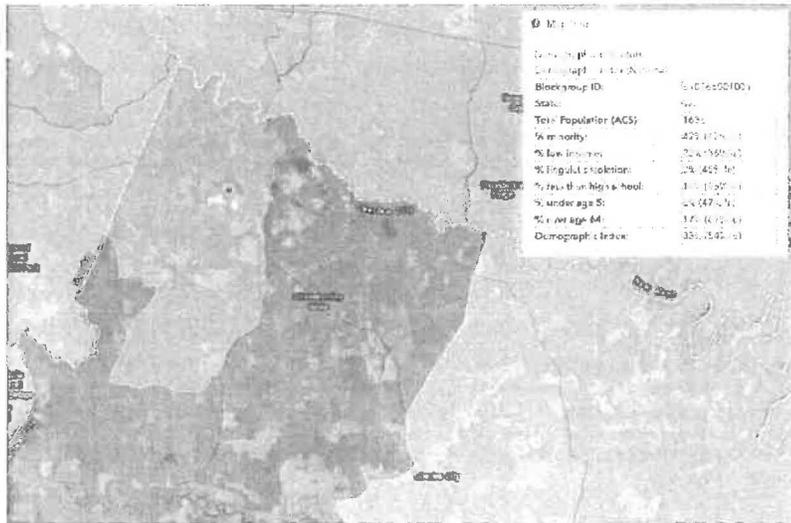
Dear Ms. Sinclair:

I am requesting that the PSD air permit for the above referenced Chickahominy Power project be heard before the Virginia Air Pollution Control Board. This an exceptionally large combined cycle gas plant at 1650 MWs with significant potential emissions, as shown in Table below from 2019 engineering analysis as submitted with the permit application.

Table 2 - Expected emissions from the proposed facility are as follows:

| Pollutant | Option 1: GE Emissions (tons/yr) | Option 2: MHPS Emissions (tons/yr) |
|--|----------------------------------|------------------------------------|
| NO _x | 368 | 407 |
| CO | 398 | 323 |
| SO ₂ | 54 | 62 |
| VOC | 74 | 211 |
| PM (filterable only) | 168 | 169 |
| PM ₁₀ | 168 | 169 |
| PM _{2.5} | 168 | 169 |
| CO _{2e} | 5,779,348 | 6,479,692 |
| Sulfuric acid mist (H ₂ SO ₄) | 37 | 65 |
| Acrolein | 0.20 | 0.23 |
| Formaldehyde | 8.81 | 9.86 |
| Beryllium | 0.00058 | 0.00064 |
| Cadmium | 0.053 | 0.059 |
| Chromium | 0.067 | 0.075 |
| Lead | 0.024 | 0.027 |
| Mercury | 0.013 | 0.014 |
| Nickel | 0.10 | 0.12 |

The proposed plant is located in census tracts (shown below) that are 42% and 65% minority, requiring analysis of the populations located closest to the facility to assure there is not an even higher cluster that might be hidden in the aggregated data at the census tract level. Existing industry around this site demonstrates the need to consider to existing burden of hazardous pollutants so as to not avoid disproportionately impact to marginalized or vulnerable populations.





Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Request for Air Pollution Control Board hearing on Chickahominy Power

1 message

Glen Besa <glenbesa@gmail.com>
To: alison.sinclair@deq.virginia.gov

Thu, Feb 28, 2019 at 6:36 PM

APPLICANT NAME AND REGISTRATION NUMBER: Balico LLC; 52610 FACILITY NAME AND ADDRESS: Balico LLC/Chickahominy Power, 1380 Coppermine Rd. Ste.115, Herndon, VA 20171

Dear Ms. Sinclair:

I am requesting that the PSD air permit for the above referenced Chickahominy Power project be heard before the Virginia Air Pollution Control Board.

This an exceptionally large combined cycle gas plant at 1600 MWs located in a rural county that has a majority minority population including a sizable Native American population of 6.9% in the last census. I understand that these are ancestral lands of the federally recognized Chickahominy Native American Tribe and that tribal members have raised environmental justice concerns related to the disproportionate impacts of this project.

Given the completion of the Skiffes Creek transmission line, there is no need for this power plant for reliability purposes. Because of the absence of any need for this project, in particular, and its anticipated disproportionate impact on minorities populations, **I am requesting that this PSD permit be heard by the Air Pollution Control Board.** Additionally, with DEQ's pending regulations to reduce CO2 emissions from fossil fuel power plants, the impact 6,479,692 tons of CO2e from this plant should be evaluated in the context of these new regulations to address climate change and meet carbon pollution targets under the Northeast Regional Greenhouse Gas Initiative (RGGI).

Thank you,
Glen Besa
4896 Burnham RD
North Chesterfield, VA 23234
glenbesa@gmail.com
c-804-387-6001



Sinclair, Alison <alison.sinclair@deq.virginia.gov>

Fwd: Chickahominy Power Plant

1 message

Faggert, Stanley <stanley.faggert@deq.virginia.gov>
 To: Alison Sinclair <alison.sinclair@deq.virginia.gov>

Fri, Mar 15, 2019 at 3:17 PM

Hey, just realized that you might not have this yet...

----- Forwarded message -----

From: **Thompson, Tamera** <tamera.thompson@deq.virginia.gov>
 Date: Fri, Mar 15, 2019 at 12:04 PM
 Subject: Fwd: Chickahominy Power Plant
 To: Faggert, Stanley (DEQ) <stanley.faggert@deq.virginia.gov>

Tamera Thompson
 Manager, Office of Air Permit Programs
 VA DEQ
 1111 E. Main Street
 Richmond, VA 23219
 (804) 698-4502
 tamera.thompson@deq.virginia.gov

----- Forwarded message -----

From: **Dowd, Michael** <michael.dowd@deq.virginia.gov>
 Date: Fri, Mar 15, 2019 at 12:02 PM
 Subject: Fwd: Chickahominy Power Plant
 To: Tamera Thompson <tamera.thompson@deq.virginia.gov>

----- Forwarded message -----

From: **Paylor, David** <david.paylor@deq.virginia.gov>
 Date: Fri, Mar 15, 2019 at 9:30 AM
 Subject: Fwd: Chickahominy Power Plant
 To: Michael Dowd <michael.dowd@deq.virginia.gov>

David K. Paylor
 804-698-4020

----- Forwarded message -----

From: **Stephen Adkins** <stephenradkins@aol.com>
 Date: Thu, Mar 14, 2019 at 1:22 PM
 Subject: Chickahominy Power Plant
 To: <david.paylor@deq.virginia.gov>

Dear Director Paylor,

Mr. Irfan Ali, the head of the company responsible for the Chickahominy Power Plant Project, contacted me at the outset of the project's development. He asked if the Chickahominy Indian Tribe (CIT) had any concerns re the proposed name of the power plant. Given the fact the proposed site for the plant is adjacent to the Chickahominy substation and there are several businesses close by "named" Chickahominy, the tribe did not oppose the name for the power plant. By the way, I do not recall the other businesses reaching out to the CIT prior to naming their business(es) Chickahominy.

In addition to the aforementioned, Mr. Ali reviewed data showing the potential levels of emissions, noise levels, potential health implications etc. The air pollution is not expected to pose negative impacts for reasonable use of property with regard to health, soils, vegetation or visibility. After reviewing the data, I shared it with the tribal council.

On March 1, 2019, the CIT held a public meeting to discuss the power plant. Around forty people attended the meeting. Mr. Ali fielded questions from 4 pm to 5:30 pm. Attendees included two members of the Charles City County School Board, the school superintendent of instruction, a member of the Board of Supervisors, members of the clergy et al. The discussion was very robust and informative. (By contrast the Charles City County public hearing on March 5, 2019 was attended by fewer than ten members of the public)

After the public meeting, the Tribal Council convened in our council room and met privately with Mr. Irfan. In this meeting he was "grilled" by the council members and provided answers to all of their questions.

It has recently come to my attention that the Virginia Department of Environmental Quality is giving consideration to presenting the air permit application for the Chickahominy Power project to the Virginia Air Board for a decision. As I understand, part of the reason being given for such consideration is that the project developers were negligent and possibly even abusive in their public outreach to our Tribe and the use of our Nation's name. Clearly that this is not the case and in no wise should it be used as leverage to advance the air permit application to the Virginia Air Board.

On a personal note, I reviewed the project on its merits and I am convinced that it and your Department of Environmental Quality will safeguard our community and our Tribal members through the air permit under consideration.

Regards,

Stephen R. Adkins
 Chief, Chickahominy Tribe

