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10
11 **BEFORE THE ADMINISTRATOR**
12 **UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

13 **PARTNERSHIP FOR POLICY INTEGRITY,**)
14 Petitioner,)

15 v.)

16 **GINA MCCARTHY, ADMINISTRATOR,**)
17 United States Environmental Protection Agency,)
18 Respondent.)

19 Application for Permit 4911-171-0014-V-02-0

20 **PETITION TO OBJECT TO THE PROPOSED TITLE V PERMIT FOR PIEDMONT GREEN**
21 **POWER, LLC ISSUED BY THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION.**

22 **I. Introduction**

23 Pursuant to Section 505(b)(2) of the Clean Air Act (“CAA” or “Act”), 40 C.F.R. § 70.8(d), and
24 applicable Federal and State regulations, Partnership for Policy Integrity (“Petitioner” or “PFPI”) hereby
25 petitions the Administrator of the U.S. Environmental Protection Agency (“EPA”) to object to Part 70
26 Permit No. 4911-171-0014-V-02-0 (“Permit” herein, included as Exhibit 1 Permit No. 4911-171-0014-
27 V-02-0), issued by the Environmental Protection Division (“EPD”, “Georgia”, or the “State” herein) of
28 the Air Protection Branch of Georgia’s Department of Natural Resources for the operation of a 60.5
megawatt (MW) steam-turbine generator powered by a 700 MM/Btu/hr biomass boiler owned by

1 operated by Piedmont Green Power, LLC Facility (“PGP” or “Facility”) in the City of Barnesville,
2 Lamar County, State of Georgia.

3 All major stationary sources of air pollution and certain other sources are required to apply for
4 permits to construct and to operate, consolidated as Title V operating permits that include emission
5 limitations and other conditions necessary to assure compliance with applicable requirements of the Act.
6 CAA §§ 502(a), and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a). The Title V program does not
7 generally impose new substantive air quality control requirements, but is intended to comprehensively
8 assure compliance with and enforceability of substantive requirements found elsewhere in the Act. 57
9 Fed Reg. 32250, 32251 (July 21, 1992). As such, the permit must contain sufficiently detailed
10 monitoring, record keeping, reporting and other requirements to ensure compliance with applicable
11 requirements. *Id.* Under 40 C.F.R. § 70.1(b), “[a]ll sources subject to [the Title V regulations] shall
12 have a permit to operate that *assures compliance* by the source will all applicable requirements”
13 (emphasis added). The program is designed to “enable the source, States, EPA *and the public* to
14 understand better requirements to which the source is subject, and whether the source is meeting those
15 requirements. 57 Fed Reg. 32250, 32251 (July 21, 1992) (emphasis added). EPA explains that the Title
16 V operating permit program is “*a vehicle for ensuring* that air quality control requirements are
17 appropriately applied to facility emissions *and for assuring* compliance with such requirements.” *Order*
18 *Granting in Part and Denying in Part Petition for Objection to Permit* for Petition No. IX-2011-1 p. 2
19 (emphasis added) (“Hu Honua Order”).

20 As detailed below, PGP's Permit fails to assure compliance with the Act and conflicts with the
21 letter and spirit of the Title V program. The Permit suffers from various legal deficiencies, including
22 significant omissions attributed to EPD. Because the Permit is not in compliance with applicable
23 requirements, the EPA is under a duty to object to this Permit, and should direct that this project undergo
24 Prevention of Significant Deterioration permitting process as a Major Source. 40 C.F.R. § 70.8(c)(1);
25 *see also* 42 U.S.C. § 7661d(b)(1) and *New York Public Interest Research Group, Inc. (NYPIRG) v.*
26 *Whitman*, 321 F.3d 316; 333 n.11 (2nd Cir. 2003). Petitioners request that the Administrator of the EPA
27 object to the Permit on each of the specific objections detailed below, and order EPD to commence
28 permitting processes for PGP as a Major Source.

29 This petition is timely filed within sixty days following the end of U.S. EPA’s 45-day review
30 period as required by Clean Air Act § 505(b)(2) and 40 C.F.R. § 70.8 (d). In compliance with section
31 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), this petition is based on objections to the various

1 iterations of the proposed permit that were raised with reasonable specificity during the public comment
2 period provided by the Act, or on issues that could not have been raised previously.

3 Petitioner is the Partnership for Policy Integrity (“PFPI”) is a non-profit corporation that
4 provides scientific and legal support so that citizen groups, environmental organizations, and
5 policymakers can better understand energy development impacts on air quality, ecosystems, and the
6 climate.

7 **II. Facility and Permit Background**

8 On June 28, 2013 (and May 15, 2014) PGP applied for a Title V permit renewal for the operation
9 of a 60.5 MW steam turbine generator powered by a 700 MMBtu/hr circulating fluidized bed boiler,
10 which fires a combination of biomass and small quantities of biodiesel during startup, shutdown and bed
11 stabilization¹ only. The original permit and four (4) amendments include various iterations of output
12 and capacity, including the following combinations—49.8 MW generator and 719 MMBtu/hr boiler
13 (4911-171-0014-E-01-0); 54.5 MW generator and 657 MMBtu/hr boiler (4911-171-0014-E-01-1); 53.5
14 MW generator and 684 MMBtu/hr (4911-171-0014-E-01-4). Exhibit 2 Statement of Basis 4911-171-
15 0014-V-02-0 (“SOB”). The SOB indicates that in all circumstances the Facility is a major source under
16 PSD for both NOx and CO emissions in the absence of operational limits on its Potential to Emit
17 (“PTE”). Nevertheless, PGP asserts and the State concurs that the PGP facility can operate the facility
18 using a synthetic minor permit, and cap emissions at the facility at 249 tons per year (TYP) for criteria
19 pollutants and not more than 10 and 25 TPY for HAPs, individually and collectively.

20 By all measures the Facility owners and operators have struggled both to keep the facility online,
21 and to maintain operational pollution monitoring equipment. In 2012 the Facility experienced a major
22 failure that required the plant to go off-line for as many as three weeks (perhaps longer) to allow
23 Siemens to replace the Facility’s virtually new turbine. Exhibit 3 e.mail re Damage to Turbine. On
24 February 27, 2014, the Company reported that the Facility had experienced *91 operating upset*
25 *conditions* since May, 2013. Exhibit 4 Atlantic Power presentation to EPD. Further, the facility’s
26 testing data during 2013 includes widely differing operating conditions; at the same time the emissions
27 monitoring equipment frequently recorded “zero” values when the boiler was operating (these “zero”
28 values are subsequently averaged into the testing data, thereby causing actual emissions to be

¹ The permit repeats the expectation that biodiesel will be burned for bed stabilization. However, the Permit provides no definition for the term, which is not defined in statute or regulation. The permit also fails to provide any assessment of likely frequency (or quantity of fuel) the facility will require burning biodiesel for “bed stabilization.”

1 underestimated, an issue we explain more detail below). PGP has also sent various reports to EPD
2 regarding NOx and/or CO exceedances. Given all of these problems, it is not surprising that the Facility
3 has caused extensive community tumult due to noise, odor and fuel pile combustion. Exhibit 5 (audio
4 file) Testimony of Gary Larkey, Barnesville resident, before the Barnesville City Council (“PGP is and
5 has been a nuisance to me and my family and at least an additional one hundred residents”).²

6 Two factors require EPA to apply the equivalent of “strict scrutiny” to all assumptions,
7 underlying data and conditions in the Permit, and to affirmatively assure that the PSD-avoidance
8 emissions limits are legally and practically enforceable. First, the Facility is permitted at only 1 tpy
9 below the New Source Review threshold of 250 tpy (for both NOx and CO), and only 0.1 tpy and 0.5
10 tpy below the Hazardous Air Pollutant (“HAP”) thresholds of 10 tpy for any individual pollutant, and 25
11 tpy from all HAPs combined. PGP seeks authorization to operate this facility as a minor source. Any
12 emissions above those acknowledged and predicted during the permit process have material legal
13 significance as the source may not operate as a minor source. PGP’s decision to “cut it close” to the
14 maximum allowable emissions thus triggers the need for careful and complete review of the practical
15 and legal enforceability of the emissions limits that are relied on to ensure minor source status. Further,
16 PGP’s operations in the last three years, and nuisance to city residents through actions that do not
17 comport with the Permit’s operations and emissions limitations, also speak to the need for careful
18 review. Anything short of the highest level of scrutiny will fail to protect public health and welfare and
19 cannot *assure* compliance with the Act. As shown herein, the PGP permit relies on numerous untenable
20 and unsupported technical assumptions and fails to include adequate real time monitoring to ensure that
21 emissions caps will not be exceeded at any time. As such, EPA must object to this permit.

22 **III. Petition Summary**

23 PGP was originally permitted as a synthetic minor source while still under construction, but
24 during the last three years of actual operation the Facility has demonstrated that it is a major source that
25 must be subject to PSD review as a major source. The Georgia EPD supports its decision to treat PGP
26 as a synthetic minor source with data that has serious methodological flaws, while largely ignoring data
27 that indicate the Facility has not been able, and likely will not be able, to meet the synthetic minor
28 emissions limits in the Permit. In fact, careful analysis of the data upon which EPD relies reveals that

² See also The Herald Gazette article “Neighbors Sick of Noise from PGP Plant.” Available at <http://www.barnesville.com/archives/6080-Neighbors-sick-of-noise-from-PGP-plant.html>.

1 the facility can not meet the synthetic minor emissions limits included in the Permit. EPA must be
2 especially probing in cases like this where large facility with numerous peculiar incidents is proposing to
3 avoid PSD by such a small margin—only 1 tpy.

4 Petitioners have sought and reviewed some records from the State, and the proposed permit with
5 its explanation and statement of basis, and compared this to other comparable biomass power plants
6 around the United States. This analysis concludes that the PGP Title V operating permit is
7 fundamentally flawed and lacks adequate conditions and controls to ensure that emissions will remain
8 below Major Source thresholds, and further that exceedances of the emissions rates projected for the
9 facility will go undetected. Other Permit defects include the omissions of significant portions of the
10 facility's emissions, such as emissions increases associated with startup, shutdown and malfunction
11 conditions, and the failure to quantify HAP emissions.. The facility has caused numerous emissions
12 episodes that have disproportionately impacted the surrounding low income community of color. The
13 State must ensure that this Title V Permit meets all of the Act's requirements, but the record contains
14 substantial evidence that compliance with the Act's emissions limits is unlikely. As such, the petition
15 must be granted and an Objection to the Permit be registered.

16 **IV. The PGP Permit Relies on “Don't Ask, Don't Tell” For Fuel Contamination Testing and** 17 **Verification**

18 Federal regulation requires that records of the type and amount of *all* fuels burned in a boiler at
19 *all* times during the reporting permit must be maintained. 40 CFR 63.11222(a)(2). This rule is premised
20 on the fundamental chemical-physical relationship between fuel burned and pollutants emitted. Indeed,
21 the chemical makeup of the fuel is the primary determinant of which pollutants will be emitted in what
22 quantities. Because of this physical and chemical reality, the Permit must include clear and strict rules
23 with respect to fuel testing, monitoring and reporting. This is especially true for facilities, like PGP,
24 where the permitted fuel stock is composed of materials with varying chemical constituents.³ In review

25 ³ As defined by the permit at 3.4.6, permitted fuels include “clean cellulosic biomass.” “Clean cellulosic biomass means
26 those residuals that are akin to traditional cellulosic biomass, including, but not limited to: Agricultural and forest-derived
27 biomass (e.g., green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, tree harvesting residuals from
28 logging and sawmill materials, hogged fuel, wood pellets, untreated wood pallets); urban wood (e.g., tree trimmings, stumps,
and related forest-derived biomass from urban settings); corn stover and other biomass crops used specifically for the
production of cellulosic biofuels (e.g., energy cane, other fast growing grasses, byproducts of ethanol natural fermentation
processes); bagasse and other crop residues (e.g., peanut shells, vines, orchard trees, hulls, seeds, spent grains, cotton
byproducts, corn and peanut production residues, rice milling and grain elevator operation residues); wood collected from
forest fire clearance activities, trees and clean wood found in disaster debris, clean biomass from land clearing operations,
and clean construction and demolition wood.”

1 of 88 permits for biomass power plants proposed around the country,⁴ Petitioners have rarely seen a
2 permit that allows such a wide variety of fuels to be burned.

3 In this context, Petitioners are concerned about Condition 6.2.13 and what it indicates about the
4 ability of this permit to protect the public's health and welfare in compliance with the Act. The Permit
5 places virtually no responsibility on PGP for assuring that the fuel burned at the Facility meets the
6 definition of clean cellulosic biomass, and contains no means for EPD to verify contamination levels in
7 fuels. The condition reads:

8 *The Permittee shall keep records verifying that each shipment of biomass fuel received*
9 *for combustion in the boiler (Source Code: B1) meets the definition of clean cellulosic*
10 *biomass in Condition 3.4.6. The Permittee shall retain the records for a period of at*
11 *least five (5) years in a format suitable for inspection.*

12 *[391-3-1-.02(6)(b)1]*

13 While this provision is written to appear compliant with 40 CFR § 63.11222(a)(2), the following
14 e-mail thread from February 10, 2015 between PGP staff person Olin Hicks and EPD staff members
15 Neal Ritchey, James Eason and David Sheffield reveal a different and disturbing story about both
16 entities' commitment to monitoring the chemical makeup of fuel burned at the Facility. Exhibit 6 EPD
17 Don't Ask, Don't Tell Policy. The first e-mail from PGP's Olin Hicks to EPD's Neal Ritchey reads:

18 *"Per our phone conversation...PGP had concerns with section 6.2.13...I am requesting*
19 *your approval that the third attached document, "PGP Biomass Fuel Specification",*
20 *suffice as supplier verification of each load...This is signed with each new purchase*
21 *order which will occur at least annually."*

22 The second e-mail from EPD's Neal Ritchey to colleagues James Eason and David Sheffield reads:

23 *"Their method of showing compliance...is proposed to be the third attachment. Basically*
24 *the wood supplier signs a document stating that what they will deliver meets the*
25 *specifications of biomass fuel. To me, it is similar to a combustion source keeping the*
26 *invoices of diesel shipments meets the Ultra low sulfur diesel requirements except that*
27 *this is in the contract instead of the bill. Your thoughts?"*

28 ⁴ Exhibit 10, "Trash, Trees and Toxics: How Biomass Energy has Become the New Coal," Mary Booth, PhD, Partnership for Policy Integrity p. 26.

1 The last e-mail provided by EPD to Petitioners on this topic is from EPD’s David Sheffield to Neal
2 Ritchey and James Eason. It reads:

3 *“I am trying to figure out how PG is going to determine if fuel shipments meet the*
4 *criteria. In this fuel specification, they say that fuel that contains chromate, etc. will not*
5 *be accepted. The fuel supplier will sign the form in any event. **Is PG going to test any***
6 ***shipments?** People who sell fuel oil probably have a way to get something from a*
7 *refinery. Forest thinings from Nick and Eddy’s tree service won’t come with that data. It*
8 *also says no more than 50% moisture and 5% ash. That sounds like a lab report. I expect*
9 *that they have a bunch of suppliers, not one or two. It sounds good on paper, but **maybe***
10 ***don’t ask don’t tell would work better.**” (emphasis added)*

11 As the e-mail thread demonstrates, neither EPD nor PGP appear be aware of what is required for
12 compliance under the Act. Condition 6.2.13 suffers from two fatal deficiencies. First, it does not
13 require PGP to conduct any fuel sampling or testing, ever. The only requirement imposed by this
14 condition is that PGP maintain records of a one-page contract that its suppliers must sign. Exhibit 7
15 Fuel Verification Contract. As the State noted, the supplier will sign the form in any event. The
16 suppliers’ interest in the transaction is in disposing of waste wood; they have no interest or motivation to
17 independently test or factually verify the composition of the fuel. Second, Condition 6.2.13 places the
18 compliance burden on PGPs suppliers, thereby shielding PGP in many ways from any penalties and
19 other enforcement actions under the Act.⁵

20 The definition of clean cellulosic biomass contained in the permit allows this facility to burn a
21 wide variety of biomass fuels. The variety and quantity of pollutants that can be emitted from these
22 fuels is similarly broad. Absent substantial changes in the way the Permit addresses the physical and
23 chemical impact of such a varied fuel stock, the requirements to report the type and amount of fuel
24 burned during a reporting period in Conditions 5.2.5(b), 6.2.2(f) and 6.2.3(b) will not be practically
25 enforceable.

26 EPD’s failure to ensure accurate fuel characterization defeats the basis for a synthetic minor
27 permit. The record contains evidence that PGP has experienced highly variable operating conditions
28 according to the fuel it is burning at any given time. Persistent, systematic and verifiable fuel stock

⁵ If the facility intended to burn waste fuels that are potentially contaminated, the permit could not be more accommodating. In fact, two community members in Barnesville independently recounted to Petitioners how they asked the PGP developer to put in writing the Company’s assertion that they would not burn contaminated fuels. The Company refused.

1 testing is a core requirement of an adequate synthetic minor operating permit, particularly for a source
2 like this that utilizes various fuel types. Further, the absence of any means of determining fuel
3 contamination is exacerbated by the lack of any requirements in the Permit to monitor hazardous air
4 pollutant (HAP) emissions, and the treatment of the facility as a synthetic minor source for HAPs (as
5 discussed in more detail below). This facility could be burning demolition or construction waste
6 containing highly contaminated materials leading to emissions of lead, mercury, arsenic, chromium,
7 dioxins, and numerous organic HAPs like benzene and formaldehyde (both carcinogens) - but no one
8 would ever know, because neither the fuel nor the emissions are tested for toxics. Deficient biomass
9 fuel testing protocols have led to excessive levels of air and other forms of pollution at other facilities
10 that endangered public health and welfare.⁶ The PGP permit must be rejected and revised requirements
11 to mandate sampling and laboratory testing for every fuel shipment used by PGP. If testing is infeasible,
12 then given the wide variety of materials that are allowed to be burned as fuel, the facility should be
13 regulated as a Commercial and Industrial Solid Waste Incineration (CISWI) unit, and held to the more
14 rigorous emissions standards required under that rule.

14 **V. Permit's HAP Rules Are Not Enforceable as Practical Matter and Endanger Public Safety**

15 Hazardous air pollutants ("HAPs") are regulated under section 112 of the CAA. 42 U.S.C. §
16 7412. The purpose of the Act's NESHAP program is to ensure the rigorous control of these highly toxic
17 and harmful air pollutants because of their potential to "cause, or contribute to, an increase in mortality
18 or an increase in serious irreversible[] or incapacitating reversible[] illness." *New Jersey v. EPA*, 517
19 F.3d 574, 578 (D.C. Cir. 2008) (quoting legislative history of section 112). A "major source" of HAPs is
20 subject to maximum achievable control technology ("MACT") standards that require the maximum
21 degree of emission reduction that the EPA determines to be achievable by each particular source
22 category. 42 U.S.C. § 7412(d)(2). Pursuant to section 112(a)(1), a "major source" is one that "emits or
23 has the potential to emit...10 tons per year or more of any hazardous air pollutant or 25 tons per year or
24 more of any combination of hazardous air pollutants." *Id.* § 7412(a)(1). Due to the importance of
25 controlling HAPs, it is crucial that sources accurately identify and control potential HAP emissions.

26
27 ⁶ See e.g. Chico News & Review article, "*Settlement Reached in POPI Case.*" This Covanta plant in California burned waste
28 wood and relied on suppliers to test fuels. The County DA's independent tests of facility ash, which was being distributed as
an agricultural soil amendment, revealed high concentrations of heavy metals, and dioxins at concentrations as high as 2,200
parts per trillion. (<http://www.newsreview.com/chico/settlement-reached-in-popi-case/content?oid=15836324>)

1 “Biomass” includes a wide variety of materials that can contain highly variable concentrations of
2 HAPs and their precursors. Natural cellulose contains chlorine, which is emitted as gaseous hydrochloric
3 acid (HCl) at a relatively high rate. Processed and treated wood often contains paint residue, arsenic,
4 chromium, and other chemicals that result in HAP emissions. Since the PGP boiler is sized large
5 enough to easily exceed the HAP Major Source triggers, these fuels must be accurately characterized.
6 To fully ensure that the public is protected, the emissions of HAPs should be monitored continuously,
7 because grab sample testing cannot assure that the Major Source triggers are not exceeded with such a
8 variable fuel stock.

9 The narrative to the 2010 construction permit, which limited total HAP emissions to 24.9 tpy,
10 acknowledged that “potential rates exceed this rate” at a time when boiler capacity was approximately
11 6% lower than the current Permit allows—657 MMBtu then, versus 700 MMBtu now. Exhibit 8 2010
12 Permit SOB Narrative. Importantly, the emissions of HAPs that were estimated for the construction
13 permit were based on emissions factors from the National Council on Air and Stream Improvement
14 (NCASI), rather than EPA-sanctioned AP-42 emissions factors. Since the NCASI emissions factors are
15 lower than the EPA factors for nearly every HAP emitted in significant amounts by a biomass facility,⁷
16 use of these factors has a high potential to substantially underestimate emissions. Actual HAPs
17 emissions at PGP are likely substantially greater than the Company predicted.

18 Below, we demonstrate why provisions in the permit for limiting the Facility’s annual mass
19 emissions of any individual HAP to 10 tons, and total HAPs to 25 tons, are unenforceable as a practical
20 matter, do not comply with the Act, and thus and require EPA to object to the Permit.

21 A. Absence of Emissions Limits for HAPs Beyond HCl is a Violation of the Act and Title V

22 The EPD stated that the facility was a major source for HAPs in the 2010 Construction Permit.⁸
23 Calculating HAP emissions using EPA’s AP-42 emissions factors shows the Facility is a Major Source;
24 a 700 MMBtu boiler is projected to emit numerous HAPs at a rate of approximately 116 tpy based on
25 AP-42 emissions factors. Exhibit 9 HAPs emissions AP-42 v NCASI. HAPs reasonably anticipated to

26 _____
27 ⁷ See comparison of AP-42 and NCASI emissions factors at page 46 of Exhibit 10 PFPI *Trees Trash and Toxics* Report
(2014). Exhibit 9 uses these factors to calculate PGP’s emissions under the two schemes.

28 ⁸ Referencing the 2010 construction permit’s 24.9 tpy emission limit for HAPs and 9.9 tpy limit for HCl, a footnote at page 2
of the permit narrative (Exhibit 8) states, “The potential rates exceed this rate. However actual emission are limited to this
rate.”

1 be emitted from PGP include various volatile organic compounds (e.g. benzene and formaldehyde⁹);
2 numerous semi-volatile compounds (e.g. PAHs such as benzo(a)pyrene¹⁰); acrolein, HCl and trace
3 metals¹¹. EPD provides no justification for its apparent conclusion that HCl is the only HAP likely to be
4 emitted from this facility. As defined by the permit, the facility is allowed to burn a wide variety of fuels
5 with varying HAP-precursor content, which dramatically influences emissions characteristics. As
6 evidence of how materially incorrect the PTE is for the facility, even using the industry-friendly NCASI
7 emissions factors, PGP would be expected to emit at least 23 tpy of total HAPs. Exhibit 9.

8 Following Petitioner's inquiry, it appears that the facility has never completed performance stack
9 tests for HAPs in accordance with federal regulations, which require that tests be conducted at the
10 representative operating load conditions while burning the type of fuel or mixture of fuels that have the
11 *highest emissions potential* for each regulated pollutant, and require the facility to demonstrate initial
12 compliance and establish its operating limits based on these performance stack tests. 40 C.F.R §
13 63.11212(c), emphasis added.

14 Of particular concern to Petitioners is that the Permit *fails to even reference*, let alone include,
15 legally adequate emissions limitations, monitoring, recordkeeping and reporting requirements for
16 Volatile Organic Compounds (VOCs), many of which are HAPs. The Permit must either provide a
17 reasoned and data-supported explanation for why VOCs are not emitted in sufficient quantities to
18 warrant specific terms and conditions, or alternatively, to set VOC PTE limits and include terms and
19 conditions sufficient to assure compliance with those limits. The absence of a reasoned explanation for
20 why VOC emissions limits were omitted is on its own grounds for granting Petitioner's request. 54 FR
21 27283. This violates the core function of the Title V permitting program, which is to provide for all
22 federal and state regulations in one legally-enforceable document that will assure that all CAA
23 requirements are applied to the facility and that the facility is compliance with those requirements. See
24 42 U.S.C. §§ 7661a(a) and 7661c(a); see also 40 C.F.R. §70.6(a)(1).

25
26
27 ⁹ See AP-42, Section 1.6, Wood Residue Combustion in Boilers, Table 1.6-3, available at <http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s06.pdf>

28 ¹⁰Id.

¹¹ Id., Table 1.6-4.

1 B. HCl Monitoring, Recordkeeping and Reporting Provisions Are Legally Inadequate to Assure
2 Compliance with the Act

3 The HCl-specific permit conditions suffer from at least two serious deficiencies. First, the data
4 on which EPD relies to establish PGP’s synthetic minor status are suspect. Second, the monitoring and
5 reporting requirements postpone the first required HCl test for *more than three years* from permit
6 issuance, depriving the public of any assurances whatsoever that the emissions limits are being met in
7 the meantime and that the Facility is not a Major Source.

8 If limitations are incomplete, vague, or unsupported by appropriate data, enforcement by the
9 States, citizens and EPA would not be effective. Consequently, in all cases, limitations and restrictions
10 must be of sufficient quality, specificity and quantity to ensure accountability (see 54 FR 27283). The
11 HCl provisions fail to meet this basic standard, making the permit unenforceable as a practical matter.

12 First, the quality of the data supplied by PGP—and then relied upon by EPD in crafting the
13 Permit—is inadequate and potentially flawed. PGP attempts to demonstrate its HCl emissions limit
14 compliance with two tests conducted in 2013 three months apart, both of which are based on short-
15 duration stack tests. However, the veracity of these tests is undermined by the untenable conclusion that
16 the Facility is able to emit fewer HCl emissions *without* controls in June of 2013 than were emitted *with*
17 air pollution controls in place in March of 2013.¹²

18 In March 2013, PGP conducted HCl emissions stack testing consisting of three runs with the
19 benefit of limestone sorbent controls. Exhibit 11 3/13 HCl Data w Limestone. The average emissions
20 rate of the three runs was 0.000107 lb/MMBtu; however, there was significant variability between the
21 three runs: 0.000046, 0.000055, and 0.00022, with the last run being over 400% of the average of the
22 first two runs. Later, in June, PGP conducted another HCl emissions stack test, this time *without*
23 limestone sorbent addition. These June tests form the technical basis for EPD’s HCl regulatory scheme.
24 EPD explains in the SOB that the stack test performed on the Boiler without controls on June 26, 2013
25 “*shows that the average site-specific emissions factor (0.00006 lb/MMBtu) for uncontrolled HCl*
26 *emissions at the facility is lower than the NCASI or AP-42 emissions factors. The site-specific emissions*
27 *rate for uncontrolled HCl from the boiler is 0.043 lb/hr or 0.188 tpy. So based on site-specific data,*
28

¹² Petitioners recognize that it is possible that these low emissions rate could have resulted from the refractory in the furnace/boiler, which was relatively new in 2013, being constructed of and absorbing some Cl. However, if that is the case, then the Facility will not be able to maintain the low level of emissions as the refractory is less able to absorb Cl over time, and must be required to conduct new baseline testing for development of the Permit conditions using a “seasoned” furnace/boiler, and then be required to perform regular (at least semi-annual) testing thereafter.

1 *PGP claims that the boiler can only emit less than a ton of HCl per year; far less than the permit limit of*
2 *10 tons per year.”*

3 The results of these two tests, taken together, strain credulity. If the data produced by these tests
4 are authentic, the average emissions rate *with* sorbent injection is 178% of the value of the 0.00006
5 lb/MMBtu reported in June *without* sorbent injection. The implied removal rate of HCl for the test
6 without sorbent is extremely high, as demonstrated by the following calculation. Assume the average
7 dry weight of unadulterated wood fuel is ~0.009% chlorine (average based on boiler fuel testing data
8 from EPA¹³; values for glued and treated wood are much higher). Given that PGP reports burning
9 approximately 67 tons of fuel an hour at 45% moisture content, the dry weight of the material burned in
10 an hour is 36.85 tons, therefore containing and potentially emitting 6.63 pounds of chlorine (as Cl) and
11 just over this amount (6.82 lb) as HCl. If the Facility is only emitting 0.043 lbs/hr of HCl as reported by
12 the June 26, 2013 emissions test, the HCl removal rate without the benefit of a sorbent system is (1 –
13 0.043/6.82), or 99.37%, an extraordinarily high value even compared to values for boilers using sorbent
14 injection. Further, the emissions factor of 0.00006 lb/MMBtu reported by the June 26, 2013 emissions
15 test is a mere 37.5% of the value at the tenth percentile of the HCl emissions data collected by EPA in
16 support of the boiler rule (see Figure 1 below), and lower than any of the measurements for the valid
17 data points in the EPA database.¹⁴

18 The technical accuracy of these figures is highly suspect, and, at the very least, requires
19 additional justification, particularly since the facility is permitted to burn a wide variety of fuels with
20 potentially varying chlorine content.
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25 ¹³ Draft Emissions Database for Boilers and Process Heaters Containing Stack Test, CEM, & Fuel Analysis Data Reported
26 under ICR No. 2286.01 & ICR No. 2286.03 (version 8) May, 2012. Available at [http://](http://www.epa.gov/airtoxics/boiler/boilerpg.html)
27 www.epa.gov/airtoxics/boiler/boilerpg.html (database labeled “Boiler MACT Draft Emissions and Survey Results
28 Databases”).

¹⁴ Draft Emissions Database for Boilers and Process Heaters Containing Stack Test, CEM, & Fuel Analysis Data Reported
under ICR No. 2286.01 & ICR No. 2286.03 (version 8) May, 2012. Available at [http://](http://www.epa.gov/airtoxics/boiler/boilerpg.html)
www.epa.gov/airtoxics/boiler/boilerpg.html (database labeled “Boiler MACT Draft Emissions and Survey Results
Databases”).

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Figure 1

Distribution of HCl emission rates for 46 bioenergy facilities in EPA’s emissions database.¹⁵

Percentile	HCl EF (lb/MMBtu)
10th Percentile	1.60E-04
20th Percentile	2.89E-04
30th Percentile	1.00E-03
40th Percentile	1.00E-03
50th Percentile	1.00E-03
60th Percentile	3.00E-03
70th Percentile	7.00E-03
80th Percentile	1.30E-02
90th Percentile	2.30E-02
95th Percentile	3.70E-02
99th Percentile	8.20E-02
Average	8.00E-03

The second significant defect with the HCl permit provisions is that the frequency of HCl testing does not match the time period over which the emission limitations are measured, meaning the related recordkeeping and reporting conditions cannot be met. The Permit requires PGP conduct a performance test of the Boiler for HCl emission by June 26, 2018, and then thereafter “no later than [5 years] after the previous test” (Condition 4.2.3). Permit page 9 of 47. The required tests are far too infrequent to ensure ongoing compliance with the Act. Federal regulations make clear that monitoring and reporting requirements must match the time period over which an emission limitation is measured. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.6(c)(1). The D.C. Circuit Court of Appeals has explicitly stated that “a monitoring requirement insufficient ‘to assure compliance’ with emission limits has no place in a [Title V] permit unless and until it is supplemented by more rigorous standards.” *See Sierra Club v. EPA*, 536 F.3d 673, 677 (D.C. Cir. 2008). As further explained by the Court, even annual testing is cannot assure compliance with a daily emission limit. *id.* at 675.

The paucity of monitoring requirements for HAPs renders the Permit’s recordkeeping and reporting requirements impotent. The Permit conditions require PGP to calculate and track *monthly* total HAP emissions and notify EPD when individual HAP emissions exceed 0.83 tons per year or when

¹⁵ Reproduced from Exhibit 10 at page 49.

1 total HAP emissions exceed 2.08 tons per year, at 6.2.14 and 6.2.15 respectively. Permit pages 24-25 of
2 47. Since PGP is not required to test for any HAPs other than HCl, this permit condition simply can not
3 be met. Further, for the one HAP that PGP *is* required to assess (HCl), as many as 5 years will likely
4 pass before PGP tests for HCl again (recall that the HCl test on which EPD relies was conducted in June
5 of 2013), and then as many as 59 months until the next. Thus, it is virtually impossible for PGP to track
6 HAPs emissions as “required” by Condition 6.2.14 or inform EPD when the Facility reaches the specific
7 thresholds as required by Condition 6.2.15.

8 C. Recommendations

9 As seen in the previous discussion, there are significant problems with properly quantifying HCl
10 emissions from the boiler. The data collected from the March and June 2013 tests show significant
11 variability (for example, Run 3 from the March 2013 test). These test results raise significant questions
12 regarding the fuel(s) that were used during testing, since no fuel chlorine characterization data are
13 available in the record. As shown earlier, reasonable assumptions on the chlorine content of wood lead
14 to unrealistically high removal efficiencies of HCl (without sorbent injection) based on the June 2013
15 test results. Given these uncertainties, there is little reason to believe that the tests conducted to date are
16 representative of actual facility emissions.

17 *i. EPA Should Require Testing for All HAPs*

18 At minimum, EPA should require PGP to conduct an “initial” source test for HAPs while
19 burning fuels with the highest potential HAPs content per federal regulation, or at least while burning
20 fuels that are representative, to determine facility-specific emissions factors. EPA should also consider
21 requiring testing for all HAP compounds typical of biomass emissions at least one per permit term,
22 employing EPA-approved test methods for the specific HAP compounds. Region IX has required
23 comparable testing rules for a biomass facility in Hawai’i where there was similar uncertainty about
24 HAPs emissions (that facility will not burn nearly the wide range of fuels that PGP potentially burns).
25 Exhibit 12 EPA 2011 Comments on Hu Honua 2011.

26 *ii. EPA Should Require HCl CEMS*

27 Given the history of uncertainty around HCl emissions at the facility, EPA and EPD should
28 require the facility to install a HCl Continuous Emissions Monitoring System (CEMS) at the boiler

1 stack. Various vendors have commercially available HCl CEMS currently in the market. These include
2 Thermoscientific,¹⁶ Altech,¹⁷ Cemtek,¹⁸ and others. EPA has required other industries (e.g. cement
3 kilns) to install such CEMS and many have tested and installed such CEMS.¹⁹ EPA recommends the
4 use of Performance Specification 18 for HCl CEMS users.²⁰ The Facility must have the ability (and
5 duty) to quantify the mass of HCl emissions under all operating conditions, and being able to sum mass
6 emissions over desired time periods when plant operations, and thus emissions, are variable.

7 **VI. PGP Is a Major Source for NO_x and CO, and the Permit's Minor Source NO_x and CO**
8 **Conditions Are Not Practically Enforceable**

9 As detailed below, the Facility has a history of emitting above the minor source limits. Despite
10 this, the Permit asserts that the Facility can achieve minor source emissions limits of CO and NO_x. In
11 light of the Facility's operating history, this determination is technically unsubstantiated. Independent
12 of the lack of an accurate and lawful basis on the Plant's "potential to emit" ("PTE")²¹ NO_x and CO, the
13 Permit's regulation of NO_x and CO are not practically enforceable. The Administrator must therefore
14 object to the Permit and require that EPD reopen and revise the Permit.

15 A. Historical Operating Data Demonstrate PGP Facility Is a Major Source for Both CO and NO_x

16 Since PGP has a 700 MMBtu boiler, hourly emissions of NO_x and CO cannot exceed 56.849 lb
17 per hour if the unit is to maintain a PTE below 249 tons. This translates to an emission rate of 0.0812
18 lb/MMBtu if the boiler is the only source of CO and NO_x at the Facility. In practice, the boiler will
19 have to achieve rates lower than this if "the entire facility" is to legally avoid PSD. However, emissions
20 from the boiler have been quite variable historically, indicating the facility's PTE has been in excess of
21 249 tons per year for both NO_x and CO. For instance, monitoring data from June 2013 to April 2014

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24 ¹⁶ <http://www.thermoscientific.com/content/tfs/en/product/continuous-emissions-monitoring-systems-cems.html>

25 ¹⁷ <http://www.altechusa.com/hydrochloric.html>

26 ¹⁸ http://www.cemteks.com/images/Cemtek_TDL_based_HCl_CEMS_to_Meet_EPA_s_Draft_PS18_.pdf

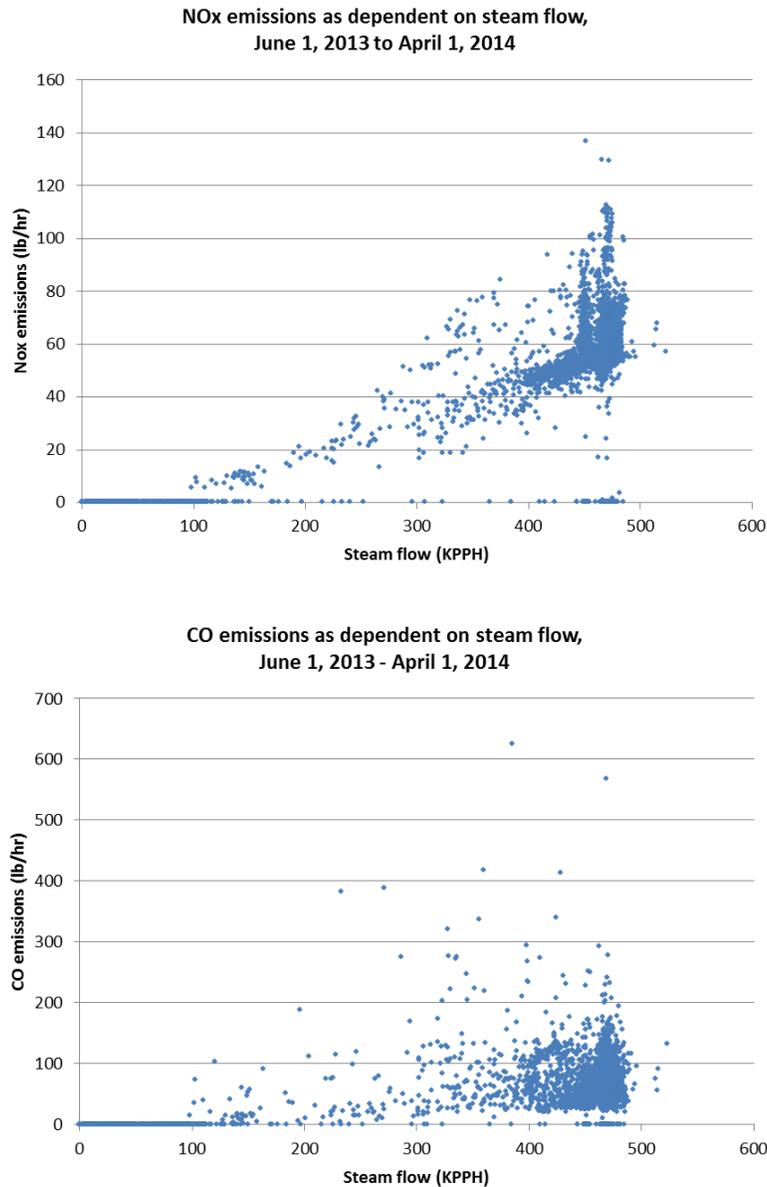
27 ¹⁹ See, for example, http://www.cemteks.com/images/HCl_CEMS_Report_-_Holcim.pdf

28 ²⁰ <http://www.epa.gov/ttnemc01/prelim.html>.

²¹ The federal regulations define "potential to emit" as: the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of fuel combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally and practically enforceable. 40 C.F.R. Sections 52.21(b)(4), 51.165(a)(1)(iii), 51.166(b)(4).

1 (Exhibit 13 PGP NO_x-CO 5 '13 to 4 '14 from heat input²²) shows hourly emission rates for NO_x up to
2 136.5 lb/hr, and for CO up to 624.9 lb/hr (Figure 2).

3
4 **Figure 2: All emissions monitoring data for NO_x and CO collected 6-1-2013 to 4-1-2014**



25 Monthly summed emission rates for this period (Exhibit 13, columns I and J) would be even
26 higher than they are, except that the hourly emissions data include many “zero” readings, even when the
27 data on steam production shows the boiler was operating (see Figure 1). The facility cannot create

28 ²² This file came to us labeled as containing May 2013 to March 2014 data, but actually contains June 2013 to April 2014 data.

1 sustained steam production without fuel input, unless the boiler is capable of immaculate combustion.
2 Data in the record strongly suggest that the boiler was emitting more than 249 tons (per 12-month
3 period) of NO_x and CO as recently as 2014.

4 Further, individual stack tests in 2014 and 2015 also indicate emissions exceed the Permit's
5 allowable emissions rates. The NO_x and CO CERMS went through a Relative Accuracy Test Audit
6 (RATA) on February 27, 2014, which, as EPD notes in the SOB, determined emissions of NO_x were
7 0.08744 lb/MMBtu NO_x and emissions of CO were 0.09244 lb/MMBtu. These rates are higher than the
8 rate that would be necessary for the Facility to meet synthetic minor emissions limits *if the boiler were*
the only source of CO and NO_x emissions.

9 The Facility's difficulties in meeting emissions limits are known to EPD. During the February
10 27, 2014 testing, the engineer's notes (Exhibit 14 Feb 27 2014 Source Test Report) state that the Facility
11 acknowledges that "project 12-month rolling emissions (of CO) will be close to the 249 tpy limit in
12 March, April and May of this year," anticipating, months ahead, that the Facility would not be able to
13 meet its limits. Indeed, the Facility self-reported exceedances of its monthly limits in May and August
14 of 2014. Exhibit 15 5.01.14 Notice of NO_x Exceedance; Exhibit 16 8.08.14 Notice of NO_x Exceedance.
15 Apparently, PGP was near or exceeding its monthly synthetic minor emissions limits for 4 out of 8
16 months (50%) of 2014.

17 A full year later, when RATA tests were conducted on February 25, 2015 (Exhibit 17 Feb 25
18 2015 Source Test Report), data show the facility's hourly NO_x emissions rates as measured by the
19 reference method range from about 62 lb/hr to 73.5 lb/hr, well in excess of the rate required to justify
20 PSD avoidance. Further, the RATA tests show that the Facility's CERMS consistently underestimate
21 the reference method readings. A rating of 20% or lower is required to pass; the Facility's rating for
22 NO_x is 19.711%, which was only achieved by excluding the results of two reference method tests that
23 had relatively high values. The rating for CO is 18.529%; again, the rate estimated by the Facility's
24 CERMS consistently underestimates the reference method rate.

25 B. Criteria Pollutant Limitations in the Permit are Not Practicably Enforceable

26 EPD may not issue a Title V permit if it lacks the data necessary to accurately evaluate an air
27 permit application and to determine compliance with all applicable requirements pursuant to Title V.
28 Federal and state regulations are clear regarding an applicant's duty to provide information and the
State's obligation to demand sufficient data to prepare reasonably enforceable permit conditions. The

1 information “must be sufficient to evaluate the subject source and its application and to determine all
2 applicable requirements.” 40 C.F.R. § 70.5(a)(2) see also id. § 71.5(a)(2). The Administrator has
3 previously granted petitions to object when she was unable to “ensure that the record contains sufficient
4 information to evaluate the source and determine all applicable requirements.” *See, e.g., In re Murphy*
5 *Oil USA, Inc., Meraux Refinery, St. Bernard Parish, La, Order Granting in Part and Denying in Part*
6 *Petition for Objection to Permit*, Pet. No. VI-2011-02 at 6 (EPA Sept. 21, 2011).

7 Similarly, EPA’s longstanding guidance requires technical accuracy as a concept in “practical
8 enforceability.” EPA informs permitting authorities and the regulated community that to effectively
9 limit a source’s PTE, permit conditions must be practically enforceable. EPA suggests that “practical
10 enforceability of a permit should be reviewed to *assure* the public’s and EPA’s ability to enforce the
11 Title V permit is maintained, and to clarify for the Title V source its obligations under the permit.” EPA
12 Region IX “Guidelines: Practical Enforceability,” Sept. 9, 1999 (“Practical Enforceability
13 Guidelines”).²³ Practicable enforceability for a source-specific permit means that the permit’s provisions
14 must specify *technically accurate* emission limitations.²⁴ Here, the State lacks the information
15 necessary to render a technically accurate determination as to whether the source can meet synthetic
16 minor emissions limits for NO_x and CO, and has not crafted practically enforceable permit conditions.

16 *i. PGP Has Not Yet Conducted Stack Tests in Accordance with Federal Regulations*

17 Petitioner’s best information indicates that the facility has never completed performance stack
18 tests for NO_x and CO in accordance with federal regulations, which require the facility demonstrate
19 initial compliance and establish its operating limits under representative operating load conditions while
20 burning the type of fuel(s) with the highest emissions potential for each regulated pollutant. 40 C.F.R §
21 63.11212(c). Indeed, the various testing performed by PGP has been conducted at varying operating
22 load conditions, and without assuring that fuel used during those tests represents the highest emission
23 potential for each pollutant. Without such tests, neither PGP nor EPD can assert to have a realistic
24 assessment of the Facility’s PTE for NO_x and CO.

1 ii. *The Assertion That PGP Meets NOx Limit is Based on Faulty Data*

2 As Petitioners commented on the draft permit, “*to constrain potential to emit (PTE) of...NOx*
3 *below 249 tons per year at a 700 MMBtu/hr boiler, the facility must emit on average less than 0.0812*
4 *pounds...per MMBtu of boiler capacity at all times, including during startup and shutdown.” Exhibit*

5 18 PFPI Comment letter on PGP Title V Permit. (This also assumes that there are zero NOx emissions
6 from any source at the facility except the boiler).

7 PGP’s response to Petitioner’s letter (Exhibit 19 PGP Response to PFPI Comment Ltr) asserts
8 that the Facility will be able to comply with this NOx limit. PGP claims that testing from the third
9 quarter of 2014 demonstrates that the Facility’s average NOx emission rate is 0.075 lb/MMBtu (and
10 therefore the Facility can stay with its synthetic minor limits). The monitoring data are included as an
11 appendix to the Company’s response letter (Exhibit 19 at page 12), allowing examination.

12 Petitioners transferred these data to a spreadsheet so we could analyze them, and in doing so,
13 concluded that the data lack technical veracity. Exhibit 20 PFPI calcs Q3 NOx-CO data. First, as
14 occurred in the earlier data record referenced above (Exhibit 13) there are gaps in these data, i.e. periods
15 during which the boiler appears to be operating but the NOx emissions rate is recorded as zero. There
16 are also periods where the daily NOx mass is recorded as zero, and the rate is recorded at about one-
17 tenth of the normal emissions rate. To arrive at the 0.075 lb/MMBtu figure, PGP averages *all* the data,
18 including these minimal rates (which appear to be marked as invalid) and the zero readings.²⁵

19 While the data and their analysis are clearly flawed, the SOB repeats PGP’s claim that the
20 Facility has demonstrated the ability to meet synthetic minor limits by referencing, almost verbatim,
21 PGP’s response to Petitioner’s comment letter. The SOB reads “[i]n the third quarter of 2014, the
22 CERMS at the Piedmont facility recorded an average NOx emission rate of 0.075 lb/MMBtu.” Exhibit
23 2 at page 25. Apparently EPD did not review the underlying data before making them a foundational
24 element in the Facility’s synthetic minor source designation. Calculated accurately, i.e. *without* the
25 “zero” readings and only using *valid* data points, the data demonstrate that the Facility is likely to
26 exceed 250 tpy for NOx.²⁶

26 ²⁵ The February 2014 RATA testing suggests that the Facility was experiencing significant problems with its monitoring
27 equipment, but the Permit does not discuss the issue.

28 ²⁶ The average for the valid data points from the third quarter 2014 data yields an emissions rate for NOx that is higher than
0.0817 lb/MMBtu, which is higher than the rate required to stay within synthetic minor limits. Further, it does not account for
1) high SSM emissions rates, 2) the fact that the boiler was operating well below capacity, and 3) emissions from other
sources of NOx at the facility.

1 Practicable enforceability for a source-specific permit requires that the permit's provisions must
2 be based on a technically accurate and verifiable limitation.²⁷ Gaps in the data and obvious calculation
3 errors undermine the technical competency of any emissions limit that depends, in whole or in part, on
4 defective data. It nonetheless appears EPD did in fact rely on these incomplete data to justify the
5 potential for the Facility to achieve the 249 tpy limit for NOx.

6
7 *iii. The Assertion That PGP Meets CO Limits is Not Supported by Testing Data*

8 Although earlier data indicate that PGP has routinely emitted CO above the rates required to
9 maintain synthetic minor status, EPD has accepted testing data from the third quarter of 2014 to justify
10 the Facility's synthetic minor status for CO. PGP claimed, and EPD apparently accepted, that the
11 Facility can meet synthetic minor emissions limits, but the frequent gaps in monitoring data, the failure
12 to test with a representative variety of fuels, the failure to assess emissions during startup/shutdown
13 suggest this is improbable. As noted above, the data on which these figures rely is seriously flawed and
14 does not provide a defensible technical baseline from which EPD can legally determine that the Facility
15 will meet the synthetic minor emissions limits. Petitioners wish to emphasize the importance of EPA
16 having confidence in the accuracy of the CO emissions limit, and urge EPA to require that EPD
17 document why it believes this source can consistently achieve the rates it reports and stay within the 249
18 tpy synthetic minor source limit.

19 Petitioners believe, based on a thorough review of this and comparable facilities, that the implied
20 emissions rates set for PGP are unrealistically low, and further that the Permit fails to provide sufficient
21 monitoring, reporting and independent oversight to assure compliance with synthetic minor emissions
22 limits.

23 *iv. Emissions Data on CO and NOx Are Incomplete and Technically Flawed*

24 The data from the third quarter of 2014 suffers from several additional, general inadequacies.
25 First, the data do not explicitly include or account for boiler start-up and shutdown emissions, which are
26 likely be higher than average emissions rates by significant amounts. See startup, shutdown and
27 malfunction comments at Section IX, *infra*.

28 ²⁷ <http://www.epa.gov/region9/air/permit/Titlev-guidelines/practical-enforceability.pdf>. See also Region V guidance which suggests that “[f]or any permit term that requires a calculation to determine compliance, make sure that the equation and all assumptions are written into the permit.”

1 Second, it is not clear how PGP calculated flow rates for any of their testing. The permit states
2 that Method 2 is used to estimate stack flow. Apparently, the Facility does not use a flow rate monitor
3 and instead relied on CERMS concentration data and multiplies those by F-Factors to determine NOx
4 and CO emissions. The use of F-Factors for a source that burns such highly variable fuels is entirely
5 inappropriate, and legally indefensible absent additional information.

6 Lastly, data on which EPD relies was collected at operating capacities below the boiler
7 operational capacity of 700 MMBtu. These three additional considerations further undermine the
8 reliability of the data that serves as EPD's foundation for allowing PGP to avoid PSD review and BACT
9 analysis through synthetic minor status.

10 v. *Recommendations*

11 The boiler at the facility appears to have a CEMS system as well as a CERMS for NOx and CO –
12 although the components of either of these two systems have not been fully described in the public
13 record. It appears from correspondence between the facility and the EPD that the Facility would prefer
14 to use the CERMS as the compliance tool for these two pollutants. The CERMS does not appear to be
15 coupled with a flow meter in addition to the NOx and CO analyzers (Petitioners saw no RATA testing
16 for any flow CEMS, for example). Instead, the flow of stack gas appears to be estimated by assuming
17 an F-Factor for the underlying fuel. The absence of a flow meter calls into question the accuracy of the
18 CERMS data. Given the wide variability of the fuel composition that can occur at this facility, the F-
19 factor approach can not provide accurate estimates of stack gas flow. We urge EPA to require that the
20 CERMS be equipped with a continuous stack gas flow meter and that the quantification of mass of NOx
21 and CO be based on the NOx and CO concentrations (as measured by their respective continuous
22 analyzers) in combination with the flow data from a flow monitor. Without a direct flow reading, there
23 is no reason to believe that the F-factor based flow is accurate.

24 **VII. Specific Permit Conditions That Are Not Practically Enforceable**

25 The following provisions demonstrate that EPD has not prepared a legal adequate Permit. EPA is under
26 a legal obligation to object to permit deficiencies once it finds that the Title V permit does not comply
27 with the Act, even if the alleged deficiencies are arguably “harmless.” *New York Public Interest*
28 *Research Group v Whitman*, 321 F.3d 316 (2d Cir. 2003).

1 A. Condition 3.2.2

2 Condition 3.2.2 is not federally or practically enforceable because the associated testing monitoring
3 requirements do not include any testing for HAPS other than HCl. It is not possible for the EPD to
4 determine compliance without adequate testing and monitoring.

5
6 B. Condition 3.2.3

7 Condition 3.2.3 is not practically enforceable because a central term—“bed stabilization”—is not
8 defined. This condition is not saved by the inclusion of Condition 8.1 which suggests that where terms
9 are not defined in the Permit, they shall be given the meaning assigned to them in the referenced
10 regulation. “Bed stabilization” is not defined by statute or regulation, and is not defined in the Permit.

11 C. Condition 3.3.2

12 Condition 3.3.2 subparagraphs (a) and (b) is not practically enforceable because it improperly excludes
13 emissions during SSM condition. See Section IX, *infra*.

14 D. Condition 4.1.3

15 Condition 4.1.3, in the final paragraph, impermissibly grants complete discretion to the Director. The
16 condition, as currently constructed, allows changes in methodology when the Director, “in his opinion”
17 believes the modification will make the methodology “more reliable.” This provision must include i)
18 objective guidelines regarding what factors the Director will consider; ii) in the event he approves such
19 changes, the director must publish an opinion outlining his reasoning; and iii) an opportunity for public
20 comment the proposed changes.

21 E. Conditions 5.2.5(b), 6.2.2(f) and 6.2.3(b)

22 EPD cannot assure compliance with Conditions 5.2.5(b), 6.2.2(f) or 6.2.3(b) unless PGP samples and
23 tests each shipment of fuel to ensure that the fuel being burned on a daily and monthly basis actually
24 meets the Permit’s definition of clean cellulosic biomass.
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1 F. Condition 6.1.2

2 EPD failed to include any deadline for submittal of the written report outlined in Condition 6.1.2, and
3 therefore cannot take corrective action if/when the facility fails to comply with the requirement, thus
4 rendering this provision unenforceable as a practical matter.

5
6 G. Conditions 6.2.14 and 6.2.15

7 Condition 6.2.14 is not practically enforceable because it uses an HCl emissions factor—0.00006
8 lb/MMBtu from the June 26, 2013 stack test—that is highly improbable on its face and lacks sufficient
9 technical justification. *See Section V.B, supra.*

10 H. Condition 8.14.4

11 As noted above, the language Condition 8.14.4 is impermissibly vague with respect to which “excess
12 emissions” are “allowed,” and renders the condition unenforceable as a practical matter.

13
14 **VIII. GHG Emissions**

15 The Facility’s PTE for carbon dioxide is over 590,000 tons per year, making it a major source for
16 greenhouse gases. We believe the evidence we have presented indicate that this facility is a major
17 source for criteria pollutants, and as such, it should go through Prevention of Significant Deterioration
18 permitting, including a best available control technology (BACT) analysis for greenhouse gases.

19 **IX. Startup, Shutdown And Malfunction Emissions Must Be Added To The PTE**

20 The Facility’s PTE must include emissions associated with all phases of facility operation,
21 including startup, shutdown and malfunction emissions. EPA recently adopted rulemaking delineating
22 this requirement in greater detail, notwithstanding the legal obligation that has existed from the Act’s
23 passage. See <http://www.epa.gov/air/urbanair/sipstatus/emissions.html>

24 Georgia state rules generally require that startup, shutdown and malfunction emissions be
25 included in a project baseline and Potential to Emit, but then improperly allows the operator to elect to
26 exclude startup, shutdown and malfunction emissions that are “not quantifiable.” Rule 391-3-1-02
27 (7)(a). Further, Georgia purports to allow any “non-compliant” emissions to be excluded from a
28 facility’s average emissions. Rule 391-3-1-02 (7)(a)(i)(I)(II). The PTE for this facility does not include
quantified emissions associated with startup, shutdown and malfunction conditions, and the State’s rules

1 allowing the exclusion of “non-quantifiable” emissions or “non-compliant” emissions are patently
2 illegal, based both on long-standing Clean Air Act jurisprudence and recently on EPA’s startup,
3 shutdown and malfunction emissions rulemaking.

4 These exemptions result in a reduced PTE that understates actual emissions, and as such, the
5 permit issued in reliance upon these rules fails to provide an enforceable emissions limit generally, and
6 further provides no enforceability of a synthetic minor emissions limit. EPA must object to this permit.

7 **X. CONCLUSION**

8 The Title V permit issued by the State to allow operation of the facility subject to this petition
9 contains numerous omissions, flaws and defects, based in part on incomplete, biased and erroneous data.
10 The facility’s PTE is not defensible to assure operation as a minor source – there are extensive data
11 supporting the conclusion that this facility cannot comply with a 249 tpy PTE for criteria pollutants nor
12 the 10 tpy HCL/25 tpy total HAP limits. As such, the permit does not comply with the Act, since it may
13 not be practically enforced. Inadequate oversight and enforcement makes this facility a nuisance in its
14 community, disproportionally exposing surrounding low income and African American residents to
15 unhealthful air pollution.

16 Administrator McCarthy has a duty to object to this permit for all of the above reasons, and
17 further to direct an audit of the permit actions approved by the State of Georgia in concluding this
18 facility could be regulated as a synthetic minor source. Title V Operating permits should ensure full
19 compliance with the Clean Air Act’s clear and specific mandates of clean air for all, and the practical
20 and legal enforceability of all facility emissions limits.

21 Respectfully submitted on this 26th day of May, 2015.

22
23 _____
24 MARC CHYTILO
25 JESSE SWANHUYSER
26 LAW OFFICE OF MARC CHYTILO
27 Attorneys for Petitioner
28 Partnership for Policy Integrity

EXHIBITS

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- Exhibit 1 Permit No. 4911-171-0014-V-02-0
- Exhibit 2 Statement of Basis 4911-171-0014-V-02-0
- Exhibit 3 e.mail re Damage to Turbine
- Exhibit 4 Atlantic Power presentation to EPD
- Exhibit 5 Testimony of Gary Larkey (audio file)
- Exhibit 6 EPD Don't Ask, Don't Tell Policy
- Exhibit 7 Fuel Verification Contract
- Exhibit 8 2010 Permit SOB Narrative
- Exhibit 9 HAPs emissions AP-42 v NCASI
- Exhibit 10 PFPI *Trees, Trash and Toxics* Report (2014)
- Exhibit 11 3/13 HCl Data w Limestone
- Exhibit 12 EPA 2011 Comments on Hu Honua 2011
- Exhibit 13 PGP NOx-CO 5 '13 to 4 '14 from heat input
- Exhibit 14 Feb 27 2014 Source Test Report
- Exhibit 15 5.01.14 Notice of NOx Exceedance
- Exhibit 16 8.08.14 Notice of NOx Exceedance
- Exhibit 17 Feb 25 2015 Source Test Report
- Exhibit 18 PFPI Comment letter on PGP Title V Permit
- Exhibit 19 PGP Response to PFPI Comment Ltr
- Exhibit 20 PFPI calcs Q3 NOx-CO data