

C.A. Nos. 14-000123 and 14-000124

**IN THE UNITED STATES COURT OF APPEALS
FOR THE TWELFTH CIRCUIT**

SYLVANERGY, L.L.C.,

Petitioner,

v.

SAVE OUR CLIMATE, INC.,

Petitioner,

v.

SHANEY GRANGER, in her official capacity as Regional Administrator for Region XIII of the
United States Environmental Protection Agency

Respondent.

ON CONSOLIDATED PETITIONS FOR REVIEW
OF A FINAL ORDER OF THE REGIONAL ADMINISTRATOR

BRIEF FOR RESPONDENT

Team 15
Attorneys for Respondent

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JURISDICTIONAL STATEMENT

Sylvanergy and Save Our Climate (SOC) filed petitions with the U.S. Environmental Protection Agency's (EPA) Environmental Appeals Board (EAB) pursuant to 40 C.F.R. § 124.19(a) challenging a federal Clean Air Act (CAA) Prevention of Significant Deterioration (PSD) permit issued jointly by the New Union Air Resources Board (NUARB) and EPA, Region XIII. On June 1, 2015, the EAB denied both petitions for review. The EAB's denial is final, and jurisdiction is proper in this Court pursuant to 42 U.S.C. § 7607(b)(1) (2012).

ISSUES PRESENTED FOR REVIEW

1. Whether the interlocutory decision to deny a NAD is subject to judicial review.
2. Whether, if denial of a NAD is subject to judicial review, NUARB properly classified the Sylvanergy facility as a "major emitting facility" subject to PSD review when a biomass electricity generation facility is (1) not among the twenty-eight listed categories of sources subject to PSD review but (2) has the potential to emit more than 255,000 tons per year of carbon monoxide.
3. Whether a biomass-fueled facility is subject to PSD review as an emitter of greenhouse gases.
4. Whether NUARB properly rejected consideration of a wood gasification and partial carbon capture and storage plant as BACT for the Sylvanergy facility.
5. Whether NUARB permissibly imposed the Sustainable Forest Plan as BACT for the Sylvanergy facility.

STATEMENT OF THE CASE

Statutory Background

At the heart of the Clean Air Act are the national ambient air quality standards (NAAQS). Air quality standards are quite simple. They set numerical limits on the concentration of specific pollutants in the ambient (outside) air. To date, EPA has issued NAAQS for six common "criteria" pollutants: sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide, and lead. States have primary responsibility for implementing the NAAQS by

developing State Implementation Plans (SIP). A state's implementation plan must designate every area within its borders as being an "attainment area" or a "nonattainment area" with respect to the NAAQS for each criteria pollutant. All states must strive for attainment. This is not an easy goal.

A SIP must also include permit programs as a means to enforce the NAAQS. Most notably, and at issue in this case, a SIP must include a PSD permit program designed to ensure that air quality in attainment areas does not deteriorate. Under the PSD program, any entity proposing to construct a "major emitting facility" in an attainment area must obtain a permit before commencing construction. To do this, the applicant must demonstrate that the proposed facility will install pollution controls determined through the best available control technology (BACT) for *any* pollutant subject to regulation under the CAA—encompassing greenhouse gas (GHG) pollutants in addition to the conventional criteria pollutants. BACT, despite what the term implies, is not any particular type of technology. Rather, BACT is an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the CAA.

Procedural Background

In this action, petitioners Sylvanergy and Save Our Climate (SOC) seek judicial review of a June 1, 2015, decision of the EAB. The EAB decision denied two administrative petitions filed by Sylvanergy and SOC, seeking review of a permit issued by NUARB to Sylvanergy. *In re Sylvanergy, L.L.C.*, PSD Appeal No. 15-0123 (Envtl. App. Bd. 2015) [hereinafter "R."]. The permit authorized Sylvanergy to construct the Forestdale Biomass Facility, a biomass-fired electricity generation and wood pellet fuel production facility near Forestdale, New Union. In its order denying review, EAB reiterated the high standard for review of a PSD permit; it stated that

EAB could only invalidate NUARB's decision if there has been a "clear error" of judgment and that petitioners failed to demonstrate "clear error" on the part of NUARB. *Id.* at 8, 13.

Subsequently, petitioners filed timely appeals in this Court. EPA Region XIII is involved because it delegated authority to NUARB to administer the federal PSD program. Consequently, the permits that NUARB issues pursuant to that delegation are considered federal permits subject to federal permitting procedure.

STATEMENT OF THE FACTS

EPA has authorized the State of New Union to implement the federal PSD program. Accordingly, New Union administers the federal program through NUARB. In creating NUARB, New Union enabled the State to preserve and enhance the air within its borders so as to promote the public health, welfare and productive capacity of its populace. NUARB has done just that. The entire State of New Union is considered to be an "attainment" area. Simply put, New Union is achieving the ultimate goal of the CAA: a balance between economic growth and the preservation of existing clean air resources.

Petitioners, Sylvanergy and SOC, are seeking to alter the balance New Union is achieving. Sylvanergy proposes to construct the Forestdale Biomass Facility, a 40 MW biomass-fired electricity generation facility combined with a wood pellet fuel production unit. The facility would consist of a stoker-design wood-fired boiler and two ultra-low sulfur diesel start-up burners. Sylvanergy proposes to construct the facility in the village of Forestdale and attempts to claim total exemption from permit requirements. The 40 MW facility has the capacity to supply power to 32,123 homes; it will also emit more than 513 tons of criteria pollutants each year. Furthermore, the facility would emit an additional 350,000 tons per year of GHG pollutants.

At full capacity, the Sylvanergy facility is undoubtedly a “major emitting facility” subject to PSD permitting requirements. Nevertheless, Sylvanergy petitioned NUARB for a Non-Applicability Determination (NAD)—that is, a determination that it was not required to obtain a PSD permit—because Sylvanergy promised to only operate the facility at 75 percent and never at full capacity. Unable to rely on a mere promise that was not federally enforceable, NUARB properly denied Sylvanergy’s NAD request and began the PSD permitting process.

NUARB gave the Forestdale Biomass Facility careful scrutiny for all the conventional pollutants covered by the PSD program. Based on an extensive record, NUARB concluded that the combination of state-of-the-art control technologies proposed by Sylvanergy would limit the facility's emissions of conventional pollutants so they would have negligible effects on air quality. However, because the facility was already subject to PSD review based on its emissions of conventional pollutants, NUARB imposed additional conditions in the final permit—the implementation of a sustainable forest plan—to ensure that the facility’s GHG emissions would not cause air quality to deteriorate below the acceptable NAAQS levels and that any potential threat to air quality would be eliminated.

On June 12, 2014, NUARB issued a federal PSD permit to Sylvanergy for the construction of the Forestdale Biomass Facility. Sylvanergy and SOC challenge NUARB’s PSD permit and each offers their own interpretation of how NUARB should have acted. Sylvanergy challenges both the denial of the NAD by NUARB and the imposition of the Sustainable Forest Plan as BACT for the facility’s GHG emissions. SOC also took issue with the Sustainable Forest Plan. SOC argues that the Sustainable Forest Plan has unacceptable adverse environmental impacts, and the NUARB should have instead imposed wood gasification and carbon capture as BACT for the facility’s GHG emissions.

STANDARD OF REVIEW

Appellate courts review agency decisions under the “arbitrary and capricious” standard. *Sierra Club v. EPA*, 346 F.3d 955, 961 (9th Cir.), *amended by* 352 F.3d 1186 (9th Cir. 2003). This is a narrow, deferential standard that presumes the validity of agency actions. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971); *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). This standard does not require the agency to have taken the best or most reasonable action. Rather, the agency’s decision must only be “based on a consideration of the relevant factors” and the Court may only invalidate the agency’s decision if “there has been a clear error of judgment.” *Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 285 (1974) (internal citation omitted).

SUMMARY OF THE ARGUMENT

The EAB properly denied Sylvanergy and SOC’s petitions challenging NUARB’s PSD permit because Petitioner’s failed to demonstrate “clear error” on the part of NUARB. Sylvanergy requested a non-applicability determination from NUARB, but NUARB denied the request. This is not a final agency action because the denial was a jurisdiction determination that did not have an immediate legal force or effect, and is therefore not reviewable by this Court. Even if this Court can review NUARB’s denial of an NAD, the Sylvanergy facility has the potential to emit over 250 tons of carbon monoxide per year, which means that NUARB properly classified the facility as a major emitting facility. As such, the CAA mandates that Sylvanergy obtain a PSD permit prior to commencing construction. And since the Forestdale Biomass Facility is already subject to PSD review for conventional pollutants, NUARB appropriately conducted BACT review for the facility’s greenhouse gas emissions.

PSD permits require a showing that new facilities include best available control technology for any regulated emissions. Permit issuers determine BACT for facilities using a top-down process developed by EPA. Available technologies are ranked from most efficient to least, and the most efficient option should be selected unless the permit applicant can demonstrate that the option is technically, economically, or environmentally infeasible. The permit issuers cannot select BACT that will redefine the source of the facility as the applicant described it.

NUARB imposed a Sustainable Forest Plan as BACT for the Sylvanergy facility's GHG emissions. In its BACT analysis, NUARB rejected various technologies, either because they were unproven for the use of GHG removal in biogenic facilities or because the imposition of those BACT impermissibly redefined the source of the facility. NUARB also rejected wood gasification and partial carbon capture, which was proper because the process would have redefined the source of Sylvanergy's biomass electric facility. The Sustainable Forest Plan did not redefine the source, nor was it economically, environmentally, or technically infeasible, so it was proper for NUARB to impose the plan as BACT. The EAB properly denied the petitions to review the permit, because NUARB's determinations were not made in clear error. Therefore, this Court should hold that the denial of the petition to review was not arbitrary or capricious, and uphold the PSD permit as issued by NUARB.

ARGUMENT

I. The interlocutory denial of an NAD is not subject to judicial review.

Under the Clean Air Act, courts do not have jurisdiction to review any EPA or state agency actions that are not "final." 42 U.S.C. § 7607(b)(1) (2012); *Puerto Rican Cement Co., Inc. v. U.S. Env'tl. Prot. Agency*, 889 F.2d 292, 294 (1st Cir. 1989). An agency's determination

that it has jurisdiction over an entity or case is not a “final” agency action. *See Fed. Trade Comm’n v. Std. Oil Co.*, 449 U.S. 232, 244 (1980); *see also Belle Co., L.L.C. v. U.S. Army Corps of Engineers*, 761 F.3d 383, 390–94 (5th Cir. 2014). Because NUARB’s NAD is a similar jurisdictional determination, it is not a “final” action and therefore not subject to review. Only one court has squarely addressed whether denials of NADs are appealable. *Puerto Rican Cement*, 889 F.2d at 294. But analogous cases suggest that *Puerto Rican Cement* was wrongly decided.

In *Federal Trade Commission v. Standard Oil*, the Court held that the filing of an FTC complaint did not constitute “final” agency action under 5 U.S.C. § 704, an analogous judicial review section in the Administrative Procedure Act. *Fed. Trade Comm’n*, 449 U.S. at 239. In that case, the FTC filed an administrative complaint against Standard Oil, alleging that the FTC had “reason to believe” that Standard Oil had violated its organic act, the Federal Trade Commission Act. *Id.* at 234. Standard Oil argued that the complaint was a final agency action because it had exhausted its administrative remedies—it had moved to dismiss the administrative complaint, and the FTC had denied that motion. *Id.* at 243–44. But the Court disagreed. First, the Court noted that the FTC’s complaint did not immediately or finally determine Standard Oil’s rights and responsibilities. *Id.* at 242–43. Then, the Court held that administrative exhaustion is not enough to make an agency action reviewable—it must still have “legal force or practical effect.” *Id.* at 243–44.

Similarly in this case, when NUARB denied Sylvanergy’s request for a NAD, that denial did not have immediate legal force or effect and was therefore not final. True, it meant that Sylvanergy would have to undergo New Source Review if it wanted to begin construction. But this is not enough, under *Federal Trade Commission v. Standard Oil*, to make an agency action

final. In order for NUARB's denial to be appealable, it needed to have immediate legal consequences.

The Fifth Circuit has also held that initial, jurisdictional determinations are not appealable. In *Belle Co. v. U.S. Army Corps of Engineers*, the Fifth Circuit held that an Army Corps "jurisdictional determination" was not a final agency action, again under the APA. *Belle Co., L.L.C.*, 761 F.3d at 386. In that case, Belle Co. requested that the Army Corps of Engineers determine whether part of their property constituted "wetlands." *Id.* at 387. If their property contained wetlands, then the couple could not fill or otherwise damage the wetlands without a permit from the Corps. *Id.* Rather than attempt to secure a permit from the Corps, Belle Co. appealed, arguing that the "jurisdictional determination" was a final agency action. But the Fifth Circuit disagreed. It noted that final agency actions require immediate legal consequences, not the possibility of future consequences. *Id.* at 390. Belle Co. still could have applied for a wetlands permit or simply begun construction. If the Corps denied their permit, or issued a cease-and-desist order, then those actions would have been final. *Id.* at 390–91. And, as the Fifth Circuit pointed out, it was *the Clean Water Act* that imposed restrictions on Belle Co., not the Corps' jurisdictional determination. *Id.* at 391.

Like the Corps jurisdictional determination in *Belle Co.*, NUARB's NAD was not final. Sylvanergy was not subject to any immediate legal consequences unless it began constructing the Forestdale Biomass Facility without going through New Source Review. As in *Belle Co.*, the Clean Air Act's command applied to Sylvanergy whether they applied for an NAD or not. Therefore, NUARB's denial of Sylvanergy's request for an NAD was not final agency action and is not appealable.

While the First Circuit has held that a denial of an NAD is a final agency action, in light of *Belle Co.*, that case was wrongly decided. *Puerto Rican Cement*, 889 F.2d at 294–96. In *Puerto Rican Cement*, a cement company attempted to construct a new cement kiln that would have polluted more than its previous kilns if operated at full capacity. *Id.* at 293. The EPA refused to grant the company an NAD, so the company appealed. *Id.* at 294. The First Circuit held that the denial of the NAD was appealable. *Id.* at 295. It held that not reviewing the NAD would require the company to go through New Source Review if they wanted to construct the new kiln, imposing a serious hardship. *Id.* But this hardship—the hardship of going through an expensive, time-consuming agency process—was not enough to make agency action “final” in *Standard Oil* or *Belle Co.* The court went on to note that New Source Review could not “give the Company precisely what it want[ed] without a few conditions.” *Id.* This is not the test: the test is whether immediate legal consequences flowed from the denial of the NAD. *See Belle Co.*, 761 F.3d at 390. The cement company could have gone through New Source Review or simply built the new kiln and defended itself against a cease-and-desist or penalty order. It did not. Instead, it appealed an order that other courts would have held to have been merely interlocutory.

Even if this Court decides to follow the example of *Puerto Rican Cement*, it still would not have jurisdiction to hear an appeal of NUARB’s denial of an NAD because the Clean Air Act’s statute of limitations would bar such an appeal in this case. 42 U.S.C. § 7607(b)(1) (2012). If *Puerto Rican Cement* was decided correctly, then Sylvanergy could have appealed NUARB’s denial of an NAD as soon as it was issued. It is not clear when NUARB denied Sylvanergy’s application for an NAD, but it must have occurred some time before September 12, 2013. R. at 6. Sylvanergy did not appeal NUARB’s denial of an NAD to this Court until 2015. The Clean Air Act’s judicial review section only allowed appeals of “any other final action of the

Administrator” for sixty days. 42 U.S.C. § 7607(b)(1). After November 11, 2013, *at the latest*, Sylvanergy’s appeal to this Court was time-barred. Because agency actions are not final unless legal consequences immediately flow from the decision, NUARB’s denial of an NAD was not final in this case. This Court does not have jurisdiction to hear interlocutory administrative disputes. Even if Sylvanergy could have appealed the NAD, the time for doing so is long past—almost two years past. Therefore, this Court does not have jurisdiction to review NUARB’s denial of Sylvanergy’s request for an NAD.

II. Even if the denial of an NAD were subject to judicial review, NUARB properly classified the Sylvanergy facility as a “major emitting facility” subject to PSD review.

Regardless of whether this Court may review the denial of a NAD, NUARB was correct in denying Sylvanergy’s request for a non-applicability determination. The Forestdale Biomass Facility is undoubtedly a “major emitting facility.” Therefore, NAURB had a nondiscretionary duty to issue a PSD permit.

A. The Sylvanergy facility is not a “fossil-fuel fired” source subject to the 100 ton-per-year threshold under section 169(1) of the Clean Air Act.

A facility is a “major emitting facility” if it falls within one of the twenty-eight listed categories of sources and emits or has the potential to emit 100 tons per year or more of any air pollutant. 42 U.S.C. § 7479(1). One of the categories subject to the 100-tons-per-year threshold is “fossil fuel-fired steam electric plants.” In fact, fourteen different types of industrial “plants” are specifically listed as types of “major emitting facilities” to which the PSD program applies. *Id.* (including Portland cement plants, iron and steel mill plants, lime plants and coal cleaning plants, to name a few); *Alabama Power Co. v. Costle*, 636 F.2d 323, 397 (D.C. Cir. 1979). A biomass-fired electric plant is not included on the list of “major emitting facilities.” 42 U.S.C.

§ 7479(1). Indeed, no alternative energy producing plant is included on the list of “major emitting facilities” subject to the 100 tons per year threshold. *Id.*

Where Congress explicitly enumerates certain categories in a definition, additional categories are not to be implied unless clear legislative intent proves otherwise. *See Andrus v. Glover Constr. Co.*, 446 U.S. 608, 616–617 (1980). When establishing the twenty-eight categories of sources subject to the 100-tons-per-year threshold, Congress wished to identify those sources “traditionally . . . considered the major polluters in the country.” Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans, 45 Fed. Reg. 52,676, 52691 (Aug. 7, 1980) (to be codified at 40 C.F.R. pts. 51, 52, 124). Particularly, Congress wished to identify the sources which, “as a group, are primarily responsible for emission of the deleterious pollutants that befoul our nation's air.” *Id.* Biomass facilities do not fit within this traditional category of polluters. Simply put, Congress implicitly excluded biomass-fired electric plants by explicitly including fossil fuel-fired electric plants and twenty-seven other specific industrial categories.

Nevertheless, SOC claims that the Forestdale Biomass Facility is a “fossil fuel-fired steam electric” plant and is consequentially subject to the 100-tons-per-year threshold. In making this argument, SOC relies on the fact that the Forestdale Biomass Facility would consist of a wood-fired boiler together with two ultra-low sulfur diesel start-up burners. SOC does not contest that the facility would rely primarily on wood biomass for energy production and that the wood-fired boiler is designed and permitted to burn only wood. Thus, SOC primarily contends with the two diesel start-up burners. SOC claims that because the Forestdale Biomass Facility would utilize diesel fuel in at least one minor aspect, the facility should be classified as a “fossil fuel-fired” source. This argument lacks merit.

Congress meant to exclude biomass facilities from the 100-tons-per-year threshold. Thus, states have continuously treated biomass sources differently than fossil fuel sources when conducting PSD review. For example, a study of 88 air permits issued for biomass power plants found that the vast majority of states do not classify biomass plants as being an enumerated category of “major emitting facilities” subject to the 100-tons-per-year threshold. Mary S. Booth, *Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal* 6–7 (April 2, 2014) (“While fossil-fueled power plants are considered major sources that are required to go through PSD if they emit 100 tons of a pollutant per year, a biomass plant is allowed to emit 250 tons of a pollutant before PSD permitting applies.”). Furthermore, EPA has treated biomass sources differently than fossil fuel sources. For example, EPA’s hazardous air pollutant regulations expressly differentiate between facilities that use biomass-fired broilers and those that use fossil fuel-fired broilers. *See* 40 C.F.R. § 63.11237. And EPA holds each facility to different standards. *Id.*; *see also* *Trees, Trash, and Toxics, supra*, at 39 (discussing EPA’s hazardous air pollutant rules; noting that “if a boiler burns or co-fires more than 10% biomass, and is greater than 10 MMBtu/hr, it is regulated as a biomass burner under the Industrial/Commercial/Institutional (ICI) rule”).

At bottom, the Forestdale Biomass facility is a biomass-fired unit that burns wood. Because wood is not considered a fossil fuel, the facility cannot be classified as a fossil fuel-fired source. *See* 40 C.F.R. § 60.41Da (defining fossil fuel under the new source performance standards as “natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating useful heat”); *see also* *Fossil Fuel*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/fossil%20fuel> (last visited Nov. 23, 2015). The fact that the Forestdale Biomass facility would use two ultra-low sulfur diesel start-

up burners does not radically change the category of the facility. The plain reading of the statute, Congress's intention in passing the statute, EPA's interpretation of the statute as well as the states interpretation of the statute leads to only one conclusion: biomass-fired electric plants are a distinct and separate category from fossil fuel-fired electric plants. Thus, a biomass fired electric plant is not subject to the 100-tons-per-year threshold because it simply does not fit within one of the twenty-eight listed source categories.

B. The Sylvanergy facility has the “potential to emit” more than 250 tons per year of carbon monoxide despite the limitations imposed by the Village of Forestdale because those limitations are not federally-enforceable.

Congress recognized that unlisted industrial categories were equally capable of contributing to air pollution based on the facility's size alone. That is why Congress included in the definition of a “major emitting facility” *any* other source that emits or has the potential to emit 250 tons or more per year of any air pollutant. 42 U.S.C. § 7479(1) (emphasis added). The plain language of the definition dictates that an “emitting facility” is “major” if the facility has the potential to emit the specified annual tonnage of any air pollutant. *Id.*; *Alabama Power Co. v. Costle*, 636 F.2d 323, 353 (D.C. Cir. 1979). Indeed, the concept of potential to emit is the “cornerstone of the entire PSD program” because it is “of primary importance” in establishing whether a new source is a “major emitting facility” subject to PSD review. ENVTL. PROT. AGENCY, NEW SOURCE REVIEW WORKSHOP MANUAL: PREVENTION OF SIGNIFICANT DETERIORATION AND NONATTAINMENT AREA PERMITTING, A.4 (Draft 1990) [hereinafter NSR MANUAL]; *United States v. Louisiana-Pacific Corp.*, 682 F. Supp 1122, 1133 (D. Colo. 1987).

EPA defines the potential to emit as the “the maximum capacity of a stationary source” while taking into consideration any “physical or operational limitation on the capacity of the source to emit a pollutant.” 40 C.F.R. § 52.21(b)(4). In describing what is meant by a physical or

operational limitation, EPA specifically refers to: (1) air pollution control equipment, (2) restrictions on hours of operation, and (3) restrictions on the amount of material combusted, stored, or processed. *Id.* However, any physical or operational limitation on the ability of a source to emit a pollutant shall be considered in calculating the potential to emit *only* if the limitation is federally-enforceable. *Id.*

The term “federally-enforceable” refers to a physical or operational limitation that the EPA Administrator can enforce. NSR MANUAL, at A.6. For example, the Administrator may enforce any requirement within a state’s implementation plan or any requirement contained in a CAA permit. *Id.* However, the Administrator lacks authority to enforce state or local initiatives not relating to permit conditions. *See In re Sutter Power Plant*, 8 E.A.D. 680, 690 (Envtl. App. Bd. 1999). This is the case here.

As part of the site plan approval process, the Village of Forestdale limited the operation of the Forestdale Biomass Facility to no more than 6,500 hours per year, which would limit the facility to a capacity factor of 75 percent. The limitation was adopted in order to mitigate the impact of log trucks bringing raw logs to the facility for processing into pellet fuel. This limitation is reflected in the site plan approval granted to the project, and can be enforced by the building inspector of the Village of Forestdale.

This clearly is not a federally-enforceable limitation. Admittedly, restrictions on hours of operation are one of EPA’s examples of an appropriate limitation because compliance with such conditions could be easily verified through the testimony of officers, internal correspondence, accounting, purchasing, and production records. *See Louisiana-Pacific Corp.*, 682 F. Supp at 1133. However, the real problem with the Village of Forestdale’s limitation is that it precedes the permitting process. NUARB was not part of the agreement nor can NUARB or the EPA enforce

the agreement. As such, the hourly restriction on the Forestdale Biomass Facility is not federally enforceable and therefore NUARB could not consider them when conducting its PSD review. All in all, at full capacity, the Forestdale Biomass Facility has the potential to emit 250 tons per year of carbon monoxide, which makes the facility a “major emitting facility” subject to PSD review.

III. Biomass-fueled facilities are subject to PSD review as an emitter of greenhouse gases because they will emit greenhouse gases in fact

Major emitting facilities in areas that are “in attainment” under the Clean Air Act, like Sylvanergy’s proposed Forestdale Biomass Facility, must secure PSD permits before undergoing construction or any major modification. 42 U.S.C. § 7475(a) (2012); *see also Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2435 (2014). Facilities that are subject to PSD review must use the best available control technology to control emissions of certain hazardous pollutants. 42 U.S.C. § 7475(a)(4). When a facility subject to PSD review also emits greenhouse gases, it must also use BACT to control the emissions of those greenhouse gases. *Util. Air Regulatory Grp.*, 134 S. Ct. at 2448–49. The Forestdale Biomass Facility is subject to PSD review for certain conventional pollutants. R. at 3.

None of this black-letter law is in dispute in this case. Rather, Sylvanergy argues that, because its facility is purportedly a “renewable energy” facility, it should not be required to undergo PSD review or use BACT to control GHG emissions. This is incorrect. The Clean Air Act is unequivocal: there is no exception for facilities that have the ability to mitigate their pollution to some extent. Sylvanergy’s facility will, in fact, emit greenhouse gases. Therefore, it must apply the best available control technology to reduce its greenhouse gas emissions.

The EPA has in the past attempted to treat “biogenic” sources—i.e., sources that emit carbon when burned but are not fossil fuels—differently for the purposes of regulating their GHG emissions. EPA Deferral Rule, 76 Fed. Reg. 43,490, 43,493, 43507–08 (July 20, 2011).

But the D.C. Circuit held that attempting to do so was arbitrary and capricious. *Ctr. for Biological Diversity v. EPA*, 722 F.3d 401, 409–12 (D.C. Cir. 2013). Admittedly, the D.C. Circuit did not hold that EPA categorically *could not* treat biogenic sources differently, but it struck down the only rule that would have justified such an exemption. *Id.* at 412; *but see id.* at 412–13 (Kavanaugh, C.J., concurring) (arguing that the plain language of the Clean Air Act does not support any exemption for biogenic sources of carbon dioxide).

Furthermore, EPA *should* require biogenic sources of carbon dioxide to undergo BACT review. Biogenic sources that burn biomass to power their facilities will require some carbon sequestration, offsetting their emissions to some extent. *Id.* at 406. But they will, in fact, emit carbon dioxide or its equivalent. Biogenic facilities may be better at mitigating climate change than coal- or natural-gas -fired power plants, but that does not mean that they cannot be made better through BACT review.

. Because there neither is, nor should there be, an exception for biogenic sources of greenhouse gases from BACT review, the Forestdale Biomass Facility should be subject to PSD review as an emitter of greenhouse gases.

IV. NUARB properly applied the top-down process when it determined BACT for the Forestdale Biomass Facility’s GHG emissions, and the EAB properly denied the petition for review because NUARB did not clearly err.

PSD review requires applicants to show that their facility will be subject to BACT for any pollutant regulated by the CAA. 42 U.S.C. §7475(a)(4). The permit issuer determines BACT on a case-by-case basis, applying a top-down approach. NSR MANUAL, at B.1. The EPA articulated the five-step top-down approach for permit issuers to use to determine BACT, which NUARB followed. *Id.* at B.6. The first step of the process is to list all available control technology options in descending order of effectiveness. *Id.* at B.2. The permit issuer should

adopt the most stringent technology option as BACT, unless the applicant can show the option is technically infeasible, which is step two of the process. *Id.* at B.7. Step three ranks the remaining control technologies by their effectiveness. *Id.* at B.7. Step four evaluates the practical, economical, or environmental concerns of the remaining technologies. *Id.* at B.8. The most effective control technology that has not been eliminated in step four must be selected as BACT in step five. *Id.* at B.9. Ultimately, “[t]he ‘top’ control option should be established as BACT unless the applicant demonstrates, and the permitting authority agrees, that the energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not ‘achievable’ in that case.” ENVTL. PROT. AGENCY, GUIDANCE FOR DETERMINING BEST AVAILABLE CONTROL TECHNOLOGY FOR REDUCING CARBON DIOXIDE EMISSIONS FROM BIOENERGY PRODUCTION 17 (2011) [hereinafter EPA GUIDANCE FOR BACT FOR BIOENERGY PRODUCTION].

In its permit application, Sylvanergy proposed flue controls as BACT for particulates, sulphur dioxide, nitrogen oxides, carbon monoxide, and VOCs. R. at 6. Sylvanergy did not propose BACT for greenhouse gas emissions in its PSD permit because it considered itself a renewable energy facility with zero GHG emissions. NUARB rejected this classification, and determined that Sylvanergy did need to meet BACT requirement for greenhouse gas emissions. NUARB conducted its own BACT analysis for greenhouse gas emissions, and imposed a Sustainable Forest Plan on the facility.

NUARB first considered multiple potential technology options, as step one dictates. NUARB considered carbon capture and storage first, because that technology has the greatest reduction in greenhouse gas emissions. NUARB rejected this option because there was “no proven technology for removing CO₂ from dilute flue gas streams that result from biomass

combustion.” R. at 6. After rejecting carbon capture and storage, NUARB then considered using alternative fuels like oil or natural gas to reduce greenhouse gas emissions. R. at 7. NUARB also rejected this option, as it would redefine a facility that described itself as renewable. R. at 7. NUARB considered wood gasification and partial carbon capture (at the behest of the SOC), but again rejected the technology as a redefinition of the facility. R. at 7. NUARB then considered implementing a Sustainable Forest Plan as BACT, which would require Sylvanergy to dedicate 25,000 hectares of forestland to offset their greenhouse gas emissions. R. at 7. NUARB found this requirement to be consistent with New Union Executive Order 005-12, which requires State agencies in New Union to ensure that any new projects they undertake are carbon neutral. R. at 7.

Both Sylvanergy and SOC petitioned the PSD to the EPA Environmental Appeals Board pursuant to 40 C.F.R. §124.19. R. at 4. The EAB ultimately denied the petition for review, which prompted the instant appeal. As the EAB indicated, the petitioners bear the burden to establish that NUARB based its permit decision on a “clearly erroneous finding of fact or conclusion of law” or that the permit decision “involve[d] a matter of policy or exercise of discretion that warrants review.” *In re Cherry Point*, 12 E.A.D. 209, 217 (Envtl. App. Bd. 2005) (citing 40 C.F.R. §124.19(a)(4)(i)(A)-(B)). The EAB determined NUARB did not issue the PSD permit in clear error, and therefore denied the petition for review.

The EAB’s denial of the petition to review constitutes a final agency action. 40 C.F.R. § 124.19(l)(2)(i). The Administrative Procedures Act dictates the standard of review courts must apply to final agency action. 5 U.S.C. § 706(2)(A). This court “may only overturn the [EAB’s denial of review], as an agency action, if it was ‘arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law.’” *See City of Pittsfield. v. EPA*, 614 F.3d 7, 10 (1st Cir.

2010) (articulating the standard of review in an analogous Clean Water Act case where the Environmental Appeal Board denied a petition to review a NPDES permit under 40 C.F.R. §124.19). The arbitrary and capricious standard is highly deferential to the agency's decision making, and presumes the validity of the agency's actions. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971). Unless this court finds that the Board's application of the clearly erroneous standard was arbitrary, capricious, or an abuse of discretion, it should uphold the EAB's decision to deny the permit review, thereby adopting the position that NUARB properly determined BACT for GHG emissions.

Both Petitioners take issue with the first step of the BACT top-down process; that is what technologies are included as available options. The EPA categorizes available technologies in three ways: (1) Inherently lower-emitting processes/practices; (2) Add-on controls; and (3) Combinations of categories (1) and (2). NSR MANUAL, at B.10. The applicant may also consider innovative technologies in the BACT analysis. *Id.* at B.12 The EPA defines innovative technologies as:

any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.

40 C.F.R. § 52.21(b)(19).

Sylvanergy argues that NUARB improperly included the Sustainable Forest Plan as an available control technology, and SOC argues it improperly excluded carbon capture and storage via wood gasification. R. at 10. But the purpose of the first step is to “identify *all* control options with potential application to the source and pollutant under evaluation.” NSR MANUAL, at B.10 (emphasis added). NUARB properly included both technologies in the first step of the BACT

analysis, because both are potentially available. The Sustainable Forest Plan is not a conventional add-on control, or a lower emitting practice or process, but it does have the “substantial likelihood of achieving greater continuous emissions reduction,” and warranted consideration in step one. Wood gasification is a lower emitting process BACT, and NUARB did consider this technology in its BACT analysis. R. at 7. Contrary to SOC’s claims, NUARB did consider wood gasification, but as illustrated below, validly rejected the technology. NUARB therefore did not err in its step one analysis.

A. NUARB properly imposed a Sustainable Forest Plan on Sylvanergy, because even though the technology is innovative, it does not impermissibly redefine the source, offers the highest reduction of greenhouse gas emissions, and is not economically prohibitive.

Because Sylvanergy has the potential to emit substantial amounts of GHG pollutants NUARB needed to determine the best available control technology to reduce the facility’s GHG emissions. NUARB applied the five step top-down process articulated by the EPA, and concluded that a Sustainable Forest Plan would be the appropriate BACT requirement for Sylvanergy’s facility. The PSD permit required Sylvanergy to purchase 25,000 hectares of dedicated forest land, at a total cost of \$10 million. R. at 7. At that acreage, the reforestation area would offset approximately 70% of the GHG emissions from the plant, and would also act as sustainable and reliable feedstock production. R. at 7.

Both petitioners take issue with the Sustainable Forest Plan, and NUARB including it in step one of the BACT analysis. But it was proper for NUARB to include innovative technologies as available technologies in the BACT analysis. NSR MANUAL, at B.12. Sustainable Forest Plans are a particularly relevant technology to consider for the GHG emissions at issue here; “because sequestration of CO₂ emissions in living plant material outside the boundaries of the facility may counteract the emissions from such facilities on a continuous basis, this unique dynamic merits

consideration in the BACT analysis.” EPA GUIDANCE FOR BACT FOR BIOENERGY PRODUCTION, at 8.

Sylvanergy takes issues with the imposition of the Sustainable Forest Plan because—as they characterize the plan—it is a “beyond-the-fence” mitigation measure “unrelated to the control of the actual emissions from the facility.” R. at 11. But as NUARB BACT analysis already shows, the other technologies were not suitable for the facility and the Sustainable Forest Plan was on the only remaining technology that had not been eliminated in the top-down process. R. at 6–7. NUARB considered carbon capture and sequestration (CCS) first, because it is the technology with the greatest possible reduction in GHG emissions, but NUARB ultimately rejected CCS because the technology is typically used in coal or natural gas fired power plants, and there was no proven technology for the transfer of CCS to remove CO₂ from biomass combustion. R. at 6. The use of alternative fuels—like natural gas or oil—and wood gasification and partial CCS were also rejected because they impermissible redefined the source, as discussed below. R. at 7. This left NUARB with only one remaining available technology: the Sustainable Forest Plan.

The Sustainable Forest Plan does not redefine the source of the facility; in fact, it furthers the goals of the facility by providing a sustainable feedstock of wood. R. at 7. The initial purchase cost of the land is not economically prohibitive, nor is the plan environmentally destructive, contrary to SOC’s claims. R. at 7. The Sustainable Forest Plan therefore passes muster in Step four of the BACT analysis, and it was therefore appropriate for NUARB to impose the Plan as BACT in Sylvanergy’s permit. This was not done in clear error; NUARB in its experience as the permitting authority for New Union properly determined BACT using the top-down process. The Board did not abuse its discretion when it applied the clearly erroneous

standard to NUARB's decision to implement the Sustainable Forest Plan. Therefore, the EPA asks this court to uphold the PSD permit and the BACT requirement of a Sustainable Forest Plan.

B. NUARB properly rejected wood gasification and carbon capture as BACT for the Sylvanergy Facility's GHG emissions because the imposition of that technology would impermissibly redefine the source, which the CAA does not require in order to achieve BACT.

Petitioner SOC also challenged the PSD permit because NUARB rejected wood gasification and partial carbon capture—the technology SOC advocated for in their brief—as BACT for the facility's GHG emissions. But wood gasification and partial carbon capture would redefine the source, and therefore cannot be implemented as BACT. The BACT requirement in PSD permits ensures that new construction projects do not negatively affect the good air quality of attainment areas, but this requirement does not require facilities to completely alter their designs or fuel source in order to achieve this goal. NSR MANUAL, at B.13; *In re Prairie State*, 13 E.A.D. 1, 18 (Env'tl. App. Bd. 2006). The BACT requirement is not meant to “redefine the design of the source,” and an available technology can be rejected during the top-down process if it does redesign the source. *In re Prairie State*, 13 E.A.D. at 18 (citing NSR MANUAL, at B.13). The EPA recommends that permitting authorities apply the framework articulated by the Environmental Appeals Board to determine when technology redefines the source. EPA GUIDANCE FOR BACT FOR BIOENERGY PRODUCTION, at 12.

As the permit issuer considers available technologies during the first step of the BACT process, they must consider the facility in the terms the permit applicant defined it. *See In re Prairie State*, 13 E.A.D. at 20 (noting that “Congress intended the permit applicant to have the prerogative to define certain aspects of the proposed facility that may not be redesigned through

application of BACT. . .”). In the permit application, the applicant “defines the goals, objectives, purpose, or basic design for the proposed facility” and the permit issuer must be mindful of these characteristics of the facility when it determines BACT. *Id.* at 23. The permit issuer therefore cannot impose a BACT requirement that would necessitate a redefinition of the source of the facility, because the “source is not a condition of the permit.” *Id.* The permit issuer can modify some design elements in order to achieve BACT, but the permit issuer must be mindful of the design elements that are inherent to the purpose of the facility, and not impose a BACT requirement that would redefine those inherent design elements. *See id.* at 23–24 (holding that the source of coal for a co-located mine and coal-fired electric plant was an inherent aspect of the proposed project, and could not be redefined through BACT). The imposition of wood gasification and carbon capture falls into the second category of modifications that would impermissibly redefine Sylvanergy’s facility.

SOC argued on appeal that NUARB improperly rejected wood gasification and carbon capture as BACT. But it was proper for NUARB to reject this technology because it would have redefined the energy source of the facility. The technology of wood gasification and carbon capture transforms biomass—in Sylvanergy’s case wood—into a synthetic gas, or syngas, in order to remove carbon dioxide and store the gas to remove it from the carbon cycle. R. at 12; *See* James S. Rhodes and David W. Keith, *Engineering Economic Analysis of Biomass IGCC with Carbon Capture and Storage*, 29 *BIOMASS AND BIOENERGY* 440 (2005), <http://keith.seas.harvard.edu/papers/67.Rhodes.2005.BiomassCCS.e.pdf> (describing the mechanics and economics of carbon capture and storage). The process is made up of four components: “biomass gasification, syngas conditioning, carbon capture, and power generation.” Rhodes and Keith, *supra*, at 443. The modeled process has 55% carbon capture rate, and the

captured carbon is then sequestered in geological formations, like the Union Shale geological unit proposed by SOC. *Id.* at 443, 446; R. at 12.

The Rhodes and Keith study, which Petitioner SOC relies on heavily in their argument, illustrates the economic feasibility of biomass gasification and carbon capture, and compares the cost saving benefits to natural gas and coal. Rhodes and Keith, *supra*, at 446–47. While this technology may be feasible, it fundamentally alters the inherent design elements of Sylvanergy’s facility, and therefore cannot be considered BACT. Sylvanergy proposed to build a biomass-fired electricity generation plant, which would generate electricity through a wood-fired burner. R. at 5. The production of electricity through a wood-fired burner is an inherent design element of the Sylvanergy facility, and cannot be redefined in order to achieve BACT. Wood gasification and carbon capture would require Sylvanergy to alter the source of energy production in their facility from burning biomass to gasifying it, thus redefining the basic purpose of their biomass fired electricity plant. Sylvanergy would have to implement a completely different energy production scheme than what they proposed in their application.

As prior EBA decisions and guidance documents show, the EPA does not require facilities to alter the fundamental elements of their facility in order to achieve BACT. *In re Prairie State*, 13 E.A.D. at 23. It was therefore proper for NUARB to reject wood gasification and carbon capture because that technology would have redefined the basic purpose or source of the facility. This decision was not arbitrary, capricious, or an abuse of discretion. The EPA relied on its longstanding policy and interpretation of the CAA BACT requirements, and properly applied that standard to the Sylvanergy PSD permit. The EPA therefore asks this court to uphold the EAB’s denial of the petitions to review on both issues: it was proper for NUARB to reject

wood gasification and carbon capture, and to impose the Sustainable Forest Plan as BACT for Sylvanergy's facility.

CONCLUSION

Biomass-burning facilities like Sylvanergy's may provide exciting ways forward for this country. They may help us produce electricity in a more sustainable way. They may be less harmful to the environment than coal, or other traditional sources. But the Clean Air Act has no exceptions for new and exciting technologies. Its mandate applies to all sources of air pollution, regardless of how sustainable they may eventually prove to be.

For the foregoing reasons, this Court should affirm the decision of the EPA Environmental Appeals Board and uphold NUARB's decision to issue a PSD permit for the construction of the Forestdale Biomass Facility.

Respectfully submitted,

Team 15
Attorneys for Respondent