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David Samlin

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2008]

GROCE V. DEPARTMENT OF ENVIRONMENTAL PROTECTION: AFFIRMATIVE COMBUSTION IN PENNSYLVANIA

I. INTRODUCTION

The nation’s metropolitan and urban areas have been steadily growing in population.1 This rise in urbanization has led to a steady increase in both the amount and complexity of air pollution in the United States.2 The increased intensity of air pollution has “resulted in mounting dangers to the public health and welfare, including injury to agricultural crops and livestock, damage to and the deterioration of property, and hazards to air and ground transportation.”3

To combat this increase in air pollution and preserve the nation’s environmental and public health,4 Congress passed the Clean Air Act (CAA),5 which delegated responsibility for the prevention and control of air pollution to state and local governments.6 Under the CAA, each State must submit a State Implementation Plan (SIP) which outlines that state’s chosen methods for the control and prevention of air pollution.7 Furthermore, the CAA requires each state to submit its SIP to the United States Environmental Protection Agency (EPA) for approval.8 The EPA accepted Pennsylvania’s SIP, which requires the Pennsylvania Department of Environmental Protection (DEP) to approve the plans for any proposed facility that would emit air pollutants.9

The DEP’s approval of a proposed plan, however, can be administratively challenged and subsequently appealed to the Penn-

2. See id. § 7401(a)(2) (detailing air pollution effects from urbanization and industrialization).
3. Id. (listing negative environmental impacts of air pollution).
4. See id. § 7401(b)(1) (describing CAA’s purpose and goals).
6. See id. § 7401(a)(3) (delegating responsibility of air pollution prevention and control).
8. Id. (explaining system under CAA by which States would submit implementation plan to EPA for approval).
sylania Environmental Hearing Board (EHB) and further to the Commonwealth Court of Pennsylvania. In Groce v. Department of Environmental Protection (Groce), certain citizens and environmental organizations (collectively the Association) appealed the DEP’s approval of a plan (Plan Approval) to construct an electric power plant facility in Pennsylvania. The EHB dismissed the appeal, and the Commonwealth Court of Pennsylvania subsequently affirmed.

The Association’s appeal in Groce concerned objections to the proposed construction of a Circulating Fluidized Bed (CFB) combustion facility that would generate electricity by burning waste coal. This Note focuses on the uses and benefits of such a CFB facility. This Note also analyzes the DEP’s approval of the proposed plan for the Facility and considers whether the Commonwealth Court of Pennsylvania properly affirmed the EHB’s validation of that approval.

Section II of this Note discusses the facts underlying the Groce case. Section III develops and explores the relevant statutes and case law regarding the CAA, Pennsylvania’s SIP, and the process by which the DEP promulgates regulations. Section IV explores the Commonwealth Court of Pennsylvania’s reasoning in affirming the EHB’s decision to uphold the DEP’s Plan Approval for the CFB facility. Section V provides a critical analysis of the court’s affirmation of the EHB’s decision regarding CFB combustors and the

10. See Groce, 921 A.2d at 572-73 (noting DEP’s approval susceptible to challenge).
12. See id. (detailing Association’s challenges to Plan Approval). The Association was comprised of Dennis Groce, the National Parks Conservation Association, the Group Against Smog and Pollution, and Phil Coleman. Id. at 570.
13. Id. at 573, 585 (establishing EHB’s dismissal of appeal and Commonwealth Court of Pennsylvania’s affirmation of dismissal).
14. See id. at 570-75 (setting forth appeal of DEP’s plan approval to Commonwealth Court of Pennsylvania).
15. For a further discussion of the facts surrounding the Wellington Facility and the Association’s appeal, see infra notes 18-29 and accompanying text.
16. For a further discussion of statutes and case law surrounding the CAA, see infra notes 30-33 and accompanying text. For a further discussion of Pennsylvania’s SIP and the DEP’s issuance of a plan approval, see infra notes 34-42 and accompanying text. For a further discussion of CFB combustors, see infra notes 43-58 and accompanying text. For a further discussion of the standard of review of EHB decisions, see infra notes 59-63 and accompanying text. For a further discussion of agency deference, see infra notes 64-67 and accompanying text. For a further discussion of the differences between regulations and statements of policy, see infra notes 68-74 and accompanying text. For a further discussion of the Fye v. United States standard of evidence, see infra notes 75-76 and accompanying text.
17. For a further analysis of the Commonwealth Court’s holding and reasoning, see infra notes 77-111 and accompanying text.
DEP's statutory interpretations in issuing the Plan Approval.\textsuperscript{18} Finally, Section VI explores the impact of the court's decision on both the future of CFB facilities in Pennsylvania as well as an agency's statutory interpretations in general.\textsuperscript{19}

II. FACTS

In \textit{Groce}, Wellington Development-WVDT-LLC (Wellington) sought to construct a new electric power plant.\textsuperscript{20} Wellington filed an application with the DEP, proposing to build a 525-megawatt electrical power generation facility (Facility) in Cumberland Township, Greene County, Pennsylvania.\textsuperscript{21} The Facility would use two CFB combustors to burn coal in order to produce steam that would then be used to generate electricity.\textsuperscript{22} Concern arose, however, that the Facility's combustion of coal would result in the emission of various air pollutants, such as Sulfur Dioxide (SO$_2$) and Nitrous Oxides (NO$_x$), which are regulated under the CAA.\textsuperscript{23}

On July 21, 2005, the DEP approved Wellington's plan for the Facility's construction in an area that met air quality standards for SO$_2$, but not for NO$_x$.\textsuperscript{24} Prior to the Plan Approval, Wellington and the DEP met with the Federal Land Managers (FLM) responsible for evaluating the Facility's impact on four areas designated as "Class I" areas under the Prevention of Significant Deterioration (PSD) guidelines.\textsuperscript{25} After reviewing Wellington's application, the

\begin{footnotesize}
\begin{enumerate}
\item For a further analysis of the Commonwealth Court of Pennsylvania's affirmation of CFB combustors and the DEP's statutory interpretations, see infra notes 112-142 and accompanying text.
\item For a further discussion of the impacts of the DEP's issuance of a plan approval, see infra notes 143-161 and accompanying text.
\item See \textit{Groce v. Dept' of Envtl. Prot.}, 921 A.2d at 570 (listing parties involved in case).
\item See \textit{id.} at 570-71 (explaining details of Wellington's plan for construction of electrical facility).
\item See \textit{id.} (detailing process through which Wellington's facility would generate electricity). The two CFB combustors generate steam by burning a combination of 15% run of mine coal and 85% bituminous waste coal. \textit{Id.} For further discussion of CFB combustors and waste coal, see infra notes 43-58 and accompanying text.
\item See \textit{Groce}, 921 A.2d at 571 (explaining why Facility falls under CAA regulations).
\item Id. at 572 (stating initial approval of Facility). For a further discussion of air quality standards and compliance, see infra notes 31-32 and accompanying text.
\item See \textit{Groce}, 921 A.2d at 572 (reviewing way in which Wellington and DEP went through application process). The four areas that were evaluated for potential impact from the emissions from the facility were: (1) Otter Creek; (2) Dolly Sods Wilderness in the Monongahela National Forest in West Virginia; (3) James River Face Wilderness Area in the Thomas Jefferson National Forest in Virginia; and (4) Shenandoah National Park in Virginia. \textit{Id.} For a further discussion of the
\end{enumerate}
\end{footnotesize}
DEP published a notice of intent to issue a plan approval, which included notice of the degree of increment consumption for Class II areas only.\footnote{Groce, 921 A.2d at 577 (detailing steps taken by DEP in issuing Plan Approval).}

The Association appealed the Plan Approval on numerous grounds: (1) the Plan Approval failed to require the proper emission standards for NOx; (2) the Plan Approval was based on an inadequate analysis of the impact to the Shenandoah National Park (Shenandoah) in Virginia, which would potentially be affected by the pollution emissions; (3) the Plan Approval did not include an “adequate increment consumption analysis” for Shenandoah under the PSD program; (4) the Plan Approval did not “require adequate mitigation of adverse impacts on visibility in Shenandoah[;]” (5) the Plan Approval failed to include emission limits that reflect the Lowest Achievable Emission Rate (LAER) for NOx emissions; (6) the DEP did not provide public notice for the expected increment consumption for Class I areas; (7) the DEP did not provide “adequate notice, necessary information or allow adequate time for review and comment on the application to the FLM;” and (8) the DEP approved the plan in violation of 40 C.F.R. sections 52.21(k) and (1).\footnote{Id.}

The EHB dismissed the Association’s appeal following an extensive de novo review.\footnote{Id. at 573 (stating EHB’s dismissal of Association’s appeal).} Upon the EHB’s dismissal, the Association appealed the decision to the Commonwealth Court of Penn-
The court subsequently upheld the EHB's dismissal of the appeal, thereby validating the Plan Approval.

III. BACKGROUND

A. Legislative Basis

Congress enacted the CAA primarily to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." In combination with the CAA, Congress entrusted the EPA with establishing the maximum concentration of various air pollutants through National Ambient Air Quality Standards (NAAQS). An area subject to these limitations may be in compliance or "attainment" with the NAAQS for some pollutants, but in noncompliance, or "nonattainment," for other pollutants. A source of pollution in attainment is subject to PSD requirements, whereas a source in nonattainment is subject to New Source Review (NSR) requirements.

Pennsylvania's SIP adopted the Federal PSD regulations with one exception: the DEP, not the EPA, acts as the agency of authority. The Federal PSD regulations separated the United States into three classes and specified which geographic areas would fit into each class. In addition, the PSD regulations establish that FLMs in charge of Class I areas "have an affirmative responsibility to protect the air quality related values (including visibility) of such lands" and to determine "whether a proposed source or modification will

29. Id. (explaining Association's actions following EHB dismissal).
30. See id. (reporting Commonwealth Court of Pennsylvania's affirmation of EHB decision dismissing Association's challenge to DEP Plan Approval).
33. See Groce, 921 A.2d at 571 (explaining effect of NAAQS on air pollutant designations in various geographical areas).
34. Id. (describing range standards to be applied to areas in attainment and nonattainment). For a further discussion of the NSR requirements, see infra notes 41-42 and accompanying text.
36. See Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(e) (2007) (establishing designation of United States into three classes). The Classes were designated by the type of area; for example, international parks, national wilderness areas exceeding 5,000 acres in size, and national memorial parks which exceed 5,000 acres in size were Class I areas. Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(e)(1)(i)-(iii).
have an adverse impact on such values." Furthermore, the PSD regulations establish the amount of a particular pollutant that could be added to an area without jeopardizing that area’s attainment status, which is referred to as the "allowable increment."38

A facility, subject to PSD review and seeking Plan Approval by the DEP, must demonstrate that the facility’s emissions will not “cause or contribute” to air pollution in excess of the allowable increment.39 The DEP is also required to publish a notice of action on intended plan approvals for new facilities subject to either PSD or NSR review.40 In addition, notice given for a source subject to PSD review must also include the degree of increment consumption expected to result.41

Pennsylvania’s SIP also adopted the federal NSR regulations, which require compliance with the LAER for pollutant emissions from a facility in an area of nonattainment.42 The LAER standard is defined in the SIP as the lowest emission rate based on the more stringent of either: (1) the emission limitation of a SIP for the class or category of the proposed source, unless it is demonstrated by the owner of the proposed source that the limitation is not achievable; or (2) the emission limitation achieved in practice by the class or category of the source.43

B. CFB Combustors and Waste Coal

CFB combustors are a relatively new development in the electric power industry.44 The combustor itself is comprised of a large

38. See Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(b)(13)(ii)(a)-(b) (establishing baseline concentrations for individual areas will not include actual emissions).
39. See Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(k) (setting forth requirements for new source to receive Plan Approval).
40. See DEP Adoption of Program, 25 PA. Code § 127.44(a)(1)-(2) (2007) (requiring notice on action taken on plan approvals for sources subject to (1) PSD and (2) NSR regulations).
furnace that burns coal in order to boil water and create steam, which then drives a turbine connected to an electric generator. 45 The solid coal used for fuel is first crushed to the relative size of sand and mixed with limestone. 46 The coal and limestone mixture is then blown into the base of the combustor using heated air, igniting as it rises. 47 Next, the hot ash and limestone created from the combustion are separated in a "cyclone" and recycled back into the combustor through superheated tubes which aid in producing steam. 48 When the hot gases finally leave the cyclone, they enter additional "reheater/superheater" tubes which also generate steam. 49 Finally, the hot gas is sent through a polishing scrubber and then through fabric filters that absorb pollutants in the gas before being released from the facility through a stack. 50

The CFB combustor has many advantages over other types of combustion facilities. 51 First, CFB combustors use lower grade coals, such as waste coal. 52 Waste coal, or garbage of bituminous


46. See id. (explaining features of CFB combustors).

47. See id. (detailing process by which CFB combustors burn fuel). The burning of the fuel and limestone mixture is conducted through a "slow burn" which stabilizes temperatures to below 1600°F. Id. This "slow burn" process is used to prevent excessive NOx formations. Id. At the top of the combustor, ammonia is also added to aid in limiting NOx emissions. Id. NOx is a precursor to ground-level ozone and can cause serious respiratory problems and can contribute to form acid rain and toxic chemicals and is a contributor to global warming. EPA, Nitrogen Oxides: Chief Causes for Concern, http://www.epa.gov/air/urbanair/nox/chf.html (July 23, 2007) (listing dangers of NOx).


49. See id. (explaining process of generating additional steam).

50. See id. (detailing process of cleaning gas to remove pollutants). In addition to the reduction of NOx emissions that are reduced through the "slow burn" process, the polishing scrubbers and fabric filters act to reduce the amount of SO2 emitted as well. Id.


(GOB) coal, is the waste created as a by-product of coal mining. Mine operators have typically dumped GOB coal outside of the mines because the coal’s low energy content is unattractive to customers. Large piles of waste coal can cause sulfuric acid and hydrogen sulfide runoff, which can severely pollute streams and kill local aquatic wildlife. Therefore, a major environmental advantage of CFB combustors is that the combustors use and burn waste coal, preventing such negative environmental impacts.

Second, CFB combustors can also lead to economic benefits. It can take millions of dollars and many years to clean up the numerous waste coal piles found in the Eastern United States. In situations where the CFB facility is situated near a waste coal pile, however, the cost of using the waste coal may only be that of transporting the coal to the facility.

C. Standard of Review of an EHB Decision

Where the Commonwealth Court of Pennsylvania is reviewing an EHB decision,

the court shall affirm the adjudication unless it shall find that the adjudication is in violation of the constitutional rights of the appellant, or is not in accordance with law, or that the provisions of Subchapter A of Chapter 5 (relating to practice and procedure of Commonwealth agencies) have been violated in the proceedings before the agency, or that any finding of fact made by the agency and necessary to support its adjudication is not supported by substantial evidence.

54. See Ivanovich, supra note 51 (explaining how GOB piles formed).
55. Id. (detailing environmental hazards of waste coal). Additionally, the excess waste coal, or GOB piles, have been known to ignite and further pollute local waters. Id.
56. See id. (recognizing that CFB facility would alleviate dangers by using waste coal as fuel).
57. See id. (stating that using waste coal as fuel source would essentially be free).
58. See Pelton, supra note 52 (estimating cost of $52 million and three decades to clean up Maryland’s most endangered areas).
59. See Ivanovich, supra note 51 (posing that only cost incurred in having CFB facility would be in transporting coal from pile to facility).
60. See 2 PA. CONS. STAT. ANN. § 704 (West 2007) (establishing standard of review). Additionally, “questions of resolving conflicts in the evidence, witness credibility, and evidentiary weight are within the exclusive discretion of the EHB, the fact finding agency, and are not matters for a reviewing court.” Pennsylvania
This standard has been upheld in numerous cases, including *Leatherwood Inc. v. Department of Environmental Protection* (*Leatherwood*), a leading case. *Leatherwood* involved the revocation of a DEP plan approval issued with respect to the construction of a solid waste landfill. In upholding the EHB's revocation, the court repeatedly noted that the EHB did not commit any errors of law and that its findings were supported by substantial evidence.

D. Agency Deference and Statutory Interpretation

Although a court may review an agency's interpretation of statutes, "agencies are entitled to deference in interpreting the statutes that they enforce and... a reviewing court must put aside its discretion [in favor of the] expertise of the administrative agency." As a result, statutory interpretations of an agency, such as the DEP, will not be overturned unless they are found to be clearly erroneous. In *Brunner v. Department of Environmental Protection* (*Brunner*), the Commonwealth Court of Pennsylvania applied this standard to invalidate an erroneous DEP interpretation; the court concluded that the DEP's interpretation read words into a statute that were not found in the language of the statute itself.

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63. See *Leatherwood*, 819 A.2d at 606 (providing brief background of case).

64. Id. at 614 (holding that reviewing court will not disturb EHB's findings where findings are supported by substantial evidence).


68. See id. at 1174 (finding DEP interpretation to be erroneous). The DEP argued in *Brunner* that Section 6301 in Title 27 of the Pennsylvania Consolidated Statutes, requiring a $4 fee for each ton of waste disposed of at a landfill, did not
E. Regulation vs. Statement of Policy

The Pennsylvania Commonwealth Documents Law (CDL) sets forth the process by which an agency issues a new regulation, including public notice of the proposed regulation, receiving comments on the regulation from interested parties, and holding hearings when appropriate.\(^{69}\) Significant within the CDL, however, is the exception that an agency's statement of policy, as opposed to a regulation, merely tracks a statute and need not be issued in accordance with the CDL.\(^{70}\)

In *Central Dauphin School District v. Commonwealth of Pennsylvania Department of Education* (*Central Dauphin*),\(^{71}\) the relationship between a regulation and a statement of policy was further explored.\(^{72}\) There, the Commonwealth Court of Pennsylvania differentiated regulations and statements of policy, and found that a regulation "establishes a standard of conduct which has the force

include sand used as an alternate daily cover unless that sand was from a resource recovery facility. *Id.* at 1173. The court, in rejecting the DEP's interpretation, focused on the language from the dissent of the EHB decision upholding the DEP's interpretation, which stated that the erroneous nature of the DEP's interpretation was that it "tends to add words that simply are not there. The statute says that the new fee shall not apply to process residue and nonprocessible waste that is used in defined ways. It does *not* say process residue and nonprocessible waste from a 'resource recovery facility.'" *Id.* at 1174. The issue, as the court pointed out, was that the words "resource recovery facility" were not contained within section 6301, but were inferred by the DEP. *Id.* Additionally, the *Brunner* court noted that, pursuant to Section 1921(b) in Title 1 of the Pennsylvania Consolidated Statutes, "[w]hen the words of the statute are clear and free from all ambiguity, the letter of it is not to be disregarded under the pretext of pursuing its spirit." *Id.* (citing 1 PA. CONS. STAT. ANN. § 1921(b) (West 2007)).


70. *See* Woods Servs., Inc., 803 A.2d at 265 (recognizing CDL treats issuances of regulations and statements of policy differently). A regulation, as defined in the CDL, means "any rule or regulation, or order in the nature of a rule or regulation, promulgated by an agency under statutory authority in the administration of any statute administered by or relating to the agency, or prescribing the practice or procedure before such agency." 45 PA. CONS. STAT. ANN. § 1102(12) (West 2007).

The CDL, however, defines a statement of policy as:

any document, except an adjudication or a regulation, promulgated by an agency which sets forth substantive or procedural personal or property rights, privileges, immunities, duties, liabilities or obligations of the public or any part thereof, and includes, without limiting the generality of the foregoing, any document interpreting or implementing any act of Assembly enforced or administered by such agency. § 1102(15).


72. *See id.* at 580-81 (setting forth definitions of regulation and statements of policy).
A statement of policy, in contrast, does not establish a "binding norm," but merely indicates the agency's "tentative intentions for the future." The court recognized that the test to determine whether an agency's action constitutes a regulation or merely a statement of policy is the extent to which the action allows the agency discretion in choosing to follow that action in an individual case.

F. Frye v. United States

The test developed in Frye v. United States (Frye test) is the applicable standard when a party wishes to introduce evidence and testimony from an expert witness regarding a scientific matter, like Wellington did in Groce. Under this test, the party wishing to introduce the evidence must prove that the methodology and principles used by the expert have been generally accepted in the relevant scientific community.

IV. Narrative Analysis

In Groce, the Commonwealth Court of Pennsylvania had to determine whether the EHB was correct in dismissing the Association's appeal of the DEP's Plan Approval. After reviewing the various issues raised by the Association, the court affirmed the EHB's decision.


74. Id. (establishing statements of policy are not legally binding).


76. 293 F. 213 (D.C. Cir. 1923).

77. See e.g. Commonwealth of Pa. v. Dengler, 890 A.2d 372, 382 (Pa. 2005) (recognizing applicability of Frye test). The Dengler court stated that the only time the Frye test applies is when a party wishes to introduce novel scientific evidence obtained from the conclusions of an expert. Id. The evidence Wellington sought to introduce was related to the methodology of modeling air quality. See Groce v. Dep't of Envt'l. Prot., 921 A.2d 576, 580-81 (Pa. Commw. Ct. 2007).

78. See Dengler, 890 A.2d at 382 (explaining requirements of Frye test).

79. See Groce, 921 A.2d at 570 (stating main issue before Commonwealth Court of Pennsylvania).

80. See id. at 574-85 (detailing Commonwealth Court of Pennsylvania's analysis of issues and EHB decision). Although the court addressed numerous issues,
A. Class or Category and LAER Standard

The court first addressed the Association’s argument that the EHB erred in affirming the DEP’s creation of a class or category of source under the LAER requirements, called the CFB combustor.81 The court explained the means for determining the LAER standard and focused on the language of “class or category” as it is used within those means.82 The court recognized, however, that “class or category” was not defined in the requirements or in any other state or federal law or regulation.83

As a result, the court instead focused on the DEP’s methodology in determining the Facility’s “class or category” to ascertain whether substantial evidence existed to support the DEP’s determination.84 Specifically, the court analyzed the DEP’s evidence on the substantial differences between CFB combustors and other coal burning units.85 Due to “substantial evidence of the significant dif-
ferences in the properties of waste coal . . . and the mechanisms for burning [it]," the court concluded that the EHB did not err in upholding the DEP’s creation of a CFB combustor class or category. 86

Additionally, the court addressed the Association’s argument that, even if the CFB combustor was a proper class, the EHB erred in finding that the Facility achieved the lowest emission of any facility in its class for NOx. 87 The court applied the second method of determining the LAER standard 88 and reviewed the evidence on record concerning the emission rate of the Facility compared to other CFB facilities. 89 After examining the evidence, the court found that no other CFB facility had achieved a lower NOx emission rate than the Facility in Groce, and the court consequently affirmed the NOx emission limitation imposed by the EHB. 90

B. Significant Impact Levels

The court next addressed the DEP’s use of Significant Impact Levels (SILs) in determining whether the Facility would cause or contribute to an increase in air pollution in violation of the PSD allowable increment for Shenandoah. 91 The court began its analysis with 40 C.F.R. section 52.21, which governs PSD review. 92 Specifically, the court analyzed section 52.21(k), which requires the owner or operator of a facility to demonstrate that the emissions

CFB combustors burn waste coal creates fewer emissions of SO2 and NOx than from PC boilers. Id. For a further discussion of CFB combustors, see supra notes 43-58 and accompanying text.

86. See Groce, 921 A.2d at 575 (holding EHB did not err in determining class or category).
87. See id. at 575-76 (setting forth Association’s argument in response to EHB’s creation of CFB class or category).
88. See DEP Definitions, 25 PA. CODE § 121.1 (2007) (declaring one LAER standard as most stringent emission limitation achieved in practice by class or category of source). The court stated, in a footnote, that it chose the second method because “there was no evidence that any emission limitation in any SIP would be more stringent than the Facility’s emission limitation.” Groce, 921 A.2d at 576 n.11. For a further discussion of the two methods to determine the LAER standard, see supra note 42 and accompanying text.
89. See Groce, 921 A.2d at 576 (explaining court’s method of reviewing determination that Facility achieved most stringent emission limit).
90. Id. (finding substantial evidence to support EHB’s designated emission limitation). The emission rate achieved by the Facility was calculated to be 0.1 lbs/million British thermal units (MMBTU). Id. Based upon that calculation, the EHB decided to impose a NOx emission limitation of 0.1 lb/MMBTU. Id.
91. See id. (detailing Association’s argument that EHB erred in allowing DEP to use SILs). The Association contended that the EHB erred in allowing the DEP to use SILs, arguing that any impact above zero prevented PSD approval. Id.
92. See generally Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21 (2007) (defining PSD requirements); see also Groce 921 A.2d at 577 (examining PSD requirements for DEP plan approval).
from that facility will not "cause or contribute" to air pollution in violation of the allowable increment.93

The DEP interpreted section 52.21(k) to mean that a facility would only cause or contribute to an amount exceeding the increment if that contribution was greater than a de minimis threshold (also known as a SIL).94 The DEP explained that its interpretation was based on the Congressional intent of balancing the desire to protect both air quality and the public health with the desire for economic growth consistent with the preservation of clean air resources.95 In reviewing the DEP's interpretation, the court recognized that in 1990, the EPA drafted a new version of its New Source Review Workshop Manual (NSR Workshop Manual), which included SILs as a de minimis threshold.96 Although the NSR Workshop Manual had not been finalized, it was "considered authoritative as a primary guidance document on the degree of increment consumption and used regularly by professionals in the field."97

The court thus affirmed the EHB decision, finding that the DEP's SIL was de minimis, because the Facility's projected emissions were only ten percent of the emissions allowed by the SIL.98 Additionally, the court agreed with the DEP that adopting the Association's "non-zero" approach would be impractical because an infinitesimally small reading by a computer projection did not necessarily make the reading significant.99 The court, therefore, held

93. See Groce, 921 A.2d at 577 (describing Court's analysis of "cause or contribute"); see also Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(k) (2007) (detailing "cause or contribute" limitation).
94. See Groce, 921 A.2d at 577 (explaining DEP's interpretation of 40 C.F.R. § 52.21(k)).
95. See id. at 577 n. 16 (quoting CAA, 42 U.S.C. § 7470(1) (2007)) (stating purpose of PSD requirements).
96. Id. at 577 (noting other sources using SIL).
97. Id. (detailing history, authority, and use of NSR Workshop Manual). The NSR Workshop Manual provided that when a violation of an increment is predicted, the applicant can determine whether the net emissions increase from the source would result in a significant ambient impact. Id. at 577 n.17. The source would not be considered to cause or contribute to the violation if its own impact was not significant at any violating receptor. Id.
98. Id. at 577 (comparing SIL limitations with projected emissions from Facility). The 24-hour SIL for SO2 was 0.2 micrograms per cubic meter, whereas the projected emission from the Facility for the increment at Shenandoah was only 0.02 micrograms per cubic meter. Id. This finding was also based on the court's definition of "contribute," which was "to play a significant part in bringing about an end or result." Id. at 578 (quoting WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 285 (1989)) (defining "contribute") (emphasis added).
99. See Groce, 921 A.2d at 577-78 (concluding that Association's approach is impractical given current modeling technology). The Association had argued
that the EHB did not err in accepting the DEP’s interpretation of “cause or contribute,” based upon the DEP’s adherence to Congressional intent as well as substantial evidence that SILs had been regularly used by professionals in the field.100

Furthermore, the court concluded that the DEP’s interpretation of “contribute,” as used in 40 C.F.R. section 52.21(k), was not an attempt to promulgate a new regulation, but instead constituted a statement of policy.101 The Association contested the DEP’s interpretation that a source would only consume the allowable increment if the source’s contribution was above a *de minimis* threshold, arguing that it imposed a “binding norm” through a new regulation without following proper rulemaking procedures under the CDL.102 The court, however, held that the DEP’s interpretation of “contribute” simply tracked the section 52.21(k) requirement that “emission increases from the proposed source not play a significant part in air pollution.”103

C. Notice of Degree of Increment Consumption

The Association also contended that the DEP was required to publish the degree of increment consumption for all Class I areas under the notice requirement of 25 Pa. Code section 127.45.104 The statute requires that notice of a proposed plan approval contain the expected “degree of increment consumption” for the source at issue.105 The problem, however, was that “degree of increment consumption” was not defined in any state or federal regulation.106 The DEP interpreted “degree of increment consumption” by following the NSR Workshop Manual, which

for a “non-zero” approach, in which any impact on air quality standards above zero would prevent issuance of PSD approval. See id. at 576.

100. *Id.* at 578 (stating Commonwealth Court of Pennsylvania’s holding on issue of SILs).

101. *Id.* (holding EHB did not err in allowing DEP to use SILs).

102. *See id.* (reiterating Association’s argument). For a further discussion of the Commonwealth Documents Law and the distinctions between regulations and statements of policy, see *supra* notes 65-70 and accompanying text.

103. *Id.* (finding that DEP’s interpretation was statement of policy and not regulation).

104. *See Groce*, 921 A.2d at 579 (discussing Association’s argument that EHB erred in not requiring DEP to publish degree of increment consumption for all affected Class I areas in notice of Plan Approval). For a further discussion of the notice requirements set forth in Pennsylvania’s SIP, see *supra* notes 39-40 and accompanying text.


106. *See Groce*, 921 A.2d at 579 (noting definitional limitations of requirements).
stated that an "increment was 'consumed'... where the computer model calculated the highest concentration of emissions for [a PSD pollutant]." The court noted that the NSR Workshop Manual does not require notice for every impact resulting from a source's emissions, but only for those impacts from sources in which emissions exceed the SIL threshold. As a result, the court concluded that the EHB did not err in holding that the DEP was only required to provide notice for Class I areas in which the modeled impact of the Facility's emissions would exceed the SIL threshold.

D. Mitigation Measures

The Commonwealth Court concluded its analysis by addressing the issue of whether the EHB erred in determining that the mitigation measures contained in the Plan Approval adequately protected visibility in Shenandoah. The court recognized that the FLMs had an affirmative responsibility to protect visibility in Class I areas, such as Shenandoah. Additionally, while the court referred to evidence showing the FLMs' initial rejection of Wellington's mitigation plan, it focused on their later acceptance of an enhanced plan. Based on this evidence, which the court found to be substantial without giving any additional reasoning, the court affirmed the EHB's determination regarding the adequate protection of Shenandoah based upon the Plan Approval's mitigation measures.

107. Id. (describing basis for DEP's interpretation). The court explained that "a proposed source was considered to be a contributing consuming increment if the emissions that were expected to result were above the SIL threshold during the period when the increment was the highest from all modeled cumulative impacts." Id. at 579-80.

108. See id. at 580 (stating requirements for PSD sources in NSR Workshop Manual).

109. Id. (affirming EHB's decision that DEP only need publish degree of increment consumption for James River Face where SO_{2} impact exceeded SIL threshold). In addition, the court also held that although the DEP had not published the degree of increment consumption for James River Face in the initial notice of the Plan Approval, the supplemental notice was sufficient to cure the error. Id. The court noted that the supplemental notice "afforded the public and the Association an opportunity for effective public participation," but no comments were submitted and the Association did not raise its objections at the de novo hearing. Id.

110. See id. at 583 (explaining final issue addressed by Commonwealth Court).

111. See Groce, 921 A.2d at 583 (listing FLM's duties under PSD regulations).

112. See id. at 584-85 (discussing actions of Shenandoah's FLM).

113. Id. at 585 (finding substantial evidence to support EHB's holding).
AFFIRMATIVE COMBUSTION IN PENNSYLVANIA

V. CRITICAL ANALYSIS

A. Approval of CFB Facility

Although the Commonwealth Court of Pennsylvania in Groce addressed a variety of issues, the overarching issue was whether the DEP properly approved Wellington’s plan for a CFB facility.\textsuperscript{114} Based on substantial evidence supporting both the DEP and EHB’s findings, the court properly affirmed the EHB’s dismissal of the Association’s appeal.\textsuperscript{115} The court’s holding in Groce demonstrates the importance of deferring to the EHB when reviewing an EHB decision and only overturning such a decision if it is unsupported by substantial evidence.\textsuperscript{116}

Therefore, through its affirmation of the EHB decision, the court properly approved the use of CFB combustors because of the substantial evidence of the advantages of CFB combustors over other, more traditional coal-burning facilities.\textsuperscript{117} One such advantage, exemplified by the CFB facility currently operating in Jacksonville, FL, is that CFB combustors produce much lower emissions of dangerous air pollutants, such as SO\textsubscript{2} and NO\textsubscript{x}, than their more traditional coal-burning counterparts.\textsuperscript{118} The design of CFB combustors, and more specifically the injection of limestone into the bed burning the coal, leads to reduced pollutant emissions and eliminates the need for more expensive emissions controls.\textsuperscript{119}

The more significant advantage of CFB combustors, however, is that unlike other conventional combustors, they are equipped to handle lower-grade coals, such as waste coal, as a fuel source.\textsuperscript{120} This quality enables CFB combustors to make use of an essentially free fuel supply: waste coal located near the site of the facility which

\textsuperscript{114.} See id. at 570 (stating Association’s general argument against DEP and EHB).

\textsuperscript{115.} See id. at 585 (affirming decision of EHB, thereby affirming decision of DEP).

\textsuperscript{116.} See 2 PA. CONS. STAT. ANN. § 704 (West 2007) (establishing standard of review); for a further discussion of the standard of review for EHB decisions, see supra notes 59-63 and accompanying text.

\textsuperscript{117.} For a further discussion of the benefits of CFB combustors over other coal-burning facilities, such as PC boilers, see supra notes 50-58 and accompanying text.

\textsuperscript{118.} See U.S. Department of Energy, supra note 50 at 4 (describing advantages of CFB combustors over traditional combustors); see also U.S. Department of Energy, supra note 44 (describing positive performance of Jacksonville facility).

\textsuperscript{119.} See U.S. Department of Energy, supra note 50 (describing benefits of limestone in CFB design).

\textsuperscript{120.} See id. (stating CFB combustor’s ability to use low-quality fuels); see U.S. Department of Energy, supra note 44 (explaining Jacksonville facility’s ability to burn low-grade coals and waste by-products as advantage to facility).
is severely damaging the environment. As a result, the ability of CFB combustors to use waste coal enables CFB facilities to simultaneously produce energy with reduced pollutant emissions and alleviate the environmental dangers of waste coal.

This evidence of the function and advantages of CFB facilities illustrates the propriety of the court’s affirmation of the EHB’s decision. The court relied on the substantial differences between PC boilers and CFB combustors in concluding that the DEP had acted correctly in designating the CFB combustor as its own class or category. Additionally, in upholding the EHB’s findings that the Facility would meet the most stringent emissions limitations, the court analyzed the effect a CFB combustor’s physical characteristics had on pollutant emissions. Therefore, because the court’s decisions were based on substantial, concrete evidence demonstrating the operational and environmental advantages of CFB combustors, it properly affirmed the EHB’s decision by upholding the DEP’s Plan Approval of the Facility.

B. DEP’s Interpretations

Throughout Groce, the court addressed many of the DEP’s statutory interpretations that came before the EHB. Pennsylvania case law establishes that agencies are to be given deference when interpreting statutes they are responsible for enforcing. Moreover, in this case, the DEP interpreted the statutes in such a way that entitled it to deference by both the EHB and Commonwealth Court.

121. See Ivanovich, supra note 51 (stating harms of waste coal and how CFB combustors will make use of waste coal).
122. Id. (describing CFB plant’s ability to use waste coal and produce fewer emissions).
124. See id. at 575 (describing differences between PC boilers and CFB combustors).
125. See id. at 576-77 (finding Facility achieved lowest emission rate in its class).
126. See 2 PA. CONS. STAT. ANN. § 704 (West 2007) (establishing standard of review for EHB decisions); see also Groce, 921 A.2d at 575-76 (finding substantial evidence to support decision of EHB).
127. See Groce, 921 A.2d at 574-80 (examining DEP interpretations of statutory language). The court examined the DEP’s interpretations of “class or category,” “cause or contribute,” and “degree of increment consumption.” Id.
of Pennsylvania.\textsuperscript{129} As the court recognized in previous cases, the language of a statute is not to be ignored when it is clear and unambiguous.\textsuperscript{130} Furthermore, DEP interpretations have been upheld as long as they are not arbitrary or unreasonable.\textsuperscript{131}

In \textit{Groce}, however, the court was presented with several instances where statutory language was not necessarily clear and no case law or regulation provided any guidance.\textsuperscript{132} Nevertheless, the methods the DEP undertook in interpreting the ambiguous language followed previous appropriate interpretations, and thus the court appropriately affirmed the EHB’s decision to accept those interpretations.\textsuperscript{133}

Presented with no guidance on what “class or category” was meant to include, the DEP in \textit{Groce} undertook a factual analysis of the coal-burning system involved in the Facility’s plan as compared to other systems.\textsuperscript{134} Due to the significant differences between CFB combustors and other coal-burning systems, the DEP determined that CFB combustors should be classified as a separate class or category.\textsuperscript{135} This analysis enabled the DEP to base its determination on the actual characteristics and functions of various coal-burning systems, which allowed the DEP to come to a “reasonable” conclusion based on the facts.\textsuperscript{136} For this reason, the court properly affirmed the EHB, which accepted the DEP’s interpretation of “class or category,” since that interpretation was neither arbitrary nor unreasonable.\textsuperscript{137}

Additionally, the court appropriately deferred to the DEP’s interpretation of the term “contribute,” because the plain meaning of the term is clear and the DEP’s interpretation was neither arbitrary

\begin{footnotes}
\item 129. See \textit{SUNOCO}, 865 A.2d at 970 (explaining DEP’s interpretations of statutes for determining allowable emissions).
\item 131. See \textit{SUNOCO}, 865 A.2d at 970 (stating reasons for upholding EHB’s ruling).
\item 132. \textit{Groce}, 921 A.2d at 574-80 (recognizing definitions of statutory terms were not provided in state or federal laws or regulations).
\item 133. See \textit{id.} (setting forth DEP interpretations of terms at issue in \textit{Groce}).
\item 134. See \textit{Groce}, 921 A.2d at 575 (examining CFB combustors and PC boilers).
\item 135. See \textit{id.} (finding substantial evidence supporting CFB combustors as class or category).
\item 136. See \textit{id.} (analyzing factual differences in properties of regular coal and waste coal).
\item 137. See \textit{id.} (affirming EHB’s decision based on substantial supporting evidence); see also \textit{SUNOCO, Inc. v. Dept’ of Envtl. Prot.}, 865 A.2d 960, 970 (Pa. Commw. Ct. 2005) (giving reasons for validity of interpretation).
\end{footnotes}
nor unreasonable.\textsuperscript{138} Although the Association called for a standard where any emission would “cause or contribute” to air pollution, the DEP’s interpretation only included significant contributions.\textsuperscript{139} In support of its interpretation, the DEP relied on the NSR Workshop Manual, which stated that a source would not cause or contribute to pollution “if its own impact is not significant.”\textsuperscript{140}

The difference in the court’s analysis of the DEP’s interpretations of “contribute” and “class or category,” however, is that the court had a plain meaning of “contribute” to reference.\textsuperscript{141} The court defined “contribute” as “to play a significant part in bringing about an end or result.”\textsuperscript{142} In this way, the DEP’s interpretation of “contribute” fit squarely within the definition offered by the court.\textsuperscript{143} Thus, the court properly affirmed the EHB because the DEP’s interpretation of “contribute” did not disregard or deviate from the plain meaning of the term as it was used in the statute.\textsuperscript{144}

VI. IMPACT

A. Future Use of CFB Combustors

The Commonwealth Court of Pennsylvania’s decision in Groce has implications beyond allowing Wellington to build its facility; its holding greatly impacts the future of CFB combustors in Pennsylvania.\textsuperscript{145} While the court did not eliminate DEP approval as a threshold requirement for construction of such a facility in Pennsylvania, the court’s decision nevertheless expresses an underlying approval of CFB combustion facilities.\textsuperscript{146} Consequently, the court’s

\begin{footnotesize}
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\item See Groce, 921 A.2d at 576-78 (describing and affirming DEP’s interpretation of “cause or contribute”).
\item See id. at 576-77 (stating Association and DEP’s competing interpretations).
\item Id. at 577 n.17 (emphasis added) (stating provisions of NSR Workshop Manual in regards to PSD requirements).
\item See id. at 578 (examining regulations versus statements of policy relating to DEP’s interpretation of term “contribute”).
\item Id. (quoting WEBSTER’S NINTH NEW COLLEGIATE DICTIONARY 285 (1989)) (defining term “contribute”) (emphasis added).
\item See Groce, 921 A.2d at 577-78 (giving DEP’s interpretation of term “contribute” and Commonwealth Court’s definition of same term).
\item See generally Groce, 921 A.2d at 567 (affirming EHB decision to uphold DEP plan approval).
\item See generally id. at 567 (affirming DEP’s plan approval of Facility).
\end{enumerate}
\end{footnotesize}
ultimate holding is in accord with numerous findings that CFB combustors present a hopeful and viable solution to dangerous waste coal while simultaneously protecting the environment from significant air pollution.\footnote{See id. at 575 (detailing CFB combustor's ability to use waste coal as fuel source and burn at low temperatures, limiting emissions); see also Department of Energy, supra note 50 at (describing advantages of CFB combustors over traditional combustors); see also Pelton, supra note 52 (estimating Pennsylvania has 250 million tons of waste coal throughout state that will be burned using power plants); see also Ivanovich, supra note 51 (stating harms of waste coal and how CFB combustors will make use of waste coal).} 

The court's review of the Facility in \textit{Groce}, however, presents a potential caveat to this implicit approval of CFB combustors: proposals for future CFB combustion facilities must contain the same characteristics and exhibit similar environmental benefits as the Wellington Facility.\footnote{See Groce, 921 A.2d at 575-76 (recognizing CFB's ability to use waste coal as fuel source and CFB's achievement of lowest emission rate in class); see also Ivanovich, supra note 51 (finding that new CFB facility would use 3.5 million tons of waste coal per year and could clean up waste coal within 16 years). For a further discussion of CFB combustors, see supra notes 43-58 and accompanying text.} The court in \textit{Groce} found substantial evidence of the CFB combustor's superiority over other traditional combustors in its ability to process waste coal.\footnote{See Groce, 921 A.2d at 575 (finding emission rate for NO\textsubscript{x} of 0.1lb/MMBTU by Facility to be lowest achieved in practice). For a further discussion of emissions created by coal-burning facilities, see supra notes 22 and 49 and accompanying text.} The court also found it significant that the Facility had achieved the lowest emission rate among other facilities in its class.\footnote{Groce, 921 A.2d at 577 (affirming EHB's findings that Facility's emissions would have \textit{de minimis} impact). For a further discussion of SILs and \textit{de minimis} impact, see supra endnote 89-101 and accompanying text.} Related to the emissions of the Facility, the court further noted that the amount of SO\textsubscript{2} emitted by the Facility would not have more than a \textit{de minimis} effect on surrounding pollution levels.\footnote{See generally Groce, 921 A.2d at 575-77 (holding that evidence supported DEP's finding that Facility was deserving of its own class or category, that Facility had achieved lowest emissions in class, and emissions from Facility had \textit{de minimis} effect).} 

For the foregoing reasons, evidence of the CFB combustion facility's superiority in relation to other coal-burning facilities was critical to the court's affirmation of the EHB.\footnote{See Groce, 921 A.2d at 575 (describing differences between CFB combustors and PC boilers). For a further discussion on waste coal and the environmental dangers it poses, see supra notes 51-54 and accompanying text.} Consequently, future CFB combustor projects will likely be able to gain approval only when the facility shares the same benefits and positive charac-
teristics as the Facility in Groce.\textsuperscript{153} Based upon the court's underlying approval of the Facility, as well as the numerous advantages inherent in CFB combustor technology, CFB combustors will likely have a future in Pennsylvania as a viable and beneficial means of generating power.\textsuperscript{154}

B. Statutory Guidance

Although the court's analysis of the DEP's statutory interpretations in Groce was helpful to the issue before the court, the court's analysis is also significant for what it did not do.\textsuperscript{155} Regarding "class or category" and "degree of increment consumption," the Court recognized that no definitions of the phrases existed in state or federal laws or regulations.\textsuperscript{156} Notably, the court did not attempt to undertake an in-depth examination of the undefined phrases, but instead affirmed the EHB's decision based upon sufficient evidentiary support.\textsuperscript{157}

As a result, although the court did not establish set definitions that could guide agencies in the future, it implicitly reaffirmed the previously adopted standard of statutory review.\textsuperscript{158} In reviewing whether CFB combustors constituted their own "class or category," the court, by affirming the EHB, accepted the DEP's interpretation because it was based upon a factual analysis of different coal-burning systems.\textsuperscript{159} As such, the court implicitly held that an agency's statutory interpretation must not be arbitrary, thereby implying that future interpretations of "class or category" must be based upon

\textsuperscript{153} See id. at 575 (differentiating characteristics of PC boilers from different, positive characteristics of CFB combustors).

\textsuperscript{154} See generally id. at 585 (affirming EHB's dismissal of Association's challenge to Wellington's CFB facility); see also Pelton, supra note 52 (estimating Pennsylvania has 250 million tons of waste coal); see also Ivanovich, supra note 51 (recognizing that CFB combustion technology can use harmful waste coal as fuel).

\textsuperscript{155} See generally Groce, 921 A.2d at 574-75, 579 (analyzing terms "class or category" and "degree of increment consumption").

\textsuperscript{156} Id. (noting lack of guidance in court's analysis).

\textsuperscript{157} See id. at 575 (accepting DEP's interpretation that CFB combustors constituted independent class or category and degree of increment consumption only required significant consumptions be reported).

\textsuperscript{158} See Brunner v. Dep't of Envtl. Prot., 869 A.2d 1172, 1174 (Pa. Commw. Ct. 2005) (holding agency's interpretation is invalid by adding words to statute, and that plain meaning of statute will not be disregarded); see also Sunoco v. Dep't of Envtl. Prot., 865 A.2d 960, 970 (Pa. Commw. Ct. 2005) (affirming DEP interpretation where interpretation was not arbitrary or unreasonable).

\textsuperscript{159} See Groce, 921 A.2d at 574-75 (describing differences between CFB combustors and PC boilers).
substantial evidence.\textsuperscript{160} This standard was reiterated in the court's analysis of "degree of increment consumption," where the court again implicitly found that the DEP's interpretation of the phrase was not arbitrary, since it was based upon provisions in the NSR Workshop Manual for when an increment is consumed.\textsuperscript{161}

Consequently, although the Commonwealth Court of Pennsylvania declined to provide meanings for undefined phrases, the court nevertheless reinforced evidentiary and reasonableness standards for statutory interpretations.\textsuperscript{162} Thus, \textit{Groce} offers guidance not only to entities wishing to construct CFB facilities in Pennsylvania, but also to agencies, such as the DEP, when interpreting statutes.\textsuperscript{163}

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\textsuperscript{160} See \textit{id.} at 575 (validating DEP's interpretation of "class or category" as relating to CFB combustors).

\textsuperscript{161} See \textit{id.} at 579 (explaining NSR Workshop Manual's provision for when increment is consumed).

\textsuperscript{162} See \textit{id.} at 575, 579 (affirming EHB because DEP's interpretations were based on substantial evidence and were not arbitrary).

\textsuperscript{163} See \textit{id.} at 575 (finding substantial evidence as critical factor in affirmation of EHB).