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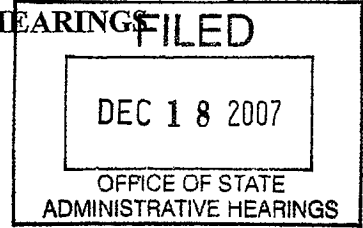
BEFORE THE ENVIRONMENTAL QUALITY COUNCIL
OF THE STATE OF WYOMING

IN THE MATTER OF:)
BASIN ELECTRIC POWER COOPERATIVE)
DRY FORK STATION,) Docket No. 07-2801
AIR PERMIT CT - 4631)

**RESPONDENT DEPARTMENT OF ENVIRONMENTAL QUALITY'S
REPLY IN SUPPORT OF ITS MOTION TO DISMISS**

ATTACHMENT 3

BEFORE THE OFFICE OF STATE ADMINISTRATIVE HEARINGS
STATE OF GEORGIA



FRIENDS OF THE
CHATTAHOOCHEE, INC. and
SIERRA CLUB,

Petitioners,

v.

DR. CAROL A. COUCH, DIRECTOR,
ENVIRONMENTAL PROTECTION
DIVISION, GEORGIA DEPARTMENT OF
NATURAL RESOURCES,

Respondent,

and

LONGLEAF ENERGY
ASSOCIATES, LLC,

Intervenor.

Docket No.: OSAH-BNR-AQ-0732139-60-
Howells

**MEMORANDUM OPINION AND ORDER
ON MOTIONS FOR SUMMARY DETERMINATION**

Introduction

On May 14, 2007, Dr. Carol A. Couch, Director of the Environmental Protection Division ("EPD") of the Georgia Department of Natural Resources ("Respondent") issued a Prevention of Significant Deterioration ("PSD") Air Quality Permit No. 4911-099-0030-P-01-0 ("Permit") to Longleaf Energy Associates, LLC ("Intervenor").¹ (Pet., Ex. A). The Permit authorizes Intervenor to construct and operate a 1,200 megawatt coal fired electric generating station. On June 13, 2007, Petitioner, Friends of the Chattahoochee, Inc. ("FOC") and Petitioner,

¹ Available at <http://www.georgiaair.org/airpermit/psd/dockets/longleaf/permitdocs/0990030final.pdf> (last visited November 20, 2007).

Sierra Club, hereinafter "Petitioners," filed a Petition for Hearing ("Petition") to appeal Respondent's decision to issue the Permit.²

Procedural Background

On July 19, 2007, pursuant to OSAH Rule 15, Intervenor filed a motion for summary determination on Counts I, X, XI, and XV of the Petition. *See* GA. COMP. R. & REGS. r. 616-1-2-.15 (2007). On July 20, 2007, Respondent also filed a motion for summary determination on Counts I, X, XI, and XV of the Petition. Additionally, on July 20, 2007, Intervenor and Respondent filed separate motions for partial summary determination on Counts II, V, and VII of the Petition. On August 13, 2007, Petitioners filed a collective response to the motions for summary determination filed by Respondent and Intervenor.

A hearing on the motions for summary determination was held on August 17, 2007. After the hearing, this Tribunal issued an oral ruling granting the motions for summary determination as to Counts I, X, and XI. This Tribunal deferred ruling on the motions for summary determination as to Count XV and partial summary determination as to Counts II, V, and VII, to allow Petitioners to respond to EPD's introduction of a memorandum in support of its position and to clarify Petitioners' position with respect to Permit Condition 8.23.

On August 24, 2007, after consideration of the motions, the arguments presented, and Petitioners' supplemental response, this Tribunal issued an oral ruling granting the motions for summary determination on Count XV and partial summary determination on Counts II, V, VII. The bases of this Tribunal's rulings are set forth below.

² The Petition for Hearing was filed with the Director of EPD on June 13, 2007, and was received by the Office of State Administrative Hearings ("OSAH") on June 20, 2007.

Summary Determination Standard

On a motion for summary determination, the moving party must show by supporting affidavits or other probative evidence that there is no genuine issue of material fact for determination such that the moving party “is entitled to a judgment as a matter of law on the facts established.” *Richie Pirkle, et al v. Envtl. Prot. Div., Dep’t of Natural Res.*, OSAH-BNR-DS-0417001-58-Walker-Russell, 2004 Ga. ENV. LEXIS 73, at *6-7 (2004) (citing *Porter, et al v. Felker, et al*, 261 Ga. 421 (1991)); GA. COMP. R. & REGS. r. 616-1-2-.15(1). *See generally Piedmont Healthcare, Inc. v. Ga. Dep’t of Human Res.*, 282 Ga. App. 302, 304-305 (2006) (observing that a summary determination is “similar to a summary judgment” and elaborating that an Administrative Law Judge “is not required to hold a hearing” on issues properly resolved by summary adjudication). Once a motion for summary determination is made and supported, the opposing party may not rest upon mere allegations or denials, but must show by supporting affidavit or other probative evidence that there is a genuine issue of material fact. *Guy Lockhart v. Dir., Envtl. Prot. Div., Dep’t of Natural Res.*, OSAH-BNR-AE-0724829-33-RW, 2007 Ga. ENV LEXIS 15, at *3 (2007) (citing *Leonaitis v. State Farm Mutual Auto Ins. Co.*, 186 Ga. App. 854 (1988)); GA. COMP. R. & REGS. r. 616-1-2-.15(3).

Legal Background

Georgia law requires all air pollution sources to obtain permits from EPD before commencing construction and operation. *See* O.C.G.A. § 12-9-7(a). EPD administers its permitting program through rules and regulations adopted by the Georgia Board of Natural Resources. The rules governing air quality control are located in Chapter 391-3-1. *See generally* GA. COMP. R & REGS. r. 391-3-1-.01, *et seq.* These rules list specific requirements for various types of air permits depending on the air quality in the area of the source (i.e., whether the source

is located in an area that is in “attainment” or “nonattainment” of applicable National Ambient Air Quality Standards (“NAAQS”), and on the potential air pollution emission rates from the source. *See generally* GA. COMP. R. & REGS. r. 391-3-1-.02 (providing specific emission limitations and standards). Early County, the site of the Longleaf’s proposed coal-fired facility, lies in an “attainment area” for all regulated pollutants. This means that the air quality in the area is in compliance with state and federal air quality standards. *See* 40 C.F.R. § 81.311.

The federal Clean Air Act (“CAA”), 42 U.S.C. § 7401, *et seq.*, requires states to adopt regulatory programs for issuing a certain type of construction permit to major air pollution sources located in attainment areas. This permit is known as a “Prevention of Significant Deterioration” or “PSD” permit, because it is designed to prevent significant deterioration of air quality in areas that are currently meeting NAAQS. *See* 42 U.S.C. § 7470(1). Georgia has adopted a regulatory program for PSD permits, which the United States Environmental Protection Agency (“EPA”) has approved as part of Georgia’s State Implementation Plan (“SIP”). *See* 40 C.F.R. § 52.572. Therefore, in Georgia, the Director of EPD issues PSD permits to qualifying sources pursuant to Georgia’s rules. *See* GA. COMP. R. & REGS. r. 391-3-1-.02(7) (providing rules for the prevention of significant deterioration of air quality).

PSD permits require a number of demonstrations and conditions to ensure protection of ambient air quality standards, or NAAQS, and to restrict future air quality degradation. *See* 42 U.S.C. § 7475(a)(3) (listing requirements for PSD permit applicants). All new major air pollution sources must utilize best available control technology (“BACT”) for each pollutant regulated under EPA’s New Source Review (“NSR”) program. *See* 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j)(2) (“A new major stationary source shall apply best available control technology for each regulated NSR pollutant that it would have the potential to emit in

significant amounts.”) (incorporated by reference in GA. COMP. R. & REGS r. 391-3-1-.02(7)(b)7). BACT is defined as follows:

[A]n emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under [the Clean Air] Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

40 C.F.R. § 52.21(b)(12); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(a)2 (incorporating 40 C.F.R. § 52.21(b) by reference).

Count I

In Count I of the Petition, Petitioners allege that the Permit is invalid because EPD failed to include a BACT emission limitation for carbon dioxide (“CO₂”). (Pet. at ¶ 37). In support of their claim, Petitioners rely on 40 C.F.R. §§ 52.21(j)(2) and (b)(50). (*Id.* at ¶ 34).

Section 52.21(j)(2) provides that “[a] new major stationary source shall apply best available control technology for each *regulated NSR pollutant* that it would have the potential to emit in significant amounts.” 40 C.F.R. § 52.21(j)(2) (emphasis added); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(b)7 (incorporating 40 C.F.R. § 52.21(j)(2) by reference). Thus, Section 52.21(j)(2) only requires BACT emission limitations for “regulated NSR pollutants.” *See* 40 C.F.R. § 52.21(j)(2). Section 52.21(b)(50) defines “regulated NSR pollutant” as follows:

Regulated NSR pollutant, for purposes of this section, means the following:

- (i) Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator (e.g., volatile organic compounds and NO[X] are precursors for ozone);
- (ii) Any pollutant that is subject to any standard promulgated under section 111 of the [CAA];

- (iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the [CAA]; or
- (iv) Any pollutant that otherwise is subject to regulation under the [CAA]; except that any or all hazardous air pollutants either listed in section 112 of the [CAA] or added to the list pursuant to section 112(b)(2) of the [CAA], which have not been delisted pursuant to section 112(b)(3) of the [CAA], are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the [CAA].

40 C.F.R. § 52.21(b)(50); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(a)2 (incorporating 40 C.F.R. § 52.21(b) by reference).

Carbon dioxide does not fall into any of the Section 52.21(b)(50) categories. EPA has not promulgated a national ambient air quality standard (“NAAQS”) for CO₂, has not listed CO₂ as a regulated pollutant in any section of the CAA, and has not established any other regulations for CO₂. *See generally Massachusetts v. EPA*, 127 S. Ct. 1438 (2007) (inherently recognizing that EPA has not, to date, regulated CO₂ emissions); *see, e.g., In re: Kawaihae Cogeneration Project, PSD/CSP Permit No. 0001-01-C*, 1997 EPA App. LEXIS 8, at *58 (1997) (upholding a permitting agency’s conclusion that “there are no regulations or standards prohibiting, limiting or controlling the emissions of greenhouse gases from stationary sources . . . [c]arbon dioxide is not considered a regulated pollutant for permitting purposes.”). Likewise, EPD has not promulgated any regulations restricting or limiting the emissions of CO₂.

Carbon dioxide is not a regulated NSR pollutant as defined by Section 52.21(b)(50). Accordingly, EPD was not required by Georgia Rule 391-3-1-.02(7)(b)7 to include a BACT emissions limitation for CO₂ in the Permit. As previously determined by this Tribunal on August 17, 2007, Respondent’s and Intervenor’s motions for summary determination as to Count I of the Petition are **granted**.

Counts II, V, and VII

In Counts II, V, and VII of the Petition, Petitioners allege, in part, that the Permit is invalid because EPD failed to consider all available production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for the control of sulfur dioxide, nitrogen oxides and particulate matter. Specifically, Petitioners assert that EPD failed to consider Integrated Gasification Combined Cycle (IGCC) technology among the pollution control technologies EPD considered in the agency's BACT analysis. (Pet. at ¶¶ 44-46, 58-60, 66-68 (alleging that IGCC technology should have been included in the BACT analysis for sulfur dioxide ("SO₂"), nitrogen oxides ("NO_x"), and particulate matter ("PM")). In support of their claims, Petitioners rely on 40 C.F.R. § 52.21(b)(12) for the proposition that EPD did not properly consider all of the technologies and techniques available for control of SO₂, NO_x, and PM. (*Id.* at ¶¶ 44-45, 58-59, 66-67). Petitioners assert that IGCC is a production process, method, system, technique, fuel cleaning treatment or innovative fuel combustion technique that EPD was required to consider. *See* 40 C.F.R. § 52.21(b)(12); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(a)2 (incorporating 40 C.F.R. § 52.21(b) by reference). EPD did not consider IGCC in its BACT analysis. (Longleaf Energy Associates, LLC's Motion for Partial Summary Determination as to Counts II, V and VII of the Petition ("Longleaf IGCC Mot.") at 8; EPD's Motion for Partial Summary Determination on Counts II, V, and VII of the Petition for Hearing ("EPD IGCC Mot.") at 4).

BACT is defined as a limitation on emissions of regulated pollutants "from any *proposed* major stationary *source*" that "is achievable for *such source*...through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or

innovative fuel combustion techniques for control of such pollutant.” 40 C.F.R. § 52.21 (b)(12) (emphasis added). Thus, EPD's BACT analysis is a source-specific inquiry.

The Environmental Appeals Board describes this source-specific BACT analysis as follows:

[P]ermit conditions are imposed for the purpose of ensuring that the proposed source . . . uses emission control systems that represent BACT These control systems, as stated in the definition of BACT, may require application of “production processes and available methods, systems, and techniques . . .” to control the emissions *The permit conditions that define these systems are imposed on the source as the applicant has defined it*

In the Matter of Pennsauken County, New Jersey Resource Recovery Facility, PSD Appeal No. 88-8, 2 E.A.D. 667, 1988 EPA App. LEXIS 27, at *13 (1988) (citation omitted) (emphasis added).

In its PSD permit application, Longleaf listed its proposed source as a “pulverized coal-fired electric power generation facility” that would include two pulverized coal-fired boilers and two steam turbine generators. *See Prevention of Significant Deterioration Permit Application for the Longleaf Energy Station, Early County, Georgia*, at 1-1, 1-3 (November 19, 2004) (Longleaf IGCC Mot., Ex. D).³ Accordingly, in its BACT analysis, EPD included those processes, methods, systems and techniques that could be applied to facilities consisting of pulverized coal-fired boilers and steam generators. *See* 40 C.F.R. § 52.21(b)(12). The resulting Permit requires Longleaf to implement innovative fuel combustion techniques (low NO_x burners and over-fire air) as well as pollution control systems (selective catalytic reduction, fabric filter baghouses, and a dry scrubber) that have been and can be used on pulverized coal-fired electric generating facilities. *See* Permit at 2 (Pet., Ex. A).

³ Available at http://www.georgiaair.org/airpermit/psd/dockets/longleaf/facilitydocs/Longleaf_PSD_Applic.pdf (last visited November 20, 2007).

Because BACT is a source-specific inquiry, analysis of alternative processes that, if applied, would redefine the air pollution source that a PSD Permit applicant has proposed is not required. EPA's guidance to permitting authorities regarding BACT analysis, the New Source Review Workshop Manual (Draft) ("Draft NSR Manual"), explains this limitation on the scope of BACT analyses as follows:

Historically, *EPA has not considered the BACT requirement as a means to redefine the design of the source when considering available control alternatives.* For example, applicants proposing to construct a coal-fired electric generator have not been required by EPA as part of a BACT analysis to consider building a natural gas-fired electric turbine although the turbine may be inherently less polluting per unit product (in this case electricity). However, this is an aspect of the PSD permitting process in which states have the discretion to engage in a broader analysis if they so desire. Thus, a gas turbine normally would not be included in the list of control alternatives for a coal-fired boiler.

ENVIRONMENTAL PROTECTION AGENCY, NEW SOURCE REVIEW WORKSHOP MANUAL, B.13 (Draft, 1990) (emphasis added) (Longleaf IGCC Mot., Ex. E).

Consistent with EPA's approach in the Draft NSR Manual, the Environmental Appeals Board has repeatedly held that a BACT analysis does not require consideration of production processes that would redefine the proposed source. *See In re Kendall New Century Development*, PSD Appeal No. 03-01, 11 E.A.D. 40, 50-52 (2003) (upholding a permitting authority's decision to exclude from its BACT analysis those other production processes that would change the size and design of the proposed source) (Longleaf IGCC Mot., Ex. F); *In the Matter of Hawaiian Commercial and Sugar Company Permit No. HI 89-01*, PSD Appeal No. 92-1,4 E.A.D. 95, 99, 1992 EPA App. LEXIS 42, at *12-14 (1992) (relying on passage from the Draft NSR Manual to conclude that the state of Hawaii was not required to consider a combined-cycle power plant as an alternative to the proposed circulating fluidized bed coal plant because that alternative would redefine the proposed source); *In the Matter of: Old Dominion Electric*

Cooperative Permit Applicant, PSD Appeal No. 91-39, 3 E.A.D. 779, 1992 EPA App. LEXIS 37, at *30-32, 32 n.38 (1992) (holding that a state PSD permitting authority was not required to consider natural gas as an alternative fuel for a proposed coal-fired facility because the state believed the use of natural gas would redefine the proposed source – noting that “[t]raditionally, EPA does not require a PSD applicant to change the fundamental scope of its project...”); *In the Matter of Pennsauken County*, 1988 EPA App. LEXIS 27, at *13-14 (“Although imposition of [BACT] conditions may, among other things, have a profound effect on the viability of the proposed facility as conceived by the applicant, the [BACT] conditions themselves *are not intended to redefine the source.*”) (emphasis added).

Thus, the Clean Air Act regulations, EPA guidance and federal administrative decisions all demonstrate that EPD was not required to consider as part of its BACT analysis those processes, methods, systems or techniques that, if applied, would have resulted in the redefinition of the pulverized coal-fired steam electric generating facility that Longleaf proposed in its PSD permit application.

IGCC power plants and pulverized coal-fired power plants are distinct and separate types of power generation facilities. (Aff. of Kennard F. Kosky (“Kosky Aff.”) at ¶ 4 (Longleaf IGCC Mot., Ex. A); Aff. of James Capp (“Capp Aff.”) at ¶ 6 (EPD IGCC Mot., Ex. A)). The major difference between the two types of facilities is that they combust *different fuels* in *different combustion devices* to produce electricity. (Kosky Aff. at ¶¶ 5, 7; Capp Aff. at ¶¶ 6-7). A pulverized coal-fired steam electric generating facility burns *pulverized coal* in a *boiler* to produce steam that turns a turbine that generates electricity. (Kosky Aff. at ¶ 5; Capp Aff. at ¶ 6). In contrast, an IGCC facility burns *synthetic gas* in a jet engine, called a *combustion turbine*, that produces electricity. (Kosky Aff. at ¶ 7; Capp. Aff. at ¶ 6).

From an engineering design perspective, a pulverized coal-fired power plant utilizes a single process: finely crushed coal is burned in a boiler to produce steam, and the steam turns a turbine to generate electricity. (Kosky Aff. at ¶ 5). By comparison, IGCC is a series of chemical processes in which coal or another fuel is fed into a chemical plant to manufacture a synthetic gas. *Id.* at ¶ 7. The synthetic gas is then burned in a large stationary combustion turbine, which produces electricity. *Id.* Therefore, unlike a pulverized coal-fired power plant, which from an engineering perspective is a single process, the IGCC design has two distinct components: a chemical plant which produces the gas; and a separate power plant which burns the gas to produce electricity. *Id.* at ¶ 8.

These basic engineering differences are reflected by the significant additional machinery required by an IGCC facility. (Capp Aff. at Ex. 3 & Ex. 4 (schematics showing the mechanical components of a coal-fired power plant and an IGCC, respectively)). An IGCC facility uses a gasifier unit. (Capp Aff. at ¶ 7 & Ex. 4). Oxygen is supplied by an air separation unit (“ASU”), which separates the nitrogen from oxygen in the air. *Id.* The gasifier chemically converts the coal from (mostly) carbon, along with oxygen and steam, under very high pressure, to form carbon monoxide and hydrogen (and contaminants). *Id.* This gas (“syngas”) is then cooled and cleaned in order to prevent damage to the combustion turbine blades when the gas is burned. (Capp Aff. at ¶ 10 & Ex. 4).

In summary, operation of an IGCC power plant requires the following components: a gasifier, ASU, syngas cooling equipment, syngas cleaning equipment, and a combustion turbine. (Capp Aff. at ¶¶ 7, 10 & Ex. 4). A pulverized coal-fired power plant does not utilize any of these major mechanical components. (Capp Aff. at ¶¶ 7, 10; *see id.* at Ex. 3).

Finally, in an IGCC facility, the gasifier produces a coal minerals slag and the syngas cleaning produces a sulfur byproduct – both of which must be handled and processed. (Capp Aff. at ¶¶ 8-9). A pulverized coal-fired power plant has no such issues – all of the material collected by the air pollution control devices at a pulverized coal-fired power plant may be safely disposed in an on-site landfill. *Id.*

As is apparent from the physical and operational differences between IGCC power plants and pulverized coal-fired steam electric generating facilities, IGCC is not a process, method, system or technique that can be applied to a pulverized coal-fired steam electric generating facility without redefining the proposed air pollution source. For these reasons, EPD decided not to consider IGCC in its BACT analysis:

IGCC is a physically and chemically distinct method of producing electricity that cannot be compared to the [pulverized coal] fired boiler proposed at Longleaf without redefining the source. Neither federal law nor Georgia law required the consideration of technologies that would redefine the proposed source.

Final Determination, SIP Permit Application No. 15846, at 33 (May 2007) (Longleaf IGCC Mot., Ex. B).⁴

EPD's conclusion that the application of IGCC technology to Longleaf's pulverized coal-fired steam electric generating facility would result in a redefinition of the proposed air pollution source is consistent with decisions from other states. See *Blue Skies Alliance, et al v. Texas Commission on Environmental Quality*, Cause No. D-1-GN-06-002911 (2007) (affirming the Texas Commission on Environmental Quality's ("TCEQ") decision to issue a permit for a

⁴ Available at <http://www.georgiaair.org/airpermit/psd/dockets/longleaf/permitdocs/0990030fd.pdf> (last visited November 20, 2007).

pulverized coal-fired steam electric generating facility, including TCEQ's Interim Order⁵ that a PSD permit applicant for a pulverized coal-fired steam electric generating facility is not required to include IGCC technology in its BACT analysis) (Longleaf IGCC Mot., Ex. I); *Sierra Club, et al v. Environmental and Public Protection Cabinet*, File No. DAQ-26003-037 and DAQ-26048-037, 30 (2006) (Longleaf IGCC Mot., Ex. K) (upholding the issuance of a PSD permit to construct a pulverized coal-fired steam electric generating facility despite the fact that the state's permitting authority had not required the applicant to include IGCC technology in its BACT analysis); *In the Matter of Linda Chipperfield, et al. v. Missouri Dept. of Natural Resources, et al.*, Appeal No. 05-139PA, 13-14 (2005) (Order Ruling on Motions to Dismiss) (Longleaf IGCC Mot., Ex. L) (dismissing a claim that the State had failed to properly evaluate alternative combustion systems, including IGCC, in its BACT analysis for a proposed pulverized coal-fired boiler and finding that Petitioners sought to redefine the source).

EPA guidance indicates that states may, as a matter of *discretion*, choose to consider IGCC in the BACT analysis for a pulverized coal-fired boiler facility. See ENVIRONMENTAL PROTECTION AGENCY, NEW SOURCE REVIEW WORKSHOP MANUAL, B.13 (1990) (Longleaf IGCC Mot., Ex. E) (emphasis added). As a result, some states have exercised their discretion to consider IGCC as part of their BACT analyses for pulverized coal-fired steam electric generating facilities. See, e.g., *In re: Prairie State Generating Co., PSD Permit No. 189808AAB*, PSD Appeal No. 05-05, Slip Opinion, 35-36 (2006) (noting that while the state permitting authority had required IGCC to be included in the BACT analysis for the proposed pulverized coal-fired

⁵ A certified question of law had been previously presented in that case as to whether an applicant that proposes to construct a pulverized coal boiler power plant is required to include other electric generation technologies, such as IGCC, in its BACT analysis. See *Interim Order Re: Application of Sandy Creek Associates L.P. for Air Quality Flexible Permit No. 70861 and PSD Permit No. PSD-TX-1039*, TCEQ Docket No. 2005-0781-AIR, SOAH Docket No. 582-05-5612 (Dec. 29, 2005) (Longleaf IGCC Mot., Ex. J).

boiler facility, IGCC was ultimately not selected as BACT for the facility) (Longleaf IGCC Mot., Ex. O). However, there is no authority for Petitioners' contention in Counts II, V and VII that EPD was legally *required* to include IGCC technology in its BACT analysis for Longleaf's proposed pulverized coal-fired steam electric generating facility.

IGCC is not a process, method, system or technique that can be applied to a pulverized coal-fired boiler facility without redefining the proposed air pollution source. Accordingly, because BACT is a source-specific inquiry, EPD was not *required* to consider IGCC in the BACT analysis for the Longleaf facility. As previously determined by this Tribunal on August 17, 2007, Respondent's and Intervenor's motions for partial summary determination as to the IGCC issue contained in Counts II, V, and VII of the Petition are **granted**.

Count X

In Count X, Petitioners allege that the Permit is invalid because it does not contain a BACT emission limitation in the form of a "visible emission standard" as that term is used in 40 C.F.R. § 52.21(b)(12). (Pet. at ¶¶ 81-83). See 40 C.F.R. § 52.21(b)(12) (defining BACT as "an emissions limitation (*including a visible emission standard*) based on the maximum degree of reduction for each pollutant subject to regulation . . .") (emphasis added); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(a)2 (incorporating 40 C.F.R. § 52.21(b) by reference).

"Opacity" refers to a visible emission standard that gauges the visibility of emissions exiting a stack. See *Sierra Club v. Ga. Power Co.*, 443 F.3d 1346, 1350 n.4 (11th Cir. 2006); GA. COMP. R. & REGS. r. 391-3-1-.01(ss) (defining "opacity" as "the degree to which emissions reduce the transmission of light and obscure the view of an object in the background, and is expressed in terms of percent opacity"). Section 52.21(j)(2) provides that "[a] new major stationary source shall apply best available control technology for each *regulated NSR pollutant*

that it would have the potential to emit in significant amounts.” 40 C.F.R. § 52.21(j)(2) (emphasis added); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(b)7 (incorporating 40 C.F.R. § 52.21(j)(2) by reference). Thus, as discussed *supra*, Section 52.21(j)(2) only requires BACT emission limitations for “regulated NSR pollutants.” See 40 C.F.R. § 52.21(j)(2). In this case, the Permit contains numerical emission limits for each regulated NSR pollutant that will be emitted in significant amounts. See Air Quality Permit No. 4911-099-0030-P-01-0, Conditions 2.15 & 2.16 (May 14, 2007) (Pet., Ex. A).

Opacity is not a regulated NSR pollutant. See *Sierra Club*, 443 F.3d at 1350 n.4 (“While opacity is not itself a regulated pollutant, it acts as a measurement surrogate for particulate matter (PM), which is a regulated pollutant”) (emphasis added). Thus, to the extent that Petitioners claim that EPD should have conducted a BACT analysis for opacity itself, this Tribunal finds that EPD was not required by Georgia Rule 391-3-1-.02(7)(b)7 to include a BACT emissions limitation for opacity in the Permit.

Here, the Permit requires Longleaf to monitor PM emissions through the use of a continuous emissions monitoring system (“CEMS”). See Air Quality Permit No. 4911-099-0030-P-01-0, Conditions 4.1(t) & 5.2(f) (May 14, 2007) (Pet., Ex. A). Rather than rely on an observer’s periodic opacity measurements to monitor the facility’s PM emissions, Longleaf will monitor its PM emissions on a more precise and continuous basis through use of its CEMS, day and night and without regard to the weather. The EPA has stated that under the new NSPS regulations for electric utility steam generating units, opacity monitoring is not required for sources in these instances:

Since opacity is used as an indication on PM emissions, EPA has provided sources with two options to demonstrate continuous compliance with the amended PM standard. Sources may elect to install and operate PM CEMS

and demonstrate compliance each boiler operating day. For these units, *opacity monitoring shall no longer be required.*

71 Fed. Reg. 9866, 9872 (2006) (emphasis added).

Moreover, there is no requirement that the Permit contain a “visible emission standard” in addition to a numerical emission limitation for each pollutant that is subject to a BACT analysis. The phrase “including a visible emission standard” appears in parentheses in the definition of BACT. See 40 C.F.R. § 52.21(b)(12); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(a)2 (incorporating 40 C.F.R. § 52.21(b) by reference). “[T]he meaning of [] words within [] parentheses should be considered as incidental explanatory matter which is not a part of, or at least is not essential to, the main statement.” *Chipperfield et al. v. Mo. Air Conservation Comm’n*, 229 S.W.3d 226, 252 (Mo. Ct. App. 2007).

In *Chipperfield*, the court examined a Missouri regulation defining BACT as “[a]n emission limitation (*including a visible emission limit*)” *Id.* at 251. The court relied on the use of parentheses in the regulation to conclude that the regulatory definition of BACT did not require the use of a “visible emission limit.” *Id.* at 251-52 (“Appellants’ argument that the parenthetical phrase adds a condition to the regulation that every emission limitation must include a visible emission limit, is inconsistent with the purpose of a parenthetical phrase to provide non-essential information.”). This Tribunal finds the *Chipperfield* court’s reasoning persuasive.

The parenthetical mention of a “visible emission standard” in 40 C.F.R. § 52.21(b)(12) does not require that each BACT emission limitation must *also* be in the form of a visible emission standard. To hold otherwise “would lead to the absurd result of requiring a visible emission limit for an invisible pollutant” such as carbon monoxide. See *Chipperfield*, 229 S.W.3d at 252.

This Tribunal finds that the parenthetical reference to a “visible emission standard” provides an alternative means of expressing the emission limitation. In other words, a permit is not required to have both a numerical emission limit *and* a visible emission standard. Rather, the permit is required to have “an emission limitation.” That limitation may be a numerical limit or, for certain pollutants, it may be expressed in the form of a visible emission standard.

For these reasons, as previously determined by this Tribunal on August 17, 2007, Respondent’s and Intervenor’s motions for summary determination as to Count X of the Petition are **granted**.⁶

Count XI

In Count XI, Petitioners allege that the Permit is invalid because Longleaf did not submit an adequate modeling demonstration for PM_{2.5}.⁷ In support of their claim, Petitioners rely on 40 C.F.R. § 52.21(k) and Georgia Rule 391-3-1-.02(7)(b)8, both of which require an applicant to demonstrate that air pollution from a proposed facility will not violate any NAAQS or “any applicable maximum allowable increase over the baseline concentration in any area.” (Pet. at ¶ 86). *See* 40 C.F.R. § 52.21(k); GA. COMP. R. & REGS. r. 391-3-1-.02(7)(b)8 (incorporating 40 C.F.R. § 52.21(k) by reference).

Section 52.21(k) provides:

Source impact analysis. The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

- (1) *Any national ambient air quality standard* in any air quality control region; or
- (2) Any applicable maximum allowable increase over the baseline concentration in any area.

⁶ Petitioners did not oppose the Motion for Summary determination as to Count X. (Pet’r Collective Response to the Motions for Summary Determination at 1 n.1).

⁷ (Pet. at ¶ 88). “PM_{2.5}” refers to particulate matter with a diameter of 2.5 microns or less. 40 C.F.R. § 50.7.

40 C.F.R. § 52.21(k) (emphasis added).

The Environmental Protection Agency (“EPA”) has promulgated a national ambient air quality standard for PM_{2.5}. See *National Ambient Air Quality Standard for Particulate Matter*, 62 Fed. Reg. 38652, 38711 (1997) (codified at 40 C.F.R. § 50.7). Intervenor did not conduct PM_{2.5} specific modeling for its proposed coal-fired power plant. (Longleaf Energy Associates, LLC’s Motion for Summary Determination on Counts I, X, XI, XV of the Petition (“Longleaf Summ. Determin. Mot.”) at 8).

Although the EPA did promulgate a NAAQS for PM_{2.5}, due to technical uncertainties associated with modeling and monitoring PM_{2.5}, EPA has not yet promulgated regulations governing the implementation of this new PM_{2.5} NAAQS for facilities, like Longleaf, that are subject to New Source Review (“NSR”). See Memorandum from John S. Seitz, Director, EPA Office of Air Quality Planning & Standards, Interim Implementation of New Source Review Requirements for PM_{2.5}, at 1 (Oct. 23, 1997) (“Seitz Memorandum”) (Longleaf Summ. Determin. Mot., Ex. G). No PM_{2.5}-specific modeling protocols have been established by EPA. *Id.* at 2. Rather, EPA has stated that states may use PM₁₀ as a surrogate for PM_{2.5} to determine compliance with PSD permitting requirements. *Id.*

Longleaf submitted its PSD permit application to EPD in November 2004. See Prevention of Significant Deterioration Permit Application for the Longleaf Energy Station, Early County, Georgia (November 19, 2004).⁸ At that time, there were no rules or regulations governing how PSD permitting authorities or applicants were to comply with PM_{2.5} requirements. The only official guidance was the 1997 Seitz Memorandum. That memorandum stated that it was “administratively impractical . . . to require sources and State permitting

⁸ Available at http://www.georgiaair.org/airpermit/psd/dockets/longleaf/facilitydocs/Longleaf_PSD_Applic.pdf (last visited November 20, 2007).

authorities to attempt to implement PSD permitting for PM_{2.5}” due to the “significant technical difficulties” that existed regarding “PM_{2.5} monitoring, emissions estimation, and modeling.” (Seitz Memorandum at 1, 2). As a result, EPA recommended “that sources should continue to meet PSD and NSR program requirements for controlling PM₁₀ emissions . . . and for analyzing impact on PM₁₀ air quality. Meeting these measures in the interim will serve as a surrogate approach for reducing PM_{2.5} emissions and protecting air quality.” *Id.* at 2. Therefore, as of November 2004, EPA endorsed a policy whereby a PSD permit applicant could satisfy PSD permitting requirements for PM_{2.5} by relying on the results of its PM₁₀ air quality modeling.

On December 17, 2004, EPA took its first step towards implementing the PM_{2.5} NAAQS by designating non attainment areas for PM_{2.5}. *See* Air Quality Designations and Classifications for the Fine Particles (PM_{2.5}) National Ambient Air Quality Standards, 70 Fed. Reg. 944 (2005) (codified at 40 C.F.R. Part 81) (Longleaf Summ. Determ. Mot., Ex. H). However, shortly after the PM_{2.5} nonattainment areas were designated, EPA again issued guidance advising states to continue using PM₁₀ as a surrogate for determining compliance with the PM_{2.5} NAAQS. *See* Memorandum from Stephen D. Page, Director, Implementation of New Source Review Requirements in PM_{2.5} Nonattainment Areas (April 5, 2005) (“Page Memorandum”) (Longleaf Summ. Determ. Mot., Ex. I). Specifically, EPA stated that “[b]ecause we have not promulgated the PM_{2.5} implementation rule, administration of a PM_{2.5} PSD program remains impractical. Accordingly, *States should continue to follow the October 23, 1997, guidance for PSD requirements.*” *Id.* at 4 (emphasis added).

EPA has recently issued an implementation rule for PM_{2.5}, Clean Air Fine Particle Implementation Rule, 72 Fed. Reg. 20586 (Apr. 25, 2007) (to be codified at 40 C.F.R. Part 51). However, this new implementation rule does not include requirements for facilities, like

Longleaf, that are subject to NSR. *Id.* at 20586. As the preamble accompanying the new rule provides, “this rule does not include final PM_{2.5} requirements for the (NSR) program; the final NSR rule will be issued at a later date.” *Id.* Thus, as of the date of issuance of the Permit, there were no relevant rules applicable to new sources, like Longleaf, that required implementation of PM_{2.5} modeling.

With no available federal or state regulations regarding the implementation of PM_{2.5} NAAQS, Intervenor and EPD relied on “EPA’s guidance to use PM₁₀ as a surrogate for PM_{2.5}” to conclude that emissions from the coal-fired facility will not cause or contribute to air pollution levels of PM_{2.5} in violation of state and federal law. *See* Final Determination, SIP Permit Application No. 15846, at 8 (May 2007) (responding to EPA’s comment suggesting that EPD expressly state that it is following EPA’s guidance to use PM₁₀ as a surrogate for PM_{2.5}) (Longleaf Summ. Determ. Mot., Ex. C).

Intervenor’s chosen approach was entirely consistent with the only official guidance that EPA had published regarding PM_{2.5}. Moreover, EPA’s comments on the draft permit, which were incorporated into the Final Determination, confirmed that using PM₁₀ as a surrogate for PM_{2.5} was still an accepted practice.⁹ Accordingly, there was no requirement that Intervenor perform and submit air modeling for PM_{2.5}. As previously determined by this Tribunal on

⁹ *See* Final Determination, SIP Permit Application No. 15846, at 8 (May 2007) (Longleaf Summ. Determ. Mot., Ex. C). The Comment and Response in the Final Determination regarding PM₁₀ and PM_{2.5} were as follows:

10. Fine Particles

PM_{2.5} is a regulated NSR pollutant and should be acknowledged as such in the final determination. At your discretion, you could state that *you are following EPA’s guidance to use PM₁₀ as a surrogate for PM_{2.5}* until final PM_{2.5} NSR implementation rules are adopted.

Response: EPD is following EPA’s guidance to use PM₁₀ as a surrogate for PM_{2.5} until final PM_{2.5} NSR implementation rules are adopted.

Id. (emphasis added).

August 17, 2007, Respondent and Intervenor's motion for summary determination as to Count XI of the Petition is **granted**.

Count XV

In Count XV, Petitioners allege that the Permit is invalid because Condition 8.23 of the Permit creates an exemption for excess emissions which might occur during periods of startup and shutdown at Longleaf's facility. (Pet. at ¶ 110). See Permit at 24-25 (Pet., Ex. A). In support of their claim, Petitioners rely on 42 U.S.C. § 7602(k) and Georgia Rule 391-3-1-.01(v), both of which require emission limitations to control air pollution on a continuous basis. (Pet. at ¶ 110). See 42 U.S.C. § 7602(k); GA. COMP. R. & REGS. r. 391-3-1-.01(v).

Condition 8.23 of the Permit provides as follows:

- a. Excess emissions resulting from startup, shutdown, malfunction of any source which occur though ordinary diligence is employed shall be allowed provided that:
 - i. The best operational practices to minimize emissions are adhered to;
 - ii. All associated air pollution control equipment is operated in a manner consistent with good air pollution control practice for minimizing emissions; and
 - iii. The duration of excess emissions is minimized.
- b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited and are violations of this Permit.
- c. The provisions of this condition and Georgia Rule 391-3-1-.02(2)(a)(7) shall apply only to those sources which are not subject to any requirement under Georgia Rule 391-3-1-.02(8) -- New Source Performance Standards or any requirement of 40 C.F.R. Part 60, as amended, concerning New Source Performance Standards.

Permit at 24-25 (Pet., Ex. A).

Section 7602(k) defines "emission limitation" and "emission standard" in the CAA as "a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants *on a continuous basis*." 42 U.S.C. § 7602(k)

(emphasis added). Georgia Rule 391-3-1-.01(v) defines "emission limitation" and "emission standard" in Georgia's State Implementation Plan ("SIP") for the CAA as "a requirement established which limits the quantity, rate, or concentration of emissions of air contaminants *on a continuous basis.*" GA. COMP. R. & REGS. r. 391-3-1-.01(v) (emphasis added).

However, Georgia Rule 391-3-1-.02(2)(a)7 (the "SSM Rule") provides an exemption for excess emissions which might occur during periods of startup, shutdown, and unavoidable malfunction. See GA. COMP. R. & REGS. r. 391-3-1-.02(2)(a)7. Georgia's SSM Rule has been approved by the Environmental Protection Agency ("EPA"), and that approval remains effective. See *Sierra Club v. Ga. Power Co.*, 443 F.3d 1346, 1351 (11th Cir. 2006) (noting that Georgia's SSM Rule was approved by the EPA in 1980); 40 C.F.R. § 52.572 (renewing the approval). Moreover, "[t]he SSM rule is categorical and unambiguous" regarding the exemption it provides during startup and shutdown. *Sierra Club*, 443 F.3d at 1353.

In *Sierra Club v. Ga. Power*, the Eleventh Circuit construed a challenge to a permit condition that contained language almost identical to the SSM Rule as a challenge to the SSM Rule itself. *Sierra Club*, 443 F.3d at 1357. The Court rejected the facial challenge, stating that the SSM Rule "remains the law" and therefore the corresponding permit condition "must be read accordingly." *Id.*

The language used in Condition 8.23 of the Permit is virtually identical to the SSM Rule.¹⁰ Accordingly, the Permit's conditional allowance in Condition 8.23 for excess emissions is entirely consistent with federal and Georgia law. As previously determined by this Tribunal

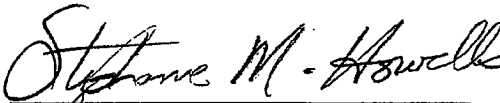
¹⁰ Condition 8.23 differs from Rule 391-3-1-.02(2)(a)(7) in only one minor detail. Compare Condition 8.23(c) (using the language "[t]he provisions of this condition and Georgia Rule 391-3-1-.02(2)(a)(7)"), with Ga. Comp. R. & Regs. r. 391-3-1-.02(2)(a)(7)(iii) (using the language "[t]he provisions of this paragraph 7") (emphasis added).

on August 17, 2007, Respondent and Intervenor's motion for summary determination as to Count XV of the Petition is **granted**.

ORDER

For the foregoing reasons, Counts I, X, XI, and XV are dismissed in their entirety. Additionally, the claims related to IGCC in Counts II, V, and VII are dismissed.

SO ORDERED December 18, 2007



STEPHANIE M. HOWELLS
Administrative Law Judge