



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE ADMINISTRATOR

BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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IN THE MATTER OF:)	
)	
EAST KENTUCKY POWER COOPERATIVE, INC.)	
HUGH L. SPURLOCK GENERATING STATION)	PETITION No.: IV-2008-4
)	
MAYSVILLE, KENTUCKY)	
TITLE V/PSD AIR QUALITY PERMIT)	
# V-06-007 (REVISION 2))	
)	
)	
ISSUED BY THE KENTUCKY)	
DIVISION FOR AIR QUALITY)	
_____)	

ORDER GRANTING ISSUE 3 OF APRIL 28, 2008 CLEAN AIR ACT
TITLE V PETITION

On April 28, 2008, the United States Environmental Protection Agency (EPA) received a petition from Sierra Club (Petitioner) pursuant to Section 505(b)(2) of the Clean Air Act (CAA or Act), 42 U.S.C. § 7661d(b)(2). The Petition requests that EPA object to the merged CAA construction/operating permit issued by the Kentucky Division for Air Quality (KDAQ or Division) on April 18, 2008, to East Kentucky Power Cooperative, Inc. (EKPC) for the Hugh L. Spurlock Generating Station (Spurlock) in Maysville (Mason County), Kentucky. Permit #V-06-007 (Revision 2) is for operation of the facility as a whole and construction of a new circulating fluidized bed (CFB) electric generating unit known as Emissions Unit 17 or CFB Unit 4. Permit Revision 2 is a merged CAA prevention of significant deterioration (PSD) construction permit and a CAA title V operating permit issued pursuant to the Kentucky Administrative Regulations (KAR) at 401 KAR 52:020 (title V regulations) and 51:017 (PSD regulations).

Sierra Club's April 28, 2008 Petition raises several issues in requesting that EPA object to Permit Revision 2. Specifically, Sierra Club alleges that: (1) the permit revision proposed by KDAQ fails to include the required heat input limit applicable to Unit 2 and unlawfully attempts

to increase that limit without going through PSD (or any other CAA title I) permitting; (2) KDAQ's review of cleaner fuel/low-sulfur coal was not adequate; and (3) the permit lacks hazardous air pollutant (HAP) emission limits under section 112(g) of the CAA. Pursuant to a proposed Consent Decree between EPA and Sierra Club, EPA agreed to respond to Sierra Club's Petition in two orders – responding to issue 3 in the first order and issues 1 and 2 in a subsequent order. This is the first order responding only to issue 3.

Based on a review of the Petition and other relevant materials, including the EKPC Spurlock permit and permit record, and relevant statutory and regulatory authorities, I grant Petitioner's request on issue 3 and find that KDAQ must undertake a 112(g) case-by-case maximum available control technology (MACT) determination for all HAPs for CFB Unit 4.

I. STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), calls upon each state to develop and submit to EPA an operating permit program to meet the requirements of title V of the CAA. The Commonwealth of Kentucky¹ originally submitted its title V program governing the issuance of operating permits in 1993, and EPA granted final full approval on October 22, 2001. 66 *Fed. Reg.* 54,953 (October 31, 2001). The program is now incorporated into Kentucky's Administrative Regulations at 401 KAR 52:020. All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and other conditions as necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable State Implementation Plan (SIP). CAA §§ 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a).

The title V operating permit program does not generally impose new substantive air quality control requirements (which are referred to as "applicable requirements"), but does require permits to contain monitoring, recordkeeping, reporting, and other conditions to assure sources comply with existing applicable requirements. 57 *Fed. Reg.* 32,250, 32,251 (July 21, 1992) (EPA final action promulgating Part 70 rules). One purpose of the title V program is to enable the source, EPA, states, and the public to better understand the applicable requirements to which the source is subject and whether the source is complying with those requirements. Thus, the title V operating permit program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units and that compliance with these requirements is assured.

Under section 505(a), 42 U.S.C. § 7661d(a), of the CAA and the relevant implementing regulations (40 CFR § 70.8(a)), states are required to submit each proposed title V permit, and certain revisions to such permits, to EPA for review. Upon receipt of a proposed permit, EPA has 45 days to object to final issuance of the permit if it is determined not to be in compliance

¹ The Commonwealth of Kentucky Environmental and Public Protection Cabinet (Kentucky Cabinet), which submitted Kentucky's title V program, oversees KDAQ, which is the permitting authority for title V and PSD permits in Kentucky.

with applicable requirements or the requirements of title V. 40 CFR § 70.8(c). If EPA does not object to a permit on its own initiative, section 505(b)(2) of the CAA provides that any person may petition the Administrator, within 60 days of the expiration of EPA's 45-day review period, to object to the permit. 42 U.S.C. § 7661d(b)(2), *see also* 40 CFR § 70.8(d). In response to such a petition, the CAA requires the Administrator to issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the CAA. 42 U.S.C. § 7661d(b)(2); *see also* 40 CFR § 70.8(c)(1), *New York Public Interest Research Group (NYPIRG) v. Whitman*, 321 F.3d 316, 333 n.11 (2nd Cir. 2003). Under section 505(b)(2), the burden is on the petitioner to make the required demonstration to EPA. *Sierra Club v. Johnson*, 541 F.3d 1257, 1266-1267 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677-678 (7th Cir. 2008); *Sierra Club v. EPA*, 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden of proof in title V petitions); *see also NYPIRG*, 321 F.3d at 333 n.11. If, in responding to a petition, EPA objects to a permit that has already been issued, EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 CFR §§ 70.7(g)(4) and (5)(i) - (ii), and 40 CFR § 70.8(d).

II. BACKGROUND

A. Existing Facility

EKPC Spurlock is an electric generating plant that burns fossil fuels, primarily coal, to generate electricity. The plant includes two pulverized coal boilers and two CFB boilers. Emission Unit 17/CFB Unit 4 began commercial operations in April 2009 and is a new 300 megawatt coal-fired electric utility boiler utilizing CFB technology. The new CFB boiler will be equipped with selective non-catalytic reduction, pulse jet fabric filters, dry lime scrubbing, and limestone injection pollution control systems.²

B. Current Permit History

The EKPC Spurlock title V permit at issue is Revision 2, issued in response to EPA's August 30, 2007 "Order Granting in Part and Denying in Part Petition for Objection to Permit." *See In re East Kentucky Power Cooperative, Inc.* (Hugh L. Spurlock Generating Station) Petition No. IV-2006-4, Order on Petition (August 30, 2007) (hereinafter referred to as the August 2007 Order). The August 2007 Order responded to an August 17, 2006 Petition by Sierra Club regarding the EKPC Spurlock Permit Revision 1 (hereinafter referred to as the August 2006 Petition). On December 21, 2007, EKPC submitted a request to revise its title V/PSD permit consistent with the August 2007 Order with regard to the heat input limit on Unit 2. Also

² For more details regarding the EKPC Spurlock facility and its permitting history, *see In re East Kentucky Power Cooperative, Inc.* (Hugh L. Spurlock Generating Station) Petition No. IV-2006-4, Order on Petition (August 30, 2007), which responded to the August 17, 2006 title V petition from Sierra Club regarding Permit Revision 1 for the EKPC Spurlock facility. KDAQ permit materials are also available at <http://www.air.ky.gov/permitting/East+Kentucky+Power+Cooperative+Inc.htm>.

consistent with the August 2007 Order, KDAQ requested additional information from EKPC and revised its best available control technology (BACT) analysis (part of the PSD review for the new unit) for the use of low-sulfur coal at the new CFB Unit 4.³ August 2007 Order at 27-32. A more detailed account of the permitting history for the EKPC Spurlock facility is included in the August 2007 Order.

C. Litigation History

On August 19, 2009, Sierra Club amended a previously filed complaint in the Eastern District of Kentucky to include a claim seeking to compel the Administrator to respond to the April 28, 2008 Petition. *Sierra Club v. Johnson* (No. 2:09-CV-00085-WOB (E. D. Ky.)). Thereafter, EPA and Sierra Club agreed to resolve the case through a Consent Decree that requires EPA to respond to the Petition in two parts. Under the terms of the proposed Consent Decree, a response to issue 3 in the Petition is due on or before September 21, 2009, and a response to issues 1 and 2 is due on or before November 30, 2009. The Consent Decree is currently proceeding through the 113(g) public notice procedures of the CAA, and the EPA and Sierra Club will ask the court to enter the Decree following completion of that process.

In accordance with the Consent Decree, this Order responds to issue 3, regarding Sierra Club's claim that the Permit Revision 2 lacks HAP emission limits under section 112(g) of the CAA.

III. THRESHOLD REQUIREMENTS

A. Timeliness of Petition

Section 505(b)(2) of the CAA provides that any person may petition the Administrator of EPA within sixty days after the expiration of EPA's 45-day review period, to object to the issuance of a proposed permit. KDAQ issued the proposed Permit Revision 2 on March 5, 2008. EPA's 45-day review period for Permit Revision 2 expired on April 19, 2008. Thus, the sixty-day petition period ended on June 18, 2008. EPA received Sierra Club's April 28, 2008 Petition on May 7, 2008. Accordingly, EPA finds that Sierra Club timely filed its Petition.

B. Objections Raised with Reasonable Specificity During Public Comment Period

Section 505(b)(2) of the CAA provides that a petition shall be based on objections raised with reasonable specificity during the public comment period provided by the permitting agency, unless the petitioner demonstrates in the petition that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period. 42 U.S.C. § 7661d(b)(2). EPA reviewed the comments submitted to Kentucky during the public

³ EPA will address the heat input and low-sulfur coal issues in a subsequent order responding to issues 1 and 2 of the April 28, 2008 Petition. *See* Litigation History, *infra*.

comment period for Revision 2 and found that Sierra Club submitted comments on February 1, 2008. While Sierra Club's February 1, 2008 public comments do not discuss the 112(g) issue raised in its April 28, 2008 Petition, Sierra Club claims that the issue is properly raised given the subsequent decision of the Court of Appeals for the District of Columbia in *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). Sierra Club explains that *New Jersey v. EPA* "was decided after the public comment period for the permit revision here and could not be raised in Sierra Club's public comments." Petition at 4. According to the permit record, the comment period for Permit Revision 2 expired on or about February 4, 2008. Sierra Club further explains that its public comments were submitted on February 1, 2008, shortly before the D.C. Circuit's opinion was issued (February 8, 2008) and more than two months before the mandate was issued that made the decision effective (March 24, 2008). Petition at 2 and 27, n. 14.

Section 505(b)(2) of the CAA provides that issues not raised during the public comment period may be raised in a petition if the grounds for such objection arose after the public comment period. As explained above, the grounds for Sierra Club's objection arose after the close of the public comment period. Thus, EPA finds that the Petition meets this threshold requirement.

IV. EPA DETERMINATIONS ON APRIL 28, 2008 PETITION ISSUE 3, ALLEGING THAT PERMIT REVISION 2 LACKS CASE-BY-CASE MACT DETERMINATIONS FOR MERCURY AND OTHER HAPS

Petitioner's Claims. Sierra Club alleges that EPA must object to the title V permit because it lacks a case-by-case MACT determination for mercury and other HAPs for the new CFB Unit 4. Petition at 25. Petitioner explains its position that EPA listed coal- and oil-fired electric utility steam generating units as a source category under Section 112(c) in 2000. Petition at 26. Petitioner notes that EPA has not promulgated a national standard under CAA section 112(d) for this source category, and thus, section 112(g) case-by-case "limits" are required. Petition at 26. Petitioner further states that "EPA's attempt to un-do this listing was rejected and vacated [in *New Jersey v. EPA*]. Therefore..., electric generating units ("EGUs") are subject to the case-by-case MACT requirements laid out in Section 112 of the Clean Air Act." *Id.* Petitioner concludes by explaining that section 112 is an "applicable requirement" for title V purposes and thus the "case-by-case HAP limits must be incorporated into the source's title V permit for each HAP." Petition at 27. Accordingly, Sierra Club alleges that the Administrator must object to Permit Revision 2 because it does not include a MACT limit for HAPs from Unit 4. *Id.*

EPA's Response. For the reasons set forth below, EPA is granting issue 3 in the Petition because CFB Unit 4 is subject to 112(g) case-by-case MACT requirements.

A. History of 112(g) for EGUs

On December 20, 2000, EPA added coal- and oil-fired electric utility steam generating units (EGUs) to the CAA section 112(c) list of source categories. 65 *Fed. Reg.* 79,825, 79,831

(December 20, 2000) (the December 2000 Listing). EPA is required to promulgate HAP emission standards under section 112(d) for listed source categories. EPA has not yet promulgated section 112(d) emission standards for coal- and oil-fired EGUs. Where, as here, EPA has not yet promulgated emission standards under section 112(d), section 112(g) applies and provides that no person may begin actual construction or reconstruction of a major source of HAPs unless the permitting authority determines on a case-by-case basis that new source MACT requirements will be met. CAA § 112(g)(2)(B) and 40 CFR § 63.43.

In early 2004, EPA published a proposed rule for coal- and oil-fired EGUs and sought public comment on two primary alternative regulatory approaches: (1) retaining the Agency's December 2000 Finding and associated listing of coal- and oil-fired EGUs under section 112(c) and issuing final section 112(d) emission standards; and (2) revising the Agency's December 2000 Finding, removing coal- and oil-fired EGUs from the section 112(c) list, and issuing final standards of performance for mercury emissions from coal-fired EGUs under CAA section 111. *See Proposed National Emission Standards for Hazardous Air Pollutants*; and, in the Alternative, *Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units*, 69 *Fed. Reg.* 4,652, 4,659-61, 4,683, 4,689 (January 30, 2004). In March 2005, EPA issued a final rule, called the "Section 112(n) Revision Rule," in which it chose the second proposed alternative noted above. In the Section 112(n) Revision Rule, EPA removed coal- and oil-fired EGUs from the section 112(c) source category list. At the same time, EPA issued another final rule, called the Clean Air Mercury Rule (CAMR), which regulated mercury emissions from coal-fired EGUs under section 111 of the Act. 70 *Fed. Reg.* 15,994 (March 29, 2005). *See Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units*, 70 *Fed. Reg.* 28,606 (May 18, 2005).

Both the Section 112(n) Revision Rule and CAMR were challenged in the D.C. Circuit, and both rules were vacated in their entirety on February 8, 2008. *State of New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). The D.C. Circuit issued a mandate effectuating its February 8, 2008 decision on March 14, 2008.

On January 7, 2009, EPA issued a Memorandum entitled "*Application of CAA Section 112(g) to Coal- and Oil-Fired Electric Utility Steam Generating Units that Began Actual Construction or Reconstruction Between March 29, 2005 and March 14, 2008.*" (hereinafter referred to as the January 2009 Memo). In the January 2009 Memo, EPA explained that coal- and oil-fired EGUs remain on the Section 112(c) list and, therefore, are subject to section 112(g), which, as noted above, provides that no person may begin actual construction or reconstruction of a major source of HAPs unless the permitting authority determines on a case-by-case basis that new source MACT requirements will be met. In addition, the January 2009 Memo addresses the applicability of section 112(g) to coal- and oil-fired EGUs that are major sources and that began actual construction or reconstruction between the March 29, 2005 promulgation of the Section 112(n) Revision Rule (removing EGUs from the CAA Section 112(c) list) and the March 14, 2008 vacatur of that rule, and concludes that those EGUs are required to comply with section 112(g).

The January 2009 Memo requested that the appropriate state and local permitting authorities commence a process under section 112(g) to make new source MACT determinations for major source units that began actual construction or reconstruction during that time. EPA also contacted individual sources to inform them of the 112(g) obligations. Specifically, in April 2009, EPA sent a letter to EKPC (David Elkins, Spurlock Plant Manager) from Adam M. Kushner, Director of EPA's Office of Civil Enforcement, directing EKPC to "contact the appropriate permitting authority as expeditiously as possible to obtain a new source maximum achievable control technology (MACT) determination and a schedule for coming into compliance with 112(g) requirements."

B. Applicability of 112(g) to EKPC Spurlock Unit 4

On July 31, 2006, KDAQ issued a merged PSD/title V permit authorizing the construction of the new CFB Unit 4 at Spurlock. The permit did not contain a section 112(g) case-by-case MACT limit for HAPs emitted from the unit. Instead, consistent with CAMR, 40 CFR 60.45Da, the permit contained a mercury limit for the new unit. As explained above, EPA objected to the permit in response to Sierra Club's August 2006 Petition in the August 2007 Order. Section 112(g) was not an issue raised in Sierra Club's August 2006 Petition or EPA's order, as the Section 112(n) Revision Rule and CAMR were not yet vacated. KDAQ revised the permit to address EPA's objections and proposed the Permit Revision 2 on March 5, 2008. EPA did not object to the proposed permit during the 45-day review period, and KDAQ issued the final permit on April 18, 2008. The proposed and final permits and supporting documents do not address applicability of section 112(g) to CFB Unit 4.

EKPC began actual construction of CFB Unit 4 on or about June 13, 2006, and commercial operation on or about April 2009.⁴ Consistent with applicable statutory and regulatory requirements, as well as the January 2009 Memo, EPA agrees with Sierra Club that KDAQ must undertake a 112(g) case-by-case MACT determination for HAPs for Unit 4.⁵

EPA agrees that the permit record fails to contain the 112(g) analysis, and the permit fails to contain appropriate HAP emission limits. Accordingly, KDAQ must develop case-by-case MACT limits consistent with section 112(g), EPA's regulations implementing section 112(g) at 40 CFR Part 63, Subpart B, and Kentucky's case-by-case MACT program (which was effective in April 1999 and is a part of Kentucky's title V program). KDAQ must revise the EKPC Spurlock title V permit to include the case-by-case MACT limits on HAP emissions and, if necessary, a compliance schedule with dates for EKPC Spurlock to come into compliance with the case-by-case MACT limits. The permit record must also be revised to explain the analysis

⁴ Actual construction of Unit 4 began in accordance with the initial merged PSD/title V permit issued by KDAQ. In accordance with Kentucky's merged PSD/title V permit program, the PSD portion of that initial permit became final on June 12, 2006, when the proposed initial title V permit was sent to EPA for its 45-day review period. *See* 401 KAR 51:017 § 1(3).


⁵ Notably, EKPC and KDAQ have undertaken a case-by-case MACT determination for a similar unit at the facility, CFB Unit 3.

and limits. If KDAQ determines that the case-by-case MACT process will take more than 90 days to complete, KDAQ must revise the EKPC Spurlock permit to include a compliance schedule for completion of the case-by-case MACT determination. The compliance schedule must also include a timeframe for incorporating the case-by-case MACT limits on HAP emissions into the permit and, if necessary, the dates by which EKPC Spurlock will come into compliance with the case-by-case MACT limits.

V. CONCLUSION

For the reasons set forth above, and pursuant to Section 505(b) of the CAA and 40 CFR § 70.8(d), I hereby grant Sierra Club's April 28, 2008 Petition as it regards section 112(g) obligations for CFB Unit 4.

9/21/09
Dated


Lisa P. Jackson
Administrator