

BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

\_\_\_\_\_) )  
IN THE MATTER OF: ) )  
 ) )  
LOUISVILLE GAS AND ELECTRIC COMPANY ) )  
 ) )  
 ) )  
TRIMBLE COUNTY, KENTUCKY ) )  
TITLE V/PSD AIR QUALITY PERMIT ) )  
# V-02-043 ) )  
REVISION 2 ) )  
 ) )  
ISSUED BY THE KENTUCKY ) )  
DIVISION FOR AIR QUALITY ) )  
\_\_\_\_\_) )

**PARTIAL ORDER RESPONDING TO MARCH 2, 2006, PETITION AND DENYING IN PART AND GRANTING IN PART REQUEST FOR OBJECTION TO PERMIT REVISION 2**

On March 2, 2006, the United States Environmental Protection Agency (EPA) received a petition from Save the Valley, Sierra Club, and Valley Watch (Petitioners) pursuant to Section 505(b)(2) of the Clean Air Act (“CAA” or “Act”), 42 United States Code (U.S.C.) § 7661d(b)(2) (the March 2, 2006, petition is referred to as “Petition 1”). Petition 1 requests that EPA object to the merged CAA construction/operating permit (Revision 2) issued by the Kentucky Division for Air Quality (“KDAQ” or “Division”) on January 4, 2006, to Louisville Gas and Electric Company (LG&E), for construction of a new 750 megawatt pulverized coal-fired boiler (and other associated modifications) at the Trimble County Generating Station located in Bedford (Trimble County), Kentucky. Permit #V-02-043 Revision 2 is a merged CAA prevention of significant deterioration (PSD) construction permit and a CAA title V operating permit issued pursuant to Kentucky’s Administrative Regulations (KAR) at 401 KAR 52:020 (title V regulations) and 51:017 (PSD regulations). KDAQ then issued a third permit revision (Revision 3) on February 29, 2008, which revises certain elements included in Revision 2.

On April 29, 2008, Petitioners submitted a second petition (Petition 2) requesting that EPA object to Revision 3 of the merged CAA construction/operating permit issued to LG&E on February 29, 2008. Petition 2 raised some issues overlapping with Petition 1 and Revision 2, and some new issues specific only to Revision 3. Following the submittal of Petition 2, Petitioners and EPA agreed that EPA would respond to the two Petitions in two separate orders. The instant Order, “Order 1,” is a partial Order, addressing issues raised in Petition 1 that are specific to Revision 2 and not affected by Revision 3. The remaining issues in Petition 1 will be addressed in a subsequent order addressing the issues raised in Petition 2.

This Order contains EPA’s response to Petitioners’ request that EPA object to Revision 2 on the basis that: (1) mercury limits do not represent the best available control technology (BACT) (Section II.A. of Petition 1); (2) opacity and visible emissions limits are not BACT (Section II.D. of Petition 1); (3) the Permit fails to contain conditions requiring BACT during

periods of startup and shutdown (Section II.E. of Petition 1); (4) emission limits at various support facilities are not BACT (Section II.H. of Petition 1); (5) compliance provisions contained in the statement of basis (SOB) are not a part of the Permit (Section III.A. of Petition 1); (6) compliance assurance monitoring (CAM) provisions are not adequate to ensure compliance with Permit limits for volatile organic compounds (VOC) (Section III.B. of Petition 1); (7) limits for toxic substances are not enforceable (Section III.C. of Petition 1); (8) limits for lead are not enforceable (Section III.D. of Petition 1); (9) limits for VOC are not enforceable (Section III.G. of Petition 1); (10) “startup and shutdown” and “good combustion control” are not defined (Section III.I. of Petition 1); and (11) the Permit raises general concerns identified in bullets 1-4 (Section III.J. of Petition 1). In a few instances, as specifically noted in the responses below, responses to the issues identified above are partial due to overlap between Petitions 1 and 2.

Based on a review of Petition 1 and other relevant materials, including the LG&E Permit and permit record, and relevant statutory and regulatory authorities, I grant in part and deny in part the issues identified above. I grant on matters regarding issues 3 and 7 above, and deny on the remainder of the issues.

## **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 intended to meet the requirements of title V of the CAA. The Commonwealth of Kentucky originally submitted its title V program governing the issuance of operating permits in 1993, and EPA granted full approval on October 31, 2001. 66 *Fed. Reg.* 54,953. 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 compliance by sources 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.

For a major modification of a major stationary source,<sup>1</sup> applicable requirements include the requirement to obtain a preconstruction permit that complies with applicable new source review requirements (i.e., PSD). Part C of the CAA establishes the PSD program, the preconstruction review program that applies to areas of the country that are not designated as nonattainment for National Ambient Air Quality Standards (NAAQS). CAA §§ 160-169, 42 U.S.C. §§ 7470-7479. In such areas, a major stationary source may not begin construction or

---

<sup>1</sup> The proposed addition of a new 750 megawatt coal-fired boiler at LG&E is considered a “major modification,” consistent with the definition of “major modification,” in 401 KAR 51:001 § 1(116). The existing LG&E facility is a major stationary source, as that term is defined in 401 KAR 51:001 § 1(120).

undertake certain modifications without first obtaining a PSD permit. CAA § 165(a)(1), 42 U.S.C. § 7475(a)(1). The PSD program analysis must address two primary and fundamental elements before the permitting authority may issue a permit: (1) an evaluation of the impact of the proposed new or modified major stationary source on ambient air quality in the area, and (2) an analysis ensuring that the proposed facility is subject to BACT for each pollutant subject to regulation under the PSD program. CAA § 165(a)(3),(4), 42 U.S.C. § 7475(a)(3), (4); *see also* 401 KAR 51:017 (Kentucky's PSD program). The BACT analysis is further discussed in Section V of this Order.

EPA has promulgated two largely identical sets of regulations to implement the PSD program. One set, found at 40 Code of Federal Regulations (CFR) § 52.21, contains EPA's own federal PSD program, which applies in areas without a SIP-approved state PSD program. The other set of regulations, found at 40 CFR § 51.166, contains requirements that state PSD programs must meet to be approved as part of a SIP. In 1989, EPA approved Kentucky's PSD rules into the SIP as meeting these requirements in relevant part. *54 Fed. Reg.* 36,307 (September 1, 1989); *see also* 40 CFR § 52.931.<sup>2</sup> Thus, the applicable requirements of the Act for major modifications at major sources, such as at LG&E, include the requirement to comply with the applicable PSD requirements under the Kentucky SIP.<sup>3</sup> In this case, the Commonwealth's rules require a source to apply for a PSD permit which is then incorporated into the existing title V permit as a revision to the title V permit. 401 KAR 52:020.

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 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 (2<sup>nd</sup> Cir. 2003). Under section 505(b)(2), the burden is on the petitioner to make the required demonstration to EPA. *See Id.* at 333 n.11, *see also* *Sierra Club v. Johnson*, No. 07-11537 (11<sup>th</sup> Cir. Sept. 2, 2008), *Citizens Against Ruining the Environment v. EPA*, 2008 U.S. App LEXIS 15975 (7<sup>th</sup> Cir. 2008) (both discussing the burden of proof in title V petitions). If, in responding to a petition, EPA objects to a permit that has already been issued, as is the case here, 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

---

<sup>2</sup> On February 10, 2006, EPA proposed to approve changes made to Kentucky's New Source Review (NSR) program consistent with EPA's 2002 NSR Reform Rules. *71 Fed. Reg.* 6,988 (February 10, 2006). On July 11, 2006, EPA took final action approving Kentucky's NSR program incorporating changes made pursuant to EPA's 2002 NSR Reform Rules. *71 Fed. Reg.* 38,990 (July 11, 2006). Kentucky's revisions to its NSR program consistent with NSR reform, became effective under Kentucky law on July 14, 2004, and were submitted to EPA as a SIP revision for approval in September 2004. For further information about rules incorporated into the Kentucky SIP, see <http://www.epa.gov/region4/air/sips/ky/kytoc.htm>.

<sup>3</sup> Kentucky defines "federally applicable requirement" in relevant part to include a "federally enforceable requirement or standard that applies to a source." 401 KAR 52:001 § 1(15). Kentucky further defines "federally enforceable requirement," as "[s]tandards or requirements in the state implementation plan (SIP) that implement the relevant requirements of the Act, including revisions to that plan promulgated at 40 CFR Part 52." 401 KAR 52:001 § 1(34).

§ 70.8(d).

Where a petitioner's request that the Administrator object to the issuance of a title V permit is based in whole, or in part, on a permitting authority's alleged failure to comply with the requirements of its approved PSD program (as with other allegations of inconsistency with the Act), the burden is on the petitioners to demonstrate that the permitting decision was not in compliance with the requirements of the Act, including of the SIP.<sup>4</sup> Such requirements, as EPA has explained in describing its authority to oversee the implementation of the PSD program in states with approved programs, include the requirements that the permitting authority (1) follow the required procedures in the SIP; (2) make PSD determinations on reasonable grounds properly supported on the record; and (3) describe the determinations in enforceable terms. *See, e.g.*, 68 *Fed. Reg.* 9,892, 9,894-9,895 (March 3, 2003); 63 *Fed. Reg.* 13,795, 13,796-13,797 (March 23, 1998). EPA has approved the PSD programs into the SIPs of most states, including the Commonwealth of Kentucky, and as the permitting authority, Kentucky has substantial discretion in issuing PSD permits. Given this, in reviewing a PSD permitting decision, EPA will not substitute its own judgment for that of Kentucky. Rather, consistent with the decision in *Alaska Dep't of Env't'l Conservation v. EPA*, 540 U.S. 461 (2004), in reviewing a petition to object to a title V permit raising concerns regarding a state's PSD permitting decision, EPA generally will look to see whether the Petitioner has shown that the state did not comply with its SIP-approved regulations governing PSD permitting or whether the state's exercise of discretion under such regulations was unreasonable or arbitrary.<sup>5</sup> *See, e.g., In re East Kentucky Power Cooperative, Inc.* (Hugh L. Spurlock Generating Station) Petition No. IV-2006-4 (Order on Petition) (August 30, 2007); *In re Pacific Coast Building Products, Inc.* (Order on Petition) (December 10, 1999); *In re Roosevelt Regional Landfill Regional Disposal Company* (Order on Petition) (May 4, 1999).

## II. BACKGROUND

### Existing Facility

The LG&E facility in Trimble County, Kentucky, began construction on its existing 500 megawatt (MW) pulverized coal-fired boiler in the late 1970s (Unit 1). The facility underwent a series of modifications since then, adding not only the support facilities for the original 500 MW boiler, but also, six 160 MW simple cycle natural gas combustion turbines (Units 25-30) in

---

<sup>4</sup> The appeal of federal PSD permits issued pursuant to the federal regulations at 40 CFR § 52.21 is governed by the regulations at 40 CFR § 124.19, and authority to review such permits rests exclusively with the Environmental Appeals Board (EAB). Because of the exclusive authority of the EAB in this area, the Administrator has declined to review the merits of a federal PSD permit in the context of a petition to review a title V permit. *See, e.g., In re Kawaihae Cogeneration Project*, Petition No. 0001-01-C (Order on Petition) (March 10, 1997).

<sup>5</sup> In determining the appropriate standard of review to apply to the review of federal PSD permit determinations in a petition to object to a title V permit, the standard of review applied by the EAB in reviewing the appeals of federal PSD permits provides a useful analogy. The standard of review applied by the EAB in its review of federal PSD permits is discussed in numerous EAB orders as the "clearly erroneous" standard. *See, e.g., In re Prairie State Generation Company*, 2006 EPA App. LEXIS 38 (EAB, August 24, 2006); *In re Kawaihae Cogeneration*, 7 E.A.D. 107, 114 (EAB, April 28, 1997). In short, in such appeals, the EAB explained that the burden is on a petitioner to demonstrate that review is warranted. Ordinarily, a PSD permit will not be reviewed by the EAB unless the decision of the permitting authority was based on either a clearly erroneous finding of fact or conclusion of law, or involves an important matter of policy or exercise of discretion that warrants review.

approximately 2001. The existing facility also includes support structures such as a natural draft cooling tower; coal/limestone/ash/gypsum material handling equipment; three auxiliary boilers; an emergency diesel generator; and fuel oil storage tanks. Unit 1 and Units 25-30 previously went through PSD permitting prior to construction. A draft title V permit for the facility was first issued in December 1997, followed by several permit changes eventually resulting in Revision 2. Kentucky issued the title V permit revision at issue (Revision 2) on January 4, 2006.<sup>6</sup> See LG&E Permit SOB (April 23, 2003).

### **Permit History**

In December 2004, LG&E submitted a PSD permit application to KDAQ to include into its title V permit, a PSD construction permit. This would permit LG&E to undertake a major modification to construct a new 750 MW net nominal generating unit that would utilize supercritical pulverized coal (Unit 31). Ancillary equipment for this new unit includes a new linear mechanical draft cooling tower, a coal blending facility, dust collectors and dust suppression equipment on material handling operations, an ash barge loading system/fly ash silos, an auxiliary steam boiler, a backup diesel generator, and an emergency diesel fire water pump engine. The construction of new Unit 31 would also result in increased utilization of the existing natural draft cooling tower on Unit 1, various material handling equipment, the three auxiliary boilers, emergency diesel generator, and fuel oil storage tanks.

In late 2004, LG&E submitted a minor permit revision application to KDAQ for a voluntary creditable decrease in emissions for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) for Unit 1. The creditable decreases were requested to net against the anticipated future increases in emissions from the new Unit 31 for PSD purposes. In January 2005, KDAQ approved the minor permit revision to reduce the NO<sub>x</sub> and SO<sub>2</sub> emission limits for Unit 1.

The final draft Revision 2 combined PSD/title V permit for construction of new Unit 31 was open for public notice and comment in July 2005. Minor changes were made to the Permit following public comment and the final Permit was issued on January 4, 2006. The Petitioners administratively appealed the issuance of the Permit by KDAQ. After reviewing the appeal, KDAQ issued a Final Order, signed by the Secretary of the Kentucky Environmental Protection and Public Health Cabinet on September 28, 2007. On October 26, 2007, KDAQ issued a SOB entitled, "Revision 2 Administrative Amendment," which explained revisions to the Permit in response to the Secretary's Final Order. In January 2008, KDAQ further revised the Permit (Revision 3).

In issuing Revision 2, KDAQ concluded that the proposed major modifications would result in a significant net increase in emissions of particulate matter (PM) and particulate matter with a diameter of less than ten microns (PM<sub>10</sub>), carbon monoxide (CO), VOC, fluorides, and sulfuric acid mist (SAM). Due to the voluntary creditable decreases in emissions of NO<sub>x</sub> and SO<sub>2</sub> at Unit 1, KDAQ concluded that the new Unit 31 was not subject to major PSD review for NO<sub>x</sub> and SO<sub>2</sub>. As presented for Revision 2, the design of Unit 31 involved a suite of control technology including: selective catalytic reduction (SCR); pulse jet fabric filters (PJFF) and hydrated lime injection; wet flue gas desulfurization (WFGD); wet electrostatic precipitator

---

<sup>6</sup> In evaluating Petition 1 issues, in addition to the terms of Revision 2, EPA also reviewed the terms of the current permit for the facility (Revision 3), although there were no substantial changes between Revision 2 and Revision 3 that impacted the Petition 1 issues addressed in this Order. For purposes of clarity in this Order, the permits are referred to by revision. Permit citations are provided for Revision 3 unless the particular citation at issue was different in Revision 2 than Revision 3.

(WESP); dry electrostatic precipitator (DESP); powdered activated carbon (PAC) injection; and low-NO<sub>x</sub> burners. These control technologies, in addition to the construction of the new linear mechanical draft cooling tower and other operational limits, were determined by KDAQ as sufficient for the facility to meet BACT requirements that resulted from KDAQ's PSD review of the proposed major modification. KDAQ SOB Revision 2. Revision 3 involved the addition of control technology; however, such changes are not directly relevant to the issues addressed in this Order.

#### IV. EPA DETERMINATIONS

This Order contains EPA's response to Petitioners' request that EPA object to Permit Revision 2 on the basis that: (1) mercury limits do not represent the BACT (Section II.A. of Petition 1); (2) opacity and visible emissions limits are not BACT (Section II.D. of Petition 1); (3) the Permit fails to contain conditions requiring BACT during periods of startup and shutdown (Section II.E. of Petition 1); (4) emission limits at various support facilities are not BACT (Section II.H. of Petition 1); (5) compliance provisions contained in the SOB are not a part of the Permit (Section III.A. of Petition 1); (6) CAM provisions are not adequate to ensure compliance with Permit limits for VOC (Section III.B. of Petition 1); (7) limits for toxic substances are not enforceable (Section III.C. of Petition 1); (8) limits for lead are not enforceable (Section III.D. of Petition 1); (9) limits for VOC are not enforceable (Section III.G. of Petition 1); (10) "startup and shutdown" and "good combustion control" are not defined (Section III.I. of Petition 1); and (11) the Permit raises general concerns identified in bullets 1-4 (Section III.J. of Petition 1).

##### *Background on PSD and BACT Applicable to All PSD/BACT Related Issues Raised in Petition*

The CAA and corresponding PSD regulations require that new major stationary sources and major modifications of such sources employ BACT to minimize emissions of regulated pollutants emitted from the facility in significant amounts. CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4); 40 CFR § 52.21(j)(2); 401 KAR 51:017 § 8(2), (3). BACT is defined to mean,

an emission limitation based on the maximum degree of reduction [of pollutants emitted from the facility] which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.

CAA § 169(3), 42 U.S.C. § 7479(3).

EPA has developed a "top-down" process that permitting authorities use to ensure that a BACT analysis satisfies the applicable legal criteria. The top-down BACT analysis consists of a five-step process which provides that all available control technologies be ranked in descending order of control effectiveness, beginning with the most stringent. *See Prairie State*, slip. op. at 17-18. The most stringent control technology is established as necessary to achieve BACT-level emission limits unless the applicant demonstrates, and the permitting authority determines, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not achievable in that case. An incomplete BACT analysis, including failure to consider all potentially applicable control alternatives, constitutes clear error. *See, e.g., Prairie State*, slip op. at 19; *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 142 (EAB,

February 4, 1999); *In re Masonite Corp.* 5 E.A.D. 551, 568-569 (EAB, November 1, 1994). The five steps in the top-down process are summarized below:

- a. Identify all available control technologies;
- b. Eliminate technically infeasible options;
- c. Rank remaining control technologies by control effectiveness;
- d. Evaluate the economic, environmental, and energy impacts of the options; and
- e. Select BACT.

*Prairie State*, slip op. at 17-18. Although it is not directly required under EPA regulations to meet the BACT requirement, this top-down analysis is frequently used by permitting authorities to ensure that a defensible BACT determination, involving consideration of all requisite statutory and regulatory criteria, is reached. Kentucky follows this top-down BACT methodology, as did LG&E when it submitted its application for modifications at Trimble County. Prevention of Significant Deterioration Construction Permit Application and Title V Operating Permit Application Trimble County Unit 2, Louisville Gas & Electric (December 1, 2004) (hereafter referred to as “LG&E Revision 2 Permit Application”).

## **A. PSD Related Issues**

### **1. Permit fails to contain BACT for mercury** (Section II.A. of Petition 1)

*Petitioners' Comment.* Petitioners state that mercury is a regulated new source review (NSR)<sup>7</sup> pollutant and the Permit is required to contain BACT for mercury. Petitioners allege that the Permit erroneously classifies mercury as a “non PSD pollutant” and fails to require BACT for mercury.

*EPA's Response.* This issue is denied on both procedural and substantive grounds.

As a procedural threshold matter, this issue was not raised during the public comment period on the draft permit. Petitioners' Exhibit A (Comments (Revised) on the Louisville Gas and Electric Company Proposed Coal-Fired Power Plant (August 9, 2005)). Pursuant to Section 505(b)(2) of the CAA, 42 U.S.C. § 7661d(b)(2), a “petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency.” *See also* 40 CFR § 70.8(d). Thus, not only must issues be raised during the public comment period, but they must be raised sufficiently to meet the threshold requirements. The Act does provide for an exception to this threshold requirement if the petitioner “demonstrates in the petition to the Administrator that it was impracticable to raise such objections...or the grounds for such objection arose after such period.” *Id.* Neither Petitioners nor any other commenter raised this concern about mercury to KDAQ in comments to KDAQ during the comment period. Further, Petitioners do not claim in their Petition to EPA that it was impracticable to raise the claim during the comment period or that the grounds for raising it arose after the close of the comment period. Therefore, consistent with Section 505(b)(2) of the CAA, and 40 CFR § 70.8(d), Petitioners have failed to meet the threshold jurisdictional requirements for raising this issue in this title V Petition.

---

<sup>7</sup> NSR refers generically to the CAA preconstruction permitting programs that regulate major new and modified sources of air pollution.

With regard to the substance of the issue, CAA § 112(b)(6), 42 U.S.C. § 7412(b)(6), specifies that the PSD provisions of the CAA shall not apply to pollutants listed in Section 112. Mercury compounds are listed as hazardous air pollutants (HAPs) in Section 112 (which includes elemental mercury). 42 U.S.C. § 7412(b). For this reason, mercury is not a PSD-regulated pollutant under federal law. As a result, PSD review is not required for mercury compounds. *See also* 401 KAR 51:001 § 1(210)(d); *Newmont Nevada Energy Investments, LLC TS Power Plant*, PSD Appeal No. 05-04, slip op. at 75-77 (EAB, December 21, 2005) (concurring with Nevada Department of Environment that PSD provisions do not apply to mercury). Petitioners cite to Kentucky's PSD program as authority for regulation of mercury under the PSD program; however, Kentucky does not include mercury as a regulated pollutant for PSD purposes. To the contrary, Kentucky's rules, consistent with federal law, specifically exclude HAPs from regulation under Kentucky's PSD program. 401 KAR 51:001 § 1(210)(d). Thus, no BACT review is required for mercury and the Petition is denied as to this issue.

**2. Permit fails to contain BACT for opacity and visible emissions**  
(Section II.B. of Petition 1)

*Petitioners' Comment.* Petitioners state that the Permit fails to contain a BACT limit for opacity and visible emissions. Specifically, Petitioners argue that the record does not contain a BACT determination for opacity and that the 20 percent opacity limit in the Permit is not based on the performance of modern particulate control systems. Further, they claim that the Permit fails to contain an opacity level that corresponds to the PM/PM<sub>10</sub> emission rate specified in the Permit. Finally, they assert that the Permit does not contain a visible emissions limit. Petitioners do not specify for which emissions unit they are raising this claim; EPA interprets it as applying to new Unit 31.

*EPA's Response.* For the reasons discussed below, the Petition is denied as to issues regarding BACT for opacity and visible emissions.

Opacity is not a regulated pollutant for PSD purposes. Therefore, there is no requirement under either federal law or Kentucky law to undertake full PSD review, including a BACT analysis, for opacity. KDAQ Response to Comments (RTC) Revision 2 at 22-23; *see also Knauf Fiber Glass*, 8 E.A.D. 121 (stating that an opacity limit "is not a requirement of the federal PSD program"). Contrary to Petitioner's assertion, the inclusion of visibility in the definition of BACT merely clarifies that a visible emission standard is an acceptable form of a BACT limit for a regulated NSR pollutant. *See Alabama Power v. Costle*, 636 F.2d 323, 408 (D.C. Cir. 1979). Thus, it is permissible for an agency to use opacity as an emission limitation, but opacity is not independently regulated. This position is consistent with EAB and state decisions finding that the PSD program does not necessarily require permits to include opacity limits. *See generally In re Amerada Hess Corp. Port Reading Refinery*, PSD Appeal No. 04-03, slip op. at 11 (EAB, February 1, 2005); *In re Air Pollution Control Construction and Operation of a 500 MW Pulverized Coal-Fired Plant Known as Weston Unit 4 in Marathon County, Wisconsin*, Wis. Div. of Hearing and Appeals, Case No. IH-04-21 (February 10, 2006).

Although a BACT analysis for opacity was not required under either the CAA or the Kentucky SIP, 401 KAR 51:017 § 8 requires major modifications to meet applicable New Source Performance Standards (NSPS) limits, which may include opacity limits. The Permit does meet the NSPS requirements, Revision 3 at 28 (Section B.2(c)), and Petitioners recognize this fact (Petition at 23), noting that the 20 percent opacity limit and reference test methods used for compliance that are set in the Permit are consistent with the NSPS for new electric steam

generating units (*see* 40 CFR § 60.42Da) and Kentucky law (401 KAR 59:016 § 3(2)). Petitioners allege that the Permit fails to set an opacity limit that corresponds to the PM/PM<sub>10</sub> BACT limits; however, opacity is addressed independently from PM and PM<sub>10</sub> in the Kentucky rules and in federal rules such as NSPS and there is no requirement that such limits be correlated. With regard to opacity, Petitioners fail to demonstrate that the Permit is inconsistent with the CAA, including the applicable SIP.

“Visible emissions” are also not regulated pollutants for PSD purposes. EPA does not view the phrase “visible emission standard,” in the BACT definition at 40 CFR § 52.21(b)(12),<sup>8</sup> as mandating a BACT analysis for visible emissions (VE). Rather, it identifies a VE standard as a possible tool for meeting the BACT requirement for regulated pollutants. However, it does not require that a VE and/or opacity limit must be included in all PSD permits. While these limits are not required under BACT, permitting authorities have the discretion to include them in PSD permits in order to ensure compliance with BACT emission limitations for regulated pollutants. The Circuit Court of Appeals for the District of Columbia (D.C. Circuit) found that visible emission limitations were properly included in PSD permits as “one such means of measuring and limiting emissions” under BACT, but stated that “EPA’s inclusion of visible emission standards (among others) to be used to determine compliance with BACT sets no single standard that all PSD permittees must meet.” *Alabama Power*, 636 F.2d at 408. Instead, the D.C. Circuit found that permitting authorities “may exercise reasonable discretion” to include opacity/VE limits in BACT for a particular facility. *Id.* at 409. The EAB has also found that such limits are not a requirement of PSD program permitting. *Knauf Fiber Glass*, 8 E.A.D. at 172 (finding that opacity limits are “not a requirement of the federal PSD program”).

The LG&E facility, and particularly Unit 31, has a number of control devices and limits that reduce “visible” emissions from the facility. These include Unit 41 (the new cooling tower); the specific PM/PM<sub>10</sub> and opacity limits for Unit 31; as well as other fugitive, opacity, and PM/PM<sub>10</sub> limits required at other parts of the facility. Many of these limits were derived through a BACT analysis (e.g., the PM/PM<sub>10</sub> limits) and will contribute to reductions in visible emissions at the facility.<sup>9</sup> Thus, the Permit does contain limits regarding visible emissions through limits on opacity and PM, along with other requirements, and the Petitioners fail to demonstrate that the Permit is inconsistent with the Act in this regard. For the reasons discussed above, the Petition is denied as to these issues.

### **3. Permit fails to require BACT during periods of startup and shutdown (Section II.E. of Petition 1)**

*Petitioners’ Comment.* Petitioners allege that the Permit violates applicable requirements by failing to include BACT limits that would apply during periods of startup and shutdown. Petitioners also state that “mere development of [a] startup/shutdown plan is not sufficient to meet BACT requirements.” Petition at 24. Petitioners take issue with the permit conditions during startup and shutdown that the facility meet the “general duty rule” and maintain operations consistent with manufacturers’ specifications. Petitioners assert that a BACT analysis was not performed and the permit file contains no “evidence that the Cabinet considered ways to eliminate or reduce excess emissions during startup and shutdown.” Petition at 26. Petitioners cite two EAB decisions in support of their arguments – *In re Tallmadge Energy Center*, Order

<sup>8</sup> Kentucky’s corresponding definition is found at 401 KAR 51:017 § 1(25).

<sup>9</sup> Petitioners raised additional concerns regarding the PM/PM<sub>10</sub> limits and KDAQ’s analysis leading to the establishment of such limits. To the extent that such matters are raised in Petition 1, they are not addressed in this Order because they were affected by Revision 2 and are further addressed in Petition 2.

Denying Review in Part and Remanding in Part, PSD Appeal No. 02-12, slip op. (EAB, May 21, 2003) and *In re RockGen Energy Center* (PSD Appeal No. 99-1) 8 E.A.D. 536 (EAB, August 25, 1999).

*EPA's Response.*<sup>10</sup> The Petition is granted on this claim because, as is described below, the Permit does not comply with applicable requirements.

For Unit 31, Revision 3 states as follows:

emission limitations shall not apply during periods of startup and shutdown. However, emissions during startup and shutdown shall be included in determining compliance with tons per year limits specified in this permit. Pursuant to 401 KAR 51:017, the owner or operators shall utilize good work and maintenance practices and manufacturer's recommendations to minimize emissions during, and the frequency and duration of, such events.

Revision 3 at 29 (Section B.2(p)) (emphasis added). There are a number of limits in the Permit for Unit 31 that are not tons per year (tpy) limits, and thus, would be affected by the statement above.<sup>11</sup>

Nothing in Kentucky's rules or federal rules provides a blanket exemption from emission limits during periods of startup and shutdown, particularly absent the requisite PSD analysis. Kentucky's SIP-approved rules found at 401 KAR 50:055 § 1, state that "[e]missions which, due to shutdown or malfunctions, temporarily exceed the standard set forth by the cabinet shall be deemed in violation of such standards unless the requirements of this section are satisfied and the determinations specified in subsection (4) of this section are made." EPA's long held interpretation is that emission limitations in PSD permits apply at all times and may not be waived during periods of startup and shutdown. *See, e.g.,* Memorandum from John B. Rasnic, EPA Stationary Source Compliance Division, to Linda M. Murphy, EPA Region 1, *Automatic or Blanket Exemptions for Excess Emissions During Startup, and Shutdowns Under PSD* (January 28, 1993); *see also Tallmadge Energy Center*, slip op. at 24. A PSD BACT limit must apply at all times, unless the permitting authority determines the need to establish alternative BACT limits for periods of startup or shutdown, and justifies such limits as part of a complete BACT analysis. *RockGen Energy Center*, 8 E.A.D. at 554. To establish a work practice standard as an alternative BACT limit during such periods, the permitting authority must determine that technological or economic limitations on the application of a measurement methodology to a particular unit would make the imposition of an emissions standard infeasible during such periods. *See* 401 KAR 51:001 § 1(25); 40 C.F.R. § 51.166(b)(12).

KDAQ's SOB does not provide a sufficient analysis to justify this exemption as an alternative BACT limit for periods of startup and shutdown. The SOB provides some explanation for the exemption – stating that “[s]ome of [the] control technologies cannot be used,

---

<sup>10</sup> EPA's response on this matter is based solely on Petitioners' arguments raised in Petition 1. EPA is responding to this issue now despite changes to Revision 3 because EPA believes this issue warrants further action by KDAQ.

<sup>11</sup> Petitioners also raise concerns that the startup/shutdown plan requirement and the Section E (Revision 3 at 60) "Source Control Equipment Requirements," which promote minimization of emissions, are not sufficient to adequately control emissions during startup and shutdown, and are not enforceable. KDAQ should consider these matters in completing its BACT analysis for periods of startup and shutdown.

to their full or partial potential during startup or shutdown for safety and other reasons.” KDAQ SOB Revision 2 at 22-23. However, neither the SOB nor the RTC explains the analysis for periods of startup and shutdown that supports the statements in the Permit exempting the facility from compliance with certain limits during periods of startup and shutdown. For example, neither the SOB nor the RTC provides information (as noted by Petitioners) that demonstrates an analysis of possible conditions that could result in reduced emissions during startup and shutdown. KDAQ did consider “good work and maintenance practices,” but it is not clear that this is the only option. *Id.* Furthermore, there is no determination that the standard for using a work practice standard has been met.

Thus, EPA is granting the Petition on this claim because the Permit conditions regarding periods of startup and shutdown do not comply with applicable requirements. KDAQ shall proceed consistent with 40 CFR §§ 70.7(g) and 70.8(d) for completing this review.

#### **4. Concerns regarding BACT analysis for support operations at facility** (Section II.H. of Petition 1 – Partial Response)

*Petitioners’ Comment.* Petitioners allege that EPA must object to the Permit because the limits set for “various pollutants at various facilities” are not BACT. Petition at 27. For this proposition, Petitioners cite to 401 KAR 51:017 § 8 (“Control Technology Review”). This allegation is followed by a bulleted list of three one-sentence statements alleging that (1) Permit limits for various support facilities at the Trimble County facility are not BACT; (2) Permit limits for fluorides (HF) are not BACT; and (3) Permit limits for SAM are not BACT. Petition at 27-28. The Petition is not clear whether issues 2 and 3 are related to the proposed new unit or the support facilities listed in the first bullet (coal blending, material handling operations, ash barge loading, fly ash silos, backup diesel generator, and the emergency diesel fire water pump). Because the one-sentence introducing the bulleted list refers to “various pollutants at various facilities,” coupled with the prior independent sections specific to the proposed new unit, EPA concludes that Petitioners’ claims in the bulleted list all regard the support facilities listed in the first bullet.

*EPA’s Response.*<sup>12</sup> The Petition is denied as to these issues for both the procedural and substantive reasons described below.

As a threshold procedural matter, these three issues were not raised during the public comment process for this Permit. Petitioners’ Exhibit A. Nor do Petitioners claim in their Petition that it was impracticable to raise such claims during the public comment period or that the grounds for the claims arose after the close of the comment period. Thus, Petitioners failed to meet threshold jurisdictional requirements for raising these issues in Petition 1 described in Section 505(b)(2) of the CAA.

With regard to the substance of the issue, KDAQ did undertake a BACT analysis for project emission units subject to PSD requirements. KDAQ SOB Revision 2 at 23-24. In addition, with regard to fluorides and SAM, both pollutants were included in the PSD review and BACT analysis for the proposed new unit.<sup>13</sup> KDAQ SOB Revision 2 at 14. KDAQ’s BACT

---

<sup>12</sup> EPA’s response on this matter does not address the backup diesel generator and the emergency diesel firewater pump engine because KDAQ made revisions to those operations as part of Revision 3 to the Permit.

<sup>13</sup> Petitioners’ concerns regarding fluoride and SAM are addressed in other areas of the Petition alleging concerns regarding those limits from specific units. This Order is responding to fluoride related concerns

analysis for the new boiler included a BACT analysis for support facilities that were considered “project emission units” – that is, support facilities that were subject to PSD review as a result of the new boiler project. KDAQ SOB Revision 2 at 23-24; *see also* 401 KAR 51:001 § 1(66) (definition of emissions unit). KDAQ determined that support facilities such as limestone handling, the backup diesel generator, and the diesel generator, were subject to BACT review. KDAQ SOB Revision 2 at 24 (Table 5.2); *see also* LG&E Revision 2 Permit Application at Appendix G (Potential to Emit Calculations). KDAQ’s BACT analysis included a unit-by-unit review for each applicable emissions unit, as required by Kentucky’s PSD rules. The SOB summarizes the requirements for all emission units in Table 5.4 (SOB Revision 2 at 26). For the units identified by Petitioners (Petition at 27) that are also included in Table 5.2, Petitioners have not provided any basis as to why the BACT analysis performed by KDAQ for the identified support facilities was inconsistent with applicable requirements. For the units identified by Petitioners that were not included by KDAQ in Table 5.2 as units considered as part of the BACT review, Petitioners have not demonstrated that a BACT analysis was required for those units.

As a general matter, Petitioners’ conclusory allegations regarding a permit are insufficient to demonstrate that the permit is inconsistent with the CAA, including the requirements of the SIP.

For the reasons discussed above, the Petition is denied as to this issue.

## **B. Issues Regarding Enforceability of Permit Terms**

In Section III of the Petition, Petitioners raise various concerns associated with the enforceability of specific Permit terms. Petition at Section III (beginning on page 28). This Order includes responses (some in full, some in part) to Sections III. A, B, C, D, G, I, and J.

### **1. Permit fails to include compliance provisions contained in the SOB and CAM provisions are not enforceable<sup>14</sup>** (Section III.A. of Petition 1)

*Petitioners’ Comment.* Petitioners allege that the Permit fails to incorporate compliance limitations and testing parameters specified in the SOB for VOC, fluorides, and lead.<sup>15</sup> Specifically, Petitioners take issue with the fact that Table 5.4 in the SOB (KDAQ SOB Revision 2 at 26-27) is not included in the Permit. Additionally, while Petitioners recognize that the LG&E Permit contains monitoring for fluorides, they take issue because they believe that “[t]he Preamble to the CAM regulations makes it clear that compliance with CAM indicator provisions

---

but is not addressing SAM issues that are affected by Revision 3. Notably, permit limits for fluorides and SAM are discussed in the SOB and included in the BACT analysis for Unit 31. KDAQ SOB Revision 2 at 14-31. The SOB discusses the applicable requirements including emission limits and associated monitoring, recordkeeping and reporting requirements that assure compliance. *Id.* Petitioners’ one-sentence statements in Section II.H. of Petition 1 are not sufficiently specific to raise objectionable issues.<sup>14</sup> All of the issues discussed in this section are specific only to Permit Revision 2 and Petition 1. Matters pertaining to PM/PM<sub>10</sub>, mercury and SAM are further addressed by Permit Revision 3 and Petition 2. This response is thus only a partial response to the extent that these matters are further discussed by Permit Revision 3 and Petition 2. EPA is not now responding to Petitioners’ allegations that the CAM monitoring requirements do not assure compliance with the SAM limits (Petition 1 at 30).

<sup>15</sup> Petitioners also raise this concern with respect to PM/PM<sub>10</sub>, mercury and SAM. Because these issues were addressed by Petitioners more fully in Petition 2, we are deferring our response on them until we issue an Order responding to the Petition 2 issues.

does not make an applicable requirement enforceable.” Petition at 29. Petitioners do not specify the unit to which this comment applies, instead referring to “PC boiler” which could be either Unit 1 or 31. Because the Permit at issue involves construction of a new PC boiler (Unit 31) and does not purport to modify existing or establish new emission limits for Unit 1, EPA interprets the comment as applying to new Unit 31.

*EPA’s Response.*<sup>16</sup> The Petition is denied as to both issues raised; each is addressed separately below.

### *SOB Concern*

Pursuant to federal regulations at 40 CFR § 70.7(a)(5), a permitting authority is required to provide “a statement that sets forth the legal and factual basis for the draft permit conditions (including references to the applicable statutory or regulatory provisions).” This document, referred to as the SOB, must be sent to EPA in support of the “proposed permit” and to any other person who requests it. The SOB must also be included as part of the permit record. However, the SOB is not a part of the permit even though it may provide background information, including the rationale for specific permit conditions or background on the permitting authority’s interpretation of an element in the permit.

With regard to Petitioners’ specific claims involving Table 5.4 of the SOB and emission limitations for VOC, fluorides, and lead, the Permit conditions list the applicable requirements for these pollutants, including testing requirements. The Permit incorporates the applicable emission limitations and testing parameters specified in the SOB, as well as initial and periodic stack testing, and limits, for VOC, fluorides, and lead. *See, e.g.*, Revision 3 at 2-6 (for Unit 1), 27-36 (for Unit 31), and 59-60 (Section D, “Source Emission Limitations and Testing Requirements”). For Unit 31, in addition to “Table 1: CAM Monitoring Approach” (Revision 3 at 32), Parts 5-7 of Section B describe in detail the various recordkeeping, reporting, and monitoring requirements. Revision 3 at 32-36. Table 5.4 (Revision 2 SOB) only provides citations to applicable regulations and summarizes the requirements of those cited regulations. In contrast, the Permit includes all the information from Table 5.4, albeit in a narrative form that is broken down by specific unit. There is no requirement that the SOB be incorporated by reference or otherwise included in a Permit; nor is there a requirement that the permit contain a summary table (similar to Table 5.4) of the applicable requirements. The permit at issue is much more specific (as it should be) than the SOB. Petitioners have not identified a specific parameter included in Table 5.4 that is not included in the Permit.

The same concern raised now to EPA was raised by Petitioners to KDAQ during the Commonwealth’s public comment period. While KDAQ did not fully agree with all of the concerns raised by Petitioners, KDAQ made changes to the Permit in response to Petitioners’ comments. *See* KDAQ RTC Revision 2 at 27-28 (explaining that annual performance testing for VOC and lead were added to the Permit). Petitioners do not explain why the changes made by KDAQ do not address the concerns they raised to the Commonwealth, nor do they demonstrate that the Permit as issued is inconsistent with applicable requirements. In the Petition, Petitioners simply restate the same claims raised to the Commonwealth and fail to explain why KDAQ’s response and subsequent changes were insufficient to address their concerns. The Permit contains specific limits and associated testing requirements for VOC, fluorides and lead and

---

<sup>16</sup> This response is addressing SAM only to the extent that Petitioners raise concerns regarding CAM compliance – any other issues regarding SAM that are raised in Petition 1 and not addressed in this Order are affected by Revision 3 to the Permit.

Petitioners do not specify how the included terms are inadequate.<sup>17</sup>

For the above reasons, the Petition is denied as to this issue.

### *General Background on CAM*

On October 22, 1997, EPA promulgated final rule revisions to implement CAM for major stationary sources under title V, consistent with the 1990 amendments to the CAA. 62 *Fed. Reg.* 54,900. This rulemaking resulted in changes to federal regulations found at 40 CFR part 64. These rules were intended to be implemented through the title V major source operating permit program. 62 *Fed. Reg.* at 54,901. One purpose of the rules is to ensure that permits provide a reasonable assurance of compliance with applicable requirements under the CAA where the underlying standard does not do so on its own. *Id.* at 54,900. The CAM rule applies only in cases where existing requirements are not more rigorous than those in the CAM regulations. For this reason, the CAM rule specifically exempt from coverage, NSPS and National Emission Standards for Hazardous Air Pollutants proposed after the CAA Amendments of 1990 (i.e., after November 15, 1990). *See* 62 *Fed. Reg.* 54,904 (codified at 40 CFR § 64.2(b)). Additionally, the CAM rule applies only to a pollutant-specific emissions unit (PSEU), which is defined as a unit that: (1) is subject to an emission limitation or standard<sup>18</sup> for the applicable regulated air pollutant (or a surrogate thereof); (2) uses a control device to achieve compliance with any such emission limitation or standard; and (3) has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tpy, required for a source to be classified as a major source. 40 CFR § 64.2(a).

For PSEUs to which CAM applies, the owner/operator must develop monitoring that meets specified criteria for selecting appropriate indicators of control performance, establishing ranges for those indicators, and for responding to any excursions from those ranges. 40 CFR § 64.3; 62 *Fed. Reg.* at 54,902. The CAM rule also establishes numerous recordkeeping and reporting requirements to ensure compliance. 40 CFR §§ 64.4, 64.9. The analysis of whether CAM applies at a particular unit is done on a pollutant-by-pollutant basis such that CAM may apply for certain pollutants at a unit but not for others. 62 *Fed. Reg.* at 54,922. The concept of the CAM approach is that compliance with an emission standard is assured through requiring monitoring of the operation and maintenance of the control equipment and, if applicable, operating conditions of the PSEU. 62 *Fed. Reg.* at 54,918. The CAM analysis is that “[o]nce an owner or operator has shown that the installed control equipment can comply with an emission limit, there will be a reasonable assurance of ongoing compliance with the emission limit as long

---

<sup>17</sup> Petitioners also note the differences in emission limits between Units 1 and 31. This is due primarily to the fact that PSD review occurred for Unit 1 in approximately 1978. Thus, even though Unit 1 is a PC boiler, emission limitations and control technology on Unit 1 will not be the same as the new Unit 31. This difference is primarily due to technological changes from 1978 to present as well as federal and Kentucky rule changes.

<sup>18</sup> For CAM purposes, the term “emission limitation or standard” is defined as:

any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the Act. An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate or concentration of emissions...or as the relationship of uncontrolled to controlled emissions...An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement.

as the emissions unit is operated under the conditions anticipated and the control equipment is operated and maintained properly.” *Id.* More specific information regarding the CAM rule can be found in the preamble to the October 1997 promulgation, the rules themselves (40 CFR part 64), and in the CAM Technical Guidance Document (August 1998), available on the EPA Web site.

With regard to indicator parameters and the correlation between pollutants, the preamble to the CAM rule provides:

The CAM approach builds on the premise that if an emissions unit is proven to be capable of achieving compliance as documented by a compliance or performance test and is thereafter operated under the conditions anticipated and if the control equipment is properly operated and maintained, then there will be a reasonable assurance that the emissions unit will remain in compliance. In most cases, this relationship can be shown to exist through results from the performance testing without additional site-specific correlation of operational indicators with actual emission values.

62 *Fed. Reg.* at 54,926. The preamble to the CAM rule further provides that:

The presumptive approach for establishing indicator ranges in part 64 is to establish the ranges in the context of performance testing. To assure that conditions represented by performance testing are also generally representative of anticipated operating conditions, a performance test should be conducted under conditions specified by the applicable rule or, if not specified, generally under conditions representative of maximum emission potential under anticipated operating conditions. In addition, the rule allows for adjusting the baseline values recorded during a performance test to account for the inappropriateness of requiring that indicator conditions stay exactly the same as during a test. The use of operational data collected during performance testing is a key element in establishing indicator ranges; however, other relevant information in establishing indicator ranges would be engineering assessments, historical data and vendor data. Indicator ranges do not need to be correlated across the whole range of potential emissions.

62 *Fed. Reg.* at 54,927. In addition, EPA has explained that established CAM parameters are not enforceable limits. The CAM rule preamble addressed this by pointing out that:

The obligation to correct excursions as expeditiously as practicable is the enforceable component associated with establishing an indicator range under part 64. Part 64 does not establish that an excursion from an indicator range constitutes an independent violation by itself.

*Id.* at 54,931; *see also Id.* at 54,928. Thus, CAM provides a reasonable assurance of compliance with emission limits and consequently, the adoption of CAM as “enhanced monitoring” meets the requirement of the CAA but does not convert the CAM parameters to enforceable permit limits.

With regard to the LG&E facility, KDAQ determined that CAM requirements applied to SAM and fluorides at Unit 31. KDAQ SOB Revision 2 at 12-13. Specifically KDAQ explained,

Pre-control emissions of SO<sub>2</sub>, NO<sub>x</sub>, PM/PM<sub>10</sub>, [SAM] and fluorides are each greater than 100 tpy. CAM requirements under 40 CFR 64.2(b) will be met for SO<sub>2</sub>, NO<sub>x</sub>, and PM/PM<sub>10</sub>, by compliance with the Acid Rain program and compliance with a post-November 15, 1990 NSPS standard. In accordance with Part 64, LG&E has submitted additional information on its CAM plan for [SAM] and fluorides. Pursuant to 401 KAR 52:020, the plan will receive public notice to ensure federal enforceability.

KDAQ SOB Revision 2 at 13. The terms of the CAM Plan for SAM and fluorides are discussed in the SOB (Table 4.1 on page 13) and are also included in Revision 3 at page 32.

*CAM Issue in Section III.A. of Petition 1*

Petitioners raise concerns with what they refer to as “CAM indicator provisions” for SAM and fluorides, but do not clearly articulate the specific deficiency that raises a potentially objectionable issue. As alleged support for this claim regarding CAM indicator provisions and enforceability, Petitioners cite to the entire 47-page preamble to the CAM rule – again, not providing EPA with any specificity regarding a particular alleged deficiency in the Permit. With regard to indicator provisions, the preamble to the CAM rule explains that:

Complete compliance with an approved part 64 monitoring plan does not shield a source from enforcement actions for violations of applicable requirements of the Act if other credible evidence proves violations of applicable emission limitations or standards. The Agency expects that a unit that is operating within appropriately established indicator ranges as part of approved monitoring will, in fact, be in compliance with its applicable limits. Part 64 does not prohibit the Agency, however, from undertaking enforcement where appropriate.

62 *Fed. Reg.* at 54,907. To the extent that Petitioners are concerned about enforceability, the elements of the CAM Plan for SAM and fluorides are enforceable. The specific CAM requirements associated with SAM and fluorides for Unit 31 are described in Table 1: CAM Monitoring Approach (Revision 3 at 32), and on subsequent pages of Revision 3 (33-36). Table 1 discusses general requirements (emission limits); monitoring methods and locations; indicator ranges; data collection frequencies; averaging periods; recordkeeping; and quality assurance/quality control. For each of these separate requirements, the Permit establishes enforceable measures such as requirements for testing parameters; initial source testing; specific testing associated with key control devices (such as the WESP and WFGD) and weekly coal sampling and quarterly coal composites for fluorides. Once the facility is operational, the required performance testing will support the establishment of operating parameters, and ensure that the Permit terms are sufficient to assure compliance with emission limits. Petitioners do not identify any specific requirement of the CAM rule that is missing from Table 1 (or pages 33-36 of Revision 3).<sup>19</sup> Thus, the Petition does not identify any defect in the Permit.

---

<sup>19</sup> Petitioners cite to a September 2000 letter from EPA Region 4 to Tampa Electric Company as support for their claims regarding enforceability and indicator pollutants. Petition at 30-31. Typically, when EPA Region 4 provides comments on permits, it provides ‘significant’ comments and ‘general’ comments. The significant comments are sufficiently important that EPA may consider such issues as potentially objectionable issues. The general comments, however, do not meet the threshold for considering an objection to a permit, but may nonetheless recommend changes to the permit or provide general information on a topic. The comment quoted by Petitioners was one of the “general” comments made by

Petitioners' conclusory allegation regarding the CAM indicator provisions does not demonstrate that the Permit is not in compliance with the Act. Therefore, the Petition is denied as to this issue.

**2. CAM compliance provisions for VOC and fluoride are not adequate to ensure compliance with Permit limits**  
(Section III.B. of Petition 1 – Partial Response)

*Petitioners' Comment.* Petitioners raise concerns with KDAQ's use of indicator parameters for VOC and fluorides for Unit 31. Petitioners assert that the use of indicator parameters results in the limits being unenforceable because KDAQ did not: require studies and testing to establish the relationship between the parameter and the indicator pollutant; include performance ranges for each parameter; specifically state that a violation of the indicator parameter is a per se violation of the pollutant limit; and require sufficient periodic retesting to validate the indicator ranges to ensure ongoing compliance. Petition at 29-30. Petitioners further state that the CAM provisions for fluoride do not assure compliance with the limits for fluorides. Petitioners cite to a comment letter issued by EPA Region 4 to another facility raising CAM related concerns. Petitioners conclude by stating that "compliance must be determined by a performance test or other similar data in which actual stack emissions are measured." *Id.* at 31.

*EPA's Response.*<sup>20</sup> As a general matter, the concept and use of indicator or surrogate pollutants is consistent with EPA's CAM rule. The applicability section of the CAM rule explains that part 64 applies "to a pollutant-specific emissions unit at a major source...if the unit satisfies all of the following criteria," including that the "unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof)..." 40 CFR § 64.2(a)(1)(*emphasis added*). EPA's preamble to the CAM rule further explains the use of surrogate pollutants as follows:

The Agency also notes that the applicability provisions in part 64 include a "surrogate" of a regulated air pollutant to address situations in which the emission limitation or standard is expressed in terms of a pollutant (or other surrogate) that is different from the regulated air pollutant that is being controlled.

62 *Fed. Reg.* at 54,912.

With regard to VOC, KDAQ did not conclude that Unit 31 is a PSEU for VOC. Furthermore, the SOB indicates that the potential to emit for VOC is 97.8 tpy, which is below the 100 tpy major source threshold for VOC in Trimble County. Thus, Unit 31 is not a PSEU for

---

EPA to Tampa Electric to serve as a reminder of the CAM requirements. Contrary to Petitioners' allegation, the mere inclusion of this statement in the comments does not demonstrate that EPA was poised to object to the Tampa Electric Permit, or that there was even a deficiency with the draft permit reviewed by EPA. The LG&E permit is consistent with the comment made by EPA to Tampa Electric because it does provide appropriate procedures for using indicator/surrogate pollutants, performing initial and annual testing, establishing performance ranges for parameters, and other CAM/title V applicable requirements.

<sup>20</sup> This response is not addressing Petitioners' comments with regard to SAM at Unit 31 and PM/PM<sub>10</sub> at Unit 1. EPA and Petitioners agree that matters regarding SAM and PM/PM<sub>10</sub> will be addressed in a subsequent order because the specific issues raised were affected by substantive changes made in Revision 3.

VOC. As a result, CAM obligations are not triggered with regard to VOC at Unit 31. Petitioners did not challenge that determination or raise any basis as to why that conclusion was in error. Although CAM does not apply, the Permit establishes compliance requirements by specifying that compliance with the applicable VOC limit will be demonstrated by compliance with the CO standard. Revision 3 at 28. Compliance with the CO standard is demonstrated by a continuous monitoring system for CO. *Id.* at 29-30. Monitoring of CO emissions is a good indicator of VOC control for a thermal combustion operation (i.e., noncatalytic) including fossil fuel fired boilers (*see e.g.*, <http://www.epa.gov/apti/bces/module6/oxidized/character/character.htm>, providing basic reference information regarding boilers and organic compounds). Although the connection between CO and VOC is supported by reasonable scientific analysis, in the RTC, KDAQ explained that as part of the initial and annual stack tests, LG&E will be required to evaluate the relationship between CO and VOC for the equipment installed at Unit 31. KDAQ RTC Revision 2 at 22, 33; *see also* Revision 3 at 59 (requiring evaluation within 60 days after submitting annual test results). The use of the CO CEMS to monitor and assure compliance with the VOC limit is consistent with other PSD/title V permits nationally.<sup>21</sup> Thus, the Permit includes safeguards to ensure that the scientific expectations are met. The SOB explains and the Permit requires the appropriate correlation testing and establishing of indicator ranges for the CO CEMS to assure compliance with the VOC limit.

With regard to fluorides, KDAQ determined that fluorides were subject to the CAM provisions. However, despite Petitioners' claims, the surrogate pollutants and control devices chosen by KDAQ are consistent with CAM and other applicable requirements, and are backed by reasonable scientific expectations of control device operation and reasonably understood chemistry. Further, the LG&E CAM provisions are consistent with other title V permits nationally for electric generating units not only with regard to the indicator pollutants chosen, but also the control technology and the methodologies for the CAM process. *See, e.g.*, Farmers Permit Memorandum at 47 (explaining that control devices for SO<sub>2</sub> and PM have co-benefits for fluoride control). Petitioners are simply incorrect that compliance "must" be determined by a specific type of performance test or compliance mechanism for only the pollutant at issue. The CAM provisions require the selection of indicators of performance, including specific ranges, but there is also flexibility for compliance to be demonstrated a number of different ways.

In the instant case, the SOB explains that the facility provided KDAQ with a CAM plan as well as follow-up information requested by KDAQ to further support the CAM plan. KDAQ SOB Revision 2 at 13. Based on this information, and the use of a continuous emissions monitor for SO<sub>2</sub>, KDAQ determined that the CAM plan for fluorides was consistent with applicable requirements (40 CFR § 64.3(d)(2)). *Id.* With regard to fluorides, the SOB explains that because wet scrubbers are known to remove fluorides as effectively as they remove SO<sub>2</sub>, SO<sub>2</sub> is a suitable surrogate for demonstrating control of fluorides. KDAQ SOB Revision 2 at 20. Monitoring of SO<sub>2</sub> emissions from an FGD (one of the control devices) is a good indicator of fluoride control.<sup>22</sup> The SOB explains and the Permit requires the source to perform the appropriate correlation testing once the control device and monitors are installed in order to establish indicator ranges

---

<sup>21</sup> One such example is PSD Permit Number 97-058-C (M-2) issued to Western Farmers Electric Cooperative (Hugo Generating Station) in Choctaw County, Oklahoma. This permit establishes a VOC limit and states that compliance is demonstrated by compliance with the CO limit. Western Farmers Permit at 3. The Permit Memorandum (SOB) accompanying the Permit explains that VOC emissions are the result of incomplete combustion, and that the control technology used to limit CO emissions is effective at reducing VOC emissions as well. Western Farmers Permit Memorandum (January 29, 1997) at 43.

<sup>22</sup> For further information regarding fluorides and SO<sub>2</sub>, see <http://www.icci.org/99final/devito2.htm>.

for the SO<sub>2</sub> CEMS to assure compliance with the fluorides limit, consistent with CAM requirements. The Permit follows the procedures and requirements in 40 CFR part 64. Revision 3 at 32-36. The Permit also requires measurements to verify the accuracy of the indicator ranges established through monitoring such as quarterly evaluation of coal samples to determine fluoride content. *Id.* at 36. Petitioners do not demonstrate that the CAM obligations for fluorides contained in the Permit are inconsistent with federal or Kentucky requirements.

For fluorides, as with some other pollutants, there are some elements of the CAM related requirements that cannot be fully established until the facility is operational. Petitioners suggest that the Permit is deficient because it does not already include these elements, such as the operating parameters. Petition at 30. However, such parameters can only be accurately established once the control and monitoring devices at the facility are operational. Furthermore, Petitioners claim that the Permit should specify that exceedances of indicator pollutants are violations of the fluoride limits (i.e., that if the SO<sub>2</sub> limit was exceeded, this would mean that the fluorides limit was violated). *Id.* at 30. As was explained above, such language is not required by the CAM regulations. *See, e.g., 62 Fed. Reg.* at 54,907.

In summary, while KDAQ determined that the VOC emissions at Unit 31 are not subject to the CAM Rule (and Petitioners have not contravened KDAQ's determination) the Permit establishes compliance requirements for the applicable VOC limits. Additionally, KDAQ followed the CAM procedures in establishing a CAM plan for fluorides, and Petitioners fail to demonstrate that the selected approach is insufficient under the CAM regulations. Instead, Petitioners raise general concerns with the concept of compliance assurance monitoring, including the idea of surrogate/indicator pollutants, among other issues that were established in the CAM rule. However, such issues are not appropriately raised in the context of this title V petition. Thus, with regard to CAM issues, Petitioners have failed to demonstrate that the Permit is not in compliance with the Act.

### **3. Unit 31 limits on toxic substances are not enforceable** (Section III.C. of Petition 1)

*Petitioners' Comment.* Petitioners state that the toxic substances limits for Unit 31 are not enforceable because the Permit relies on the use of indicator parameters including PM/PM<sub>10</sub>, SO<sub>2</sub>, CO, and Hg but the permit record does not establish any relationship between those indicator pollutants and other toxic substances noted by Petitioners. Petitioners specifically claim that the Commonwealth failed to identify what toxic substances might be emitted, though the Petitioners identify the toxic substances dioxins, mercury, and selenium as pollutants of concern. Petition at 31-32. Petitioners also raise the concern that in addition to failing to identify the toxics that might be emitted, the permit record does not quantify toxics emissions, or otherwise perform any risk assessment to determine if the emissions are harmful to health and welfare. *Id.* at 32. Petitioners further note that the record does not demonstrate that the permit limits for the indicator pollutants (i.e., PM/PM<sub>10</sub>, SO<sub>2</sub>, CO, and Hg) are sufficient to assure emission of toxic substances are not harmful to human health and welfare; Petitioners cite to 401 KAR 63:020 for support for the "harmful" standard. *Id.*

*EPA's Response.* The Petition is granted as to this issue so that KDAQ may clarify applicability of 401 KAR 63:020 with regard to toxic substances emitted by the unit.

Petitioners cite to 401 KAR 63:020<sup>23</sup> as requiring KDAQ to undertake a series of evaluations on the toxic substances emitted by LG&E. Petitioners cite to specific toxics of concern (e.g., dioxins, mercury, and selenium) and coal regression analysis for support of their claim. Petition Exhibit A at 18. The Kentucky rule on which Petitioners rely is currently incorporated into the Kentucky SIP. The Permit terms indicate that KDAQ determined that 401 KAR 63:020 was an applicable requirement for Unit 31. Revision 3 at 27. In the SOB, KDAQ explained that the “same control technologies and emissions limitations that are applied for PM, SO<sub>2</sub>, CO, VOC and fluorides ensure that the proposed facilities will not emit potentially hazardous matter or toxic substances.” KDAQ SOB Revision 2 at 9. KDAQ also concluded that the toxic substances highlighted by Petitioners were “particulate in nature,” and thus, “will be controlled through the existing pollution control train.” KDAQ RTC Revision 2 at 30. Even assuming that particulate controls will control some emissions of toxics, KDAQ fails to explain the level of reductions that would be achieved, or how such emissions levels would meet the standard of its SIP-approved regulation. Rather, KDAQ appears to rely on EPA’s review of HAPs from EGUs to conclude that mercury is the only HAP that poses a “risk sufficient to warrant regulation.” KDAQ RTC Revision 2 at 30 (citing to 65 *Fed. Reg.* 79,825, December 20, 2000). This conclusion, however, is not consistent with EPA’s review which found only that mercury was the HAP of “greatest concern.” 65 *Fed. Reg.* at 79,825; *see also* 70 *Fed. Reg.* 15,996, 16,002-08. Thus, KDAQ’s reliance on prior EPA findings for its conclusion that all HAPs other than mercury need not be considered was unreasonable.

EPA notes that on its face, 401 KAR 63:020 requires an ‘evaluation’ of the adequacy of controls and/or procedures and the emissions potential of a facility, but does not specify that such evaluation include a risk assessment or emissions quantification as suggested by Petitioners. Petition at 32. In further considering this issue, Kentucky should address whether a risk assessment or emissions quantification is necessary when applying the Kentucky rule to this permit action. Because KDAQ included 401 KAR 63:020 as an applicable requirement in the Permit, the Petition is granted as to this issue for KDAQ to (1) clarify applicability of 63:020; (2) perform an evaluation the adequacy of controls and/or procedures and emission potential for Unit 31 consistent with 63:020; and (3) ensure that the record includes sufficient information supporting KDAQ’s determination(s) regarding applicability of 63:020 and KDAQ’s resulting evaluation(s). KDAQ shall proceed consistent with 40 CFR §§ 70.7(g) and 70.8(d) for completing this review.

**4. Unit 31 limits for lead are unenforceable**  
(Section III.D. of Petition 1 – Partial Response)

*Petitioners’ Comment.* Petitioners raise several concerns with regard to the lead limit for Unit 31 including: (1) that the annual performance test is insufficient to ensure continuous compliance with the lead limit and that quarterly stack testing and weekly coal sampling are necessary; (2) the Permit must specifically require the use of monitoring data to assure continuous compliance; (3) the 12-month rolling average is ambiguous and excessively long; (4)

---

<sup>23</sup> 401 KAR 63:020 applies only to the emissions of hazardous substances that are not otherwise regulated by Kentucky’s rules. For those substances falling under this rule, § 3 requires that, “Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the Cabinet.”

the limit is slightly less than the PSD significance threshold and thus the unit is a synthetic minor for lead and Petitioners recommend coal related limits; and (5) the Permit does not require any testing to determine if the lead limit is met.<sup>24</sup> Petition at 32-33.

*EPA's Response.* For the following reasons, the Petition is denied as to this issue.

Lead is a criteria pollutant as well as a PSD regulated pollutant. KDAQ performed a review of lead for Unit 31 and determined that there would be a net emissions increase of 0.55 tpy. KDAQ SOB Revision 2 at 4. However, consistent with federal rules (and Kentucky's SIP-approved PSD rules), PSD review only applies to pollutants for which there is a "significant" net increase in emissions as a result of the major modification. *See, e.g.*, 401 KAR 51:001 § 1(221). The construction of Unit 31 did not trigger PSD review for lead because there was not a significant net increase in lead emissions as a result of the project. KDAQ SOB Revision 2 at 15. In response to Petitioners concern #4 summarized above, the Permit sets a limit of 0.55 tpy of lead based on a 12-month rolling total. Revision 3 at 29 (Section B.2(m)). Unit 31 is considered a "natural minor" source for lead (as opposed to a synthetic minor) because its potential-to-emit lead is below the 0.6 tpy PSD significance threshold for lead without additional pollution controls or other operational limits.<sup>25</sup> In response to comments, KDAQ explained that the Permit is not a synthetic minor permit for lead and the addition of the new Unit did not exceed the PSD significance threshold of 0.6 tpy. KDAQ RTC Revision 2 at 31. Although a lead limit was not required for purposes of PSD, in response to Petitioners' concerns raised during the comment period (which are nearly identical to those raised in the Petition to EPA), KDAQ set a limit of 0.55 tpy of lead based on a 12-month rolling total. KDAQ explained that the 0.55 tpy limit was established as "practical cap" to ensure that the facility did not trigger PSD for lead. *Id.*

With regard to the limit itself, "12-month rolling total," means the averaging period is 12-months (as opposed to a 30-day averaging period). Because the 0.55 tpy limit is an annual limit, testing via initial and annual performance tests following EPA methods 12 or 29 (methods applicable for lead), is sufficient to demonstrate compliance with the annual standard. *See, e.g.*, Revision 3 at 59 (Section D). When emitted from a facility like LG&E, lead is primarily found in particulate matter. *See, e.g.*, 73 *Fed. Reg.* 29,184, 29,191 (May 20, 2008) (NAAQS for Lead, Proposed Rule). The relationship between lead and PM/PM<sub>10</sub> was studied as part of EPA's analysis in establishing a NAAQS for lead. *See, e.g.*, 72 *Fed. Reg.* 71,488, 72,516 (December 17, 2007) (Advanced Notice of Proposed Rulemaking on Lead NAAQS). KDAQ's use of PM/PM<sub>10</sub> as an indicator for lead compliance is based upon reasonable scientific expectations of coal-fired utility operation and control. Thus, with regard to issues 1, 3, 4 and 5 above, Petitioners' statements are either incorrect or otherwise unsupported by the record. Claim 2 above is also unsupported. Petitioners have failed to identify any applicable requirement that requires the lead limit established by KDAQ as a result of Petitioners' comments (that is, it was not required for PSD purposes), to be determined based on an averaging time that is different from the one selected by KDAQ.

In summary, Petitioners do not present information to support their conclusory statements regarding the lead limit, and fail to demonstrate that the Permit is inconsistent with the Act. For

---

<sup>24</sup> Petitioners also raise the concern that the permit fails to establish the lead emissions rates in units of mass per unit time. Because Petitioners also raised this issue in Petition 2, EPA will address this issue when EPA response to Petition 2.

<sup>25</sup> A "synthetic minor" is where a source is able to maintain emissions below major source thresholds only because of enforceable reductions achieved through controls or other limits on operations.

these reasons, the petition is denied as to this issue.

**5. Unit 31 limit for VOC is unenforceable**  
(Section III.G. of Petition 1 – Partial Response)

*Petitioners' Comment.* Petitioners allege that the VOC limit is not enforceable because compliance is tied to CO as a surrogate and these pollutants are not “directly related and are affected by different factors.”<sup>26</sup> Petition at 35-36.

*EPA's Response.* For the following reasons, the Petition is denied as to this issue.

Matters regarding the VOC limit and compliance with that limit are discussed in detail, above, in Section B.2 of this Order; such information is not repeated here but is relevant and applicable. Revision 3 sets a VOC limit of 0.0032 lbs/mmBtu based on a 3-hour rolling average for the new Unit 31. Revision 3 at 28 (Section B.2(i)). Compliance with the VOC standard is demonstrated by compliance with the CO standard, for which compliance is demonstrated by a CEM. *Id.* In response to Petitioners' comments regarding VOC and CO, KDAQ made several changes to the Permit to clarify annual performance testing for VOC as well as a review of the relationship between CO and VOC during the initial and annual stack tests. Revision 3 at 59 (Section D(8)); *see also* KDAQ SOB Revision 2 at 17-18. Petitioners have made the same claims to EPA that they made to Kentucky and have not indicated why Kentucky's revisions were insufficient to address their concerns. Furthermore, as was explained in greater detail earlier, monitoring of CO emissions is a good indicator of VOC control for a thermal combustion operation (i.e., noncatalytic) including fossil fuel fired boilers (*see, e.g.*, <http://www.epa.gov/apti/bces/module6/oxidized/character/character.htm>, providing basic reference information regarding boilers and organic compounds). *See also* “National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors (Phase I Final Replacement Standards and Phase II); Final Rule,” 70 *Fed. Reg.* 59,402, 59,461 (describing the relationship between CO and organic compounds). The SOB explains and Permit requires the appropriate correlation testing and establishing of indicator ranges for the CO CEMS to assure compliance with the VOC limit.

Petitioners have failed to demonstrate that Kentucky's action on this issue was unreasonable or otherwise inconsistent with the Act. For these reasons, the Petition is denied as to this issue.

**6. Permit fails to define “good combustion control”**  
(Section III.I. of Petition 1)

*Petitioners' Comment.* Petitioners allege that the Permit fails to define the term “good combustion control,” and as a result, limits containing this language are vague and unenforceable. Petitioners cite specifically to the use of this language as associated with the CO limit as well as toxic substances and VOC.<sup>27</sup> Petition at 39.

---

<sup>26</sup> Petitioners also raise the concern that the permit fails to establish the VOC emissions rates in units of mass per unit time. Because Petitioners also raised this issue in Petition 2, we will address this issue when we address Petition 2.

<sup>27</sup> Although the terms “startup” and “shutdown” are included in the heading for this section, the body of the discussion on page 39 does not address startup and shutdown at all. Petitioners repeat this claim in section III.J of the Petition and we respond in section 7 below.

*EPA's Response.* For the following reasons, the Petition is denied as to this issue.<sup>28</sup>

The term “good combustion practices,” appears in title V permits nationally to refer to requirements to operate existing controls consistent with manufacturers’ specifications. *See, e.g.,* KDAQ RTC Revision 2 at 34. Good combustion control is generally considered a work practice standard and provides an additional layer of compliance assurance that the facility will operate pursuant to appropriate specifications. For pollutants that are byproducts of combustion (such as CO), good combustion controls that maintain boiler efficiency help to reduce emissions. *See, e.g.,* EPA’s RACT/BACT/LAER Clearinghouse at <http://cfpub1.epa.gov/rblc/htm/bl02.cfm>.

In addition to the “good combustion control” standard, the Permit also establishes four different CO limits including: a 0.5 lbs/mmBtu (three hour rolling average), a 0.10 lb/mmBtu (30-day rolling average), a 3471 lb/hr (8-hour average), and a 3471 lb/hr (1-hour average). Revision 3 at 28 (Section B.2(f)). The Permit also requires use of a CO continuous emissions monitoring system. Revision 3 at 29 (Section B.4). Thus, minimization of CO emissions by control of combustion is to be assessed through compliance with four separate CO emissions limits verified by use of a continuous emissions monitor. Similarly for toxics and VOC, the Permit specifies other control requirements in addition to “good combustion controls.” Revision 3 at 28-29.

As noted by KDAQ in the RTC, “good combustion control” is “pervasive in permitting,” and an important element to ensuring general good practices. KDAQ RTC Revision 2 at 34. The SOB also explains KDAQ’s BACT analysis for CO which explains the Permit terms. KDAQ SOB Revision 2 at 17. KDAQ’s response demonstrates its determination to use the generally-accepted meaning of “good combustion control.” With regard to use of the term “good combustion controls,” Petitioners have failed to demonstrate that the Permit is not consistent with the Act, including the requirements of the SIP.

For the above reasons, the Petition is denied as to these issues.

**7. Other conditions that are not enforceable**  
(Section III.J. of Petition 1)

*Petitioners' Comment.* In their last comment, Petitioners include a bulleted list of issues that they believe render the Permit unenforceable. These include (1) failure of the Permit to provide use of monitoring data to ensure continuous compliance with opacity and lead; (2) failure of the Permit to define the terms “startup and shutdown;” (3) failure of the Permit to specify the contents of LG&E’s startup and shutdown plan; and (4) failure of the Permit to identify what records must be maintained regarding control equipment.<sup>29</sup> Petition at 39-41.

*EPA's Response.* For the following reasons, the Petition is denied as to the bullets 1-4 identified above.

Petitioners do not provide citations to any authority for any of the individual propositions in bulleted items (1)-(4), or explain how the Permit fails to contain, or assure compliance with, an applicable requirement. These conclusory, one sentence allegations are not sufficient to

<sup>28</sup> As with other issues in Section III of the Petition, Petitioners fail to specifically identify the unit of concern. EPA concludes that this issue regards Unit 31.

<sup>29</sup> Petitioners raise four other issues which are related to issues raised in Revision 3 and Petition 2. EPA will address those issues when it addresses the issues raised in Petition 2.

demonstrate a deficiency in the Permit raising an objectionable issue. In addition, some of these issues are duplicative with issues raised earlier in the Petition.

Nonetheless, below is a brief explanation of why each of the four issues raised by Petitioners is denied.

(1) Petitioners' claim regarding opacity and lead is not supported by the Permit. Matters regarding opacity and lead are discussed in greater detail earlier in this Order. The Permit provides monitoring for opacity through a continuous emissions monitor, as well as performance testing. *See, e.g.*, Revision 3 at 29 (Sections B.3. and 4). With regard to lead, the testing/monitoring requirements are described in Section D.5 (*Id.* at 59).

(2) The terms startup and shutdown are defined in Kentucky's rules at 401 KAR 51:001 § 1(220) (shutdown) and (231) (start-up). These definitions apply to Kentucky's PSD rules found at 401 KAR 51:017 and would apply to this Permit. Petitioners state no reason why these terms need to be specifically defined in the Permit itself when they are defined in the applicable regulations. Permits typically do not include a list of all relevant definitions, nor is that required by any applicable requirement.

(3) Issues regarding the startup/shutdown plan were discussed earlier in this Order.

(4) The Permit includes separate sections for each emission unit, as well as generally applicable sections. Section F is a generally applicable section that describes monitoring, recordkeeping, and reporting requirements. Revision 3 at 61-63. This section describes specific records required to be kept as a general matter regarding specific control equipment installed at the facility. Additional recordkeeping requirements are described in the unit-by-unit requirements. Petitioners have failed to explain why these recordkeeping requirements are inadequate.

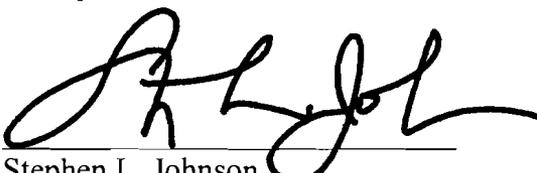
For the above reasons, the Petition is denied as to these issues.

## 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 in part and deny in part in this partial response to Petition 1 submitted on March 2, 2006.

SEP 10 2008

Dated

  
Stephen L. Johnson,  
Administrator.