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March 1, 2011

Via Federal Express

Karl Brooks, Regional Administrator
U.S. Environmental Protection Agency, Region 7
901 North 5th Street
Kansas City, KS 66101

Re: Section 167 Objection – Unlawful Permit for Sunflower Coal Plant

Dear Regional Administrator Brooks:

We are writing on behalf of the Sierra Club and its members to request that you formally object, under section 167 of the Clean Air Act, 42 U.S.C. § 7477, to the final Prevention of Significant Deterioration ("PSD") pre-construction air permit issued for the new 895 MW pulverized-coal generating unit which Sunflower Electric Power Corporation is proposing to construct at Holcomb Station, located near Holcomb, Kansas (the "Holcomb Expansion"). The final permit, issued by the Kansas Department of Health and Environment ("KDHE") on December 16, 2010, fails to meet the minimum requirements of the Clean Air Act and fails to adequately protect human health and the environment. Specifically, the permit fails to include emissions limits that ensure compliance with the 1-hour NO_2 and SO_2 National Ambient Air Quality Standards (NAAQS), fails to include adequate emissions limits for Hazardous Air Pollutants ("HAPs"), and fails to include sufficiently stringent emissions limits for numerous other pollutants due to inadequate Best Available Control Technology ("BACT") determinations, among other shortcomings.

The permit's failure to comply with the minimum requirements of the Clean Air Act requires EPA action, particularly because KDHE was well aware of the permit's failures, yet chose to disregard them and issue the permit. EPA, the Sierra Club, and others raised each of the ways in which the permit fails to comply with the Act in comments on the draft permit and in earlier correspondence, in some instances more than a year in advance of the permitting decision. Rather than address these established requirements, KDHE rushed to issue the permit in far less time than its permitting process generally takes, despite the fact that Sunflower's own predictions demonstrate the power from the plant will not be needed for many years (if ever). Moreover, there is evidence that Sunflower requested executive and legislative officials to interfere in the permitting process in an effort to limit the public's ability to participate, among other things. The result of this dubious process is a permit that not only fails to contain numerous required emissions limits but one that also fails to include the requisite response to comments. This failure to respond to comments and interference in the permitting process alone would require EPA to object; EPA's objection is even more critical because this flawed process resulted in emissions limits that are legally inadequate, as discussed in greater detail below.

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KDHE has repeatedly ignored EPA's guidance, comments, and correspondence and has proceeded to issue a final permit that does not meet the minimum requirements of federal law. Accordingly, EPA is obligated to take action to prevent the construction of the plant until such time as an adequate permit is issued. See 42 U.S.C. § 7477 ("The Administrator shall . . . take such measures . . . as necessary to prevent the construction or modification of a major emitting facility which does not conform to the requirements of this part") (emphasis added); see also Alaska v. EPA, 540 U.S. 461 (2004). Per EPA's own guidance, EPA should act without delay to address these deficiencies. See Memorandum from Michael S. Alushin, Procedures for EPA to Address Deficient New Source Permits Under the Clean Air Act (Jul. 15, 1988). Federal air quality standards are critical to protecting human heath across the nation, and EPA may not stand by when states openly and knowingly disregard established standards.

ONE-HOUR NO_2 AND SO_2 NAAQS

The final permit fails to include emissions limits that ensure compliance with the applicable 1-hour NO_2 and SO_2 NAAQS. The 1-hour nitrogen dioxide ("NO_2") NAAQS was announced in the Federal Register on January 22, 2010. The final rule was published in the Federal Register on February 9, 2010, and the standard became effective on April 12, 2010. The 1-hour sulfur dioxide ("SO_2") NAAQS was published on June 22, 2010; that standard became effective on August 23, 2010. Despite the fact that both of these standards were in effect at the time the permit was issued, and despite the fact that EPA and others repeatedly advised KDHE during the permitting process of the need to comply with these standards, the final permit fails to include enforceable emissions limits to ensure that the Holcomb Expansion will not cause or contribute to violations of these standards. Instead, it contains provisions requiring Sunflower to notify KDHE if the total nitrogen oxide ("NO_x") and sulfur oxide ("SO_x") emissions from Holcomb Station exceed the levels modeled in the permit application, averaged over any 1-hour period.

These notification provisions or action levels are not a lawful substitute for enforceable emissions limits. An emissions limit is defined as "a requirement . . . which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis." 42 U.S.C. § 7602(k) (emphasis added). An action level, such as that in the current permit for 1-hour NO_2 and SO_2, does not limit the "quantity, rate, or concentration" of emissions of air pollutants, and accordingly is not an enforceable emissions limit. Indeed, EPA explicitly advised KDHE Secretary Robert Moser by letter dated February 3, 2011 that "action levels" do not constitute enforceable emissions limits and accordingly are not adequate to ensure that the Holcomb Expansion will not cause or contribute to violations of the NAAQS. See K.A.R. § 28-19-350(b) (incorporating by reference 40 C.F.R. § 52.21(k)). Despite these explicit warnings, KDHE issued the final permit without enforceable emissions limits and without any assurance that the new source will not lead to exceedences of the NAAQS.

Moreover, even if these "notification" provisions adequately limited emissions from the Holcomb Expansion (which they do not), the modeling on which Sunflower relied to demonstrate that the Holcomb Expansion will not cause or contribute to a violation of the 1-hour NAAQS for NO_2 or SO_2 is fatally flawed because it relies on unenforceable and unsubstantiated assumptions, including unenforceable assumptions regarding emissions from the existing unit at Holcomb Station ("Holcomb 1"). For example, KDHE used an emission rate of 1626.72 lb/hr. for SO_2 for Holcomb 1 and a NO_x emission rate of 1,814.5 lb/hr. for Holcomb 1 in its modeling, but as EPA noted in its letter of February 3, 2011, and as Sierra Club noted in its comments on the draft permit, nothing restricts Holcomb 1 to those emissions levels and actual emissions of SO_2 and NO_x have exceeded those levels in recent years. If Holcomb 1 emits levels of SO_2 and NO_x above the levels assumed in the modeling, then it is likely that the additional emissions from Holcomb 2 will cause or contribute to violations of the 1-hour NAAQS.

In response to comments on this point, KDHE asserted that "there is no regulatory provision that requires permit limitations on existing sources at Holcomb Station" and otherwise ignored the issue. See KDHE Responsiveness Summary at 49 (Responding to Comment 42). While it is true that KDHE is not required to impose enforceable emissions limits on Holcomb 1, if KDHE does not impose such limits, then the modeling for the Holcomb Expansion must assume maximum hourly emissions from Holcomb 1 based on the maximum operational capacity and maximum hourly emissions rate under the existing Holcomb 1 permit (which does not limit hourly emissions). See NSR Manual at C.47. What KDHE may not do is assume lower than maximum values of hourly NO_x and SO_2 emissions from Holcomb 1 without imposing enforceable limits to ensure that those lower values are not exceeded, and then rely on those unenforceable lower values to show that the Holcomb Expansion's contribution to existing emissions will not lead to exceedences of the NAAQS. Because emissions from Holcomb 1 can and likely will exceed the levels assumed in the modeling, the modeling fails to demonstrate that emissions from the Holcomb Expansion, when combined with emissions from Holcomb 1 and other existing sources, will not cause or contribute to exceedences of the NAAQS even if the Holcomb Expansion does not exceed the "action levels" in the permit.

Under the federal Clean Air Act ("CAA"), no person may construct a "major stationary source" of regulated air pollutants unless they demonstrate that the source will not cause or contribute to air pollution in excess of any national ambient air quality control standard ("NAAQS"), any maximum allowable increase or maximum allowable concentration for any pollutant, or any other applicable emission standard or standard of performance. 42 U.S.C. § 7475(a)(3). As EPA has made clear in multiple guidance memoranda, a new source must demonstrate compliance with NAAQS that are effective at the time a new PSD permit is issued.[1]

[1] See Memorandum from Stephen D. Page, Applicability of the Federal Prevention of Significant Deterioration Permit Requirements to New and Revised National Ambient Air Quality Standards (Apr. 1, 2010); Memorandum from Stephen D. Page, Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the Prevention of Significant Deterioration Program (June 29,

Not only did EPA make this clear in general guidance, EPA explicitly advised KDHE on multiple occasions that compliance with these new standards would be required and that emissions limits would have to be supported by adequate modeling. See Letter from Becky Weber to John Mitchell (Apr. 2, 2010); EPA comments on the draft permit (Aug. 12, 2010); EPA comments on the draft permit (Oct. 22, 2010). Most recently, on February 3, 2011, EPA advised KDHE by letter that the final permit must be amended to include emissions limits that comply with these NAAQS.

Sunflower did not complete its permit application until August 23, 2010, due to errors in its modeling identified by EPA. See 40 C.F.R. § 51.166(b)(22) ("Complete means, in reference to an application for a permit, that the application contains all the information necessary for processing the application."); see also id. § 52.21(m)(1) (incorporated by reference in K.A.R. § 28-19-350); id. § 51.166(m)(4). Both of the new 1-hour NAAQS had long since been announced by this date – indeed, both standards were already in effect on that date. Moreover, by that date, EPA had twice advised KDHE in writing that compliance with these new standards was necessary.

KDHE's response to comments that these standards do not apply to the permit because Kansas has not yet amended its state implementation plan ("SIP") to include them is without merit. Section 110 of the CAA allows three years for Kansas to adopt a comprehensive plan, via the SIP revision process, providing for "implementation, maintenance, and enforcement" of a new NAAQS. 42 U.S.C. § 7410. Section 165 of the Act, however, requires new stationary sources to demonstrate that they "will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard." Id. § 7475(a)(3) (emphasis added). Moreover, under the existing, approved Kansas SIP, a proposed new source must demonstrate that its emissions will not cause or contribute to a violation of any NAAQS. See K.A.R. § 28-19-350(b) (incorporating by reference 40 C.F.R. § 52.21(k) (emphasis added)). Accordingly, new sources must comply with all NAAQS that are effective at the time a PSD permit is issued. Contrary to KDHE's arguments, nothing in section 110 or in the Kansas SIP exempts Sunflower from compliance with the NO_2 and SO_2 NAAQS.

KDHE has simply ignored its own SIP and repeated statements from EPA and others that the final permit must comply with the 1-hour NO_2 and SO_2 NAAQS. If KDHE does not immediately withdraw and amend the permit to include enforceable emissions limits to ensure compliances with these NAAQS, based on revised and appropriate modeling on which the public has an opportunity to comment, EPA must object to the permit under section 167 because the permit fails to ensure compliance with the applicable standards. 42 U.S.C. § 7477; id. § 7475(a)(3).

2010); Memorandum from Anna Marie Wood, General Guidance for Implementing the 1-hour SO_2 National Ambient Air Quality Standard in Prevention of Significant Deterioration Permits, Including and Interim 1-hour SO_2 Significant Impact Level (Aug. 23, 2010).

HAZARDOUS AIR POLLUTANTS

The permit also fails to include adequate emissions limits for Hazardous Air Pollutants ("HAPs"), which are regulated under section 112 of the Clean Air Act. 42 U.S.C. § 7412. KDHE did not include MACT emissions limits for HAPs in the permit on the grounds that the Holcomb Expansion is not a "major" source because the permit purportedly limits HAPs emissions to less than 10 tons per year of any single HAP and less than 25 tons per year of all HAPs combined. KDHE's analysis and explanation to support this conclusion do not follow EPA guidance, do not address the factors identified as relevant by this guidance, rely on information that is not relevant to a proper analysis, and consequently reach an unsupportable and legally inadequate result. EPA identified these shortcomings explicitly in its August 12, 2010, comment letter on the draft permit:

> The general description on page 3 [of the draft] permit states that "there is no potential" that Unit 2 could exceed the major source HAPs limit. The permit record should include an explanation as to why the major source limit for HAPs is not exceeded and explain how the monitoring and testing requirements included in the permit demonstrate this.

As EPA rules and guidance make clear, a determination of whether a source of toxic air pollution is a major or a minor source begins with an analysis of the source's "potential to emit." See 40 C.F.R. §§ 63.2, 63.41; see also Memorandum from John S. Seitz, Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act) at 1 (Jan. 25, 1995) (hereinafter "Seitz Memorandum"); NSR Manual at A.19. There is, however, no analysis of the Holcomb Expansion's "potential to emit" HAPs.

Even if a source has the potential to emit HAPs in quantities that would make it a major source, it may still qualify for treatment as a minor source if the permit contains emissions limits that are "enforceable as a practical matter" and will therefore ensure that the minor source emission thresholds are not exceeded. See id. at 2-3; see also Nat'l Mining Ass'n v. EPA, 59 F.3d 1351, 1363 (D.C. Cir. 1995). Again, neither the final permit nor KDHE's response to EPA's comments attempt to explain how, why, or whether the terms of the final permit meet the requirements of enforceability as a practical matter and thus may properly be relied on to conclude that the Holcomb Expansion will not be a major source of HAPs. This missing analysis is fatal to the permit and EPA must object unless KDHE immediately withdraws and amends the permit to include an appropriate HAPs analysis and/or fully justified MACT limits.

KDHE's failure to include any analysis of potential emissions and any discussion of practical enforceability is particularly troublesome because it is likely that the Holcomb Expansion has the potential to emit HAPs at levels well above the10/25 tons per year minor source threshold. Indeed, the permit application shows as much: using the EPA preferred AP-42 emissions factors, Sunflower calculated that Holcomb Expansion HAPs emissions would exceed

the minor source threshold by about 100%. See Sunflower Construction Permit Application, Appendix L – HAPS Threshold Estimate (Jan. 21, 2010), available at http://www.kdheks.gov/bar/sunflower/Appendix_H-M.pdf (estimating total annual HAPs emissions from Holcomb 2 as 49.93 tons per year, using AP-42 emissions factors).

Rather than calculate the Holcomb Expansion's total potential to emit HAPs, the permit estimates Holcomb 2's actual HAPs emissions based on stack testing at Holcomb 1.[2] Actual emissions cannot be used as a lawful surrogate for analyzing potential emissions – indeed, EPA guidance explicitly recognizes that sources with actual emissions that are lower than the major source threshold still are subject to major source requirements if their potential to emit is above the major source threshold. See Seitz Memorandum at 1. Nor has KDHE explained how the limitations and restrictions in the final permit, based on its analysis of actual emissions or any other evidence, are of sufficient quality and quantity to ensure accountability as required by EPA guidance. See Seitz Memorandum at 5-6. EPA's comments on the draft permit specifically called this lack of explanation and documentation to KDHE's attention, EPA Letter of Aug. 22, 2010, at 3, but KDHE failed to respond to the substance of the issues EPA raised. See KDHE Responsiveness Summary at 21-22 (Responding to Comment 14) (restating that the permit limits are based on actual emissions at Holcomb 1 scaled up for Holcomb 2 and otherwise ignoring EPA's comment). KDHE must properly calculate the potential to emit for Holcomb 2 based on appropriate emissions factors and operation at maximum capacity for the design of the plant. It may then consider whether there will be lower emission levels based on permit limits so long as it shows that any such limits are practically enforceable. What it may not do is simply rely on limited data regarding actual emissions from another source, and permit terms that are unenforceable as a practical matter and have not been evaluated for compliance with EPA guidance (and that do not comply with it) to assert without the proper analysis that the Holcomb Expansion has "no potential" to emit HAPs above the major source threshold.[3]

KDHE also improperly relied on emissions factors from the Electric Power Research Institute ("EPRI") to estimate the HAPs emissions from the Holcomb 2 boiler. The EPRI emissions factors are substantially lower than the AP-42 emissions factors identified by EPA as

[2] Moreover, the permit does not even attempt to calculate the emissions from any components of the Holcomb Expansion other than the boiler at Holcomb 2 – however, other components can and will emit HAPs and must be included in the potential to emit calculation and emissions limits.

[3] As Sierra Club pointed out in its comments, these so-called permit limits are not enforceable as a practical matter because the permit fails to require appropriate continuous monitoring of HAPs emissions or appropriate parametric surrogates. Instead KDHE relies on infrequent and unrepresentative stack tests and other measures, without documentation that these are of a quality and quantity to ensure accountability, as a basis for the permit. Without adequate limitations and monitoring, there is no way to determine whether the minor source threshold for HAPs emissions is being exceeded and no way to enforce compliance with this threshold.

the preferred factors. The basis for and data underlying the federal AP-42 factors is public information. The EPRI, however, is a membership-based group that only discloses the data and basis for its emissions factors at a substantial price. KDHE did not disclose the basis for the EPRI emissions factors on which it relied to estimate that Holcomb Expansion will not be a major source (because it very likely did not have them); nor did it explain why it chose not to use the preferred, fully-public and well-established AP-42 emissions factors, leaving the implication that Sunflower and KDHE simply preferred the EPRI factors because they would support a minor source conclusion. KDHE's reliance on the EPRI emission factors prevented the public – and presumably even EPA (since the EPRI information is private) – from commenting on whether these emissions factors are accurate and appropriate.

The Settlement Agreement between Sunflower and the Kansas Governor includes emissions estimates from Sunflower that the Holcomb Expansion will emit less than 10 tons per year of any single hazardous air pollutant and less than 25 tons per year of all hazardous air pollutants, and provides that KDHE must accept the accuracy of this data. To the extent it relied on these findings, KDHE may not lawfully allow Sunflower to escape MACT limits on the basis of these unsupported estimates. Indeed, EPA advised KDHE repeatedly that the permit must include adequate HAPs emissions limits, and even explicitly advised KDHE as early as July 1, 2009, that the Settlement Agreement emissions estimates could not be used to escape compliance with section 112 of the Act. See Letter from William W. Rice to Roderick L. Bremby (July 1, 2009); see also Letter from Becky Weber to John Mitchell (Apr. 2, 2010); EPA comments on the draft permit (Aug. 12, 2010).

Despite being repeatedly advised that this political agreement could not lawfully exempt the permit from compliance with section 112 of the Act, and despite being fully aware of the relevant EPA guidance for assessing potential HAPs emissions, KDHE failed to adequately calculate the Holcomb Expansion's potential to emit HAPs, and failed to include practically enforceable emissions limits in the final permit. Consequently, there is no basis for KDHE's conclusion that the Holcomb Expansion will be a minor source of HAPs. EPA must object to the permit because it fails to ensure compliance with these standards. 42 U.S.C. § 7477; id. § 7412.

INADEQUATE BACT ANALYSIS

The final permit also fails to include sufficiently stringent emissions limitations for numerous pollutants due to inadequate Best Available Control Technology ("BACT") determinations. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the "best available control technology" ("BACT") for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The definition of BACT in the Clean Air Act explicitly includes "innovative fuel combustion techniques" among the available methods of emissions reductions that must be considered as part of the BACT determination. 42 U.S.C. § 7479(3). In the BACT analysis for the permit, KDHE failed to even include (let alone analyze) innovative fuel combustion techniques that would

substantially reduce the emission of numerous regulated pollutants from the Holcomb Expansion.

Specifically, KDHE failed to include ultra-supercritical pulverized coal combustion techniques ("USPC") and integrated gasification combined cycle technology ("IGCC") in the BACT analysis. As both EPA and the Sierra Club repeatedly advised KDHE, USPC and IGCC are available and inherently less polluting combustion techniques that must be considered. See, e.g., Letter from Becky Weber to John Mitchell (Apr. 2, 2010); EPA comments on the draft permit (Aug. 12, 2010). While the "Settlement Agreement" between Sunflower and then-Governor Parkinson specifies that Sunflower will receive a permit for a supercritical boiler, this political agreement cannot lawfully exempt Sunflower and KDHE from complying with BACT requirements.

KDHE has not offered any defensible reason for its failure to include USPC in the BACT analysis. KDHE allegedly refused to consider USPC because there are currently no existing USPC facilities in the United States – even though KDHE acknowledged that there is a permitted USPC facility currently under construction in Arkansas that is scheduled to begin operation in 2012. See KDHE Responsiveness Summary at 14-15, 114-15 (Response to Comments 1 & 100) (noting that the lack of operating USPC facilities in the U.S. is a "key factor"). EPA guidance makes clear, however, that technologies outside the United States must be included in the BACT analysis. See NSR Manual at B.5 ("This includes technologies employed outside of the United States."). Moreover, even if the absence of an operating U.S. facility comparable to the Holcomb Expansion were an appropriate reason to ultimately reject USPC – which it is not – it certainly is not an appropriate reason to fail to even include USPC in the BACT analysis. Nor may KDHE allow Sunflower to escape the use of BACT on the grounds that "small" companies should not be required to invest in cutting-edge technology. See KDHE Responsiveness Summary at 115. KDHE's concerns with the "reliability and maintainability of the facility to be constructed," KDHE Responsiveness Summary at 15, 115, may only be considered within the framework of a proper BACT analysis; it cannot justify KDHE's failure to include USPC in the analysis in the first instance. See NSR Manual at B.5-B.7 ("at the outset, applicants should initially identify all control options with potential application to the emissions unit under review"). Indeed, given that Sunflower's own consultant, Black and Veatch, included USPC in a contemporaneous BACT analysis for a plant very similar to the Holcomb Expansion and concluded that USPC constituted BACT for that facility, its marked absence here leaves the implication that it was intentionally excluded simply because political agreements purport to allow Sunflower to construct a less efficient and higher-polluting plant.

KDHE's failure to include IGCC in the BACT analysis also is impermissible. See KDHE Responsiveness Summary at 38-44 (Response to Comment 39) (IGCC and natural gas). Even if KDHE's concerns with reliability and fuel compatibility were justified – which they are not – such concerns must be addressed within the context of a BACT analysis. They cannot

justify excluding available, inherently cleaner technologies from the BACT analysis in the first instance.

Similarly, KDHE chose to ignore repeated statements from EPA and others that the BACT determinations and compliance modeling for multiple pollutants including nitrogen oxides, sulfur dioxide, and particulate matter were legally inadequate. See Letter from Becky Weber to John Mitchell (Apr. 2, 2010); EPA comments on the draft permit (Aug. 12, 2010); EPA comments on the draft permit (Oct. 22, 2010). Indeed, the public comments on the draft permit emphasized that there are many existing and operating plants that are actually achieving lower emissions of numerous criteria pollutants than the permitted levels for Holcomb 2—in particular, the NO_x, SO_2, and particulate matter emissions limits in the final permit are substantially higher than the levels in other comparable permits and the levels actually achieved by existing facilities. Yet here, as with the 1-hour NAAQS and HAPs emissions limits, KDHE chose to ignore these explicit comments and issue a final permit without adequate BACT determinations and compliance modeling. As a result, the emissions limits for numerous pollutants are unjustifiably high, and the permit fails to demonstrate that the Holcomb Expansion will not cause or contribute to a violation of the NAAQS for these pollutants. EPA must object to the permit because it fails to ensure compliance with these requirements. 42 U.S.C. § 7477; id. § 7475(a)(4); id. § 7475(a)(3).

In sum, the final permit issued by KDHE fails to meet the minimum requirements of the Clean Air Act. These failings are not accidental or the result of an unintentional oversight – EPA and others repeatedly advised KDHE of the need to meet each of these requirements. Nor are these failings insignificant – the Holcomb Expansion will emit greater volumes of pollutants than necessary, including the most toxic Hazardous Air Pollutants, and will likely contribute to violations of a number of NAAQS. Unless these shortcomings are corrected, the permit will not protect public health and welfare. EPA is obligated to take action to prevent the construction of the plant until such time as an adequate permit is issued. See 42 U.S.C. § 7477. EPA must either require KDHE to issue an amended permit, including new emissions limitations following a new public comment period, or EPA must take action to prevent the construction of this unlawful facility.

Sincerely,

/s/

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