No. 11-105,493-AS

IN THE SUPREME COURT OF THE STATE OF KANSAS

SIERRA CLUB,

Appellant,

vs.

ROBERT MOSER, in his official capacity as Acting Secretary of The Kansas Department of Health and Environment, and THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, an agency of the State of Kansas,

Appellees,

and

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC., and SUNFLOWER ELECTRIC POWER CORPORATION,

Intervenor-Appellees.

BRIEF OF APPELLANT

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STATEMENT OF THE CASE

Petitioner Sierra Club seeks review of an air permit the Kansas Department of Health and Environment ("KDHE") issued to Sunflower Electric Power Corporation ("Sunflower") to build a new 895-megawatt coal-fired electric generating unit and associated equipment at Holcomb Station in Holcomb, Kansas ("Holcomb 2"), on the grounds that the permit fails to comply with the requirements of the federal Clean Air Act and Kansas law. Sierra Club brings this appeal pursuant to K.S.A. 65-3008a(b) and K.S.A. 20-3018(c).

STATEMENT OF ISSUES

1. Whether the Kansas Governor and legislature may direct KDHE to issue the permit?

2. Whether KDHE may issue the permit without ensuring that Holcomb 2 will comply with all existing national ambient air quality standards?

3. Whether KDHE may issue the permit without emissions limits that are the best available control technology?

4. Whether KDHE may issue the permit without adequate emissions limits for hazardous air pollutants?

BACKGROUND

I. FACTUAL BACKGROUND

In 2006, Sunflower applied for a Prevention of Significant Deterioration ("PSD") pre-construction air permit to build three new 700-megawatt ("MW") coal-fired electric generating units at Holcomb Station. AR 7527 (permit application timeline) (the format for citations to the Administrative Record is described in the Table of Authorities). The permit application revealed the plants would emit substantial volumes of pollutants that

the U.S. Environmental Protection Agency ("EPA") has determined are harmful to human health and the environment. Based on the harm to human health that the greenhouse gas emissions from the proposed plants would cause, then KDHE Secretary Roderick Bremby denied the permit on October 18, 2007. AR 6790-91. Sunflower appealed the denial of the permit and brought civil rights claims in federal district court collaterally attacking the denial of the permit.

On April 28, 2009, Mark Parkinson became Governor of Kansas following confirmation of Kathleen Sebelius as the U.S. Secretary of Health and Human Services. On May 4, 2009, Governor Parkinson and Sunflower entered into a "Settlement Agreement" regarding the Sunflower air permit. This agreement provides that KDHE "shall" issue a final permit to Sunflower for one 895 MW generating unit (Holcomb 2). AR 11379 (Settlement Agreement). The Agreement further provides that the new permit "shall" be substantially similar to the draft permit that KDHE had denied. Id. Additionally, the agreement provides that KDHE may not dispute the data Sunflower used to estimate emissions of hazardous air pollutants ("HAPs") for the three 700-MW units. AR 11377 (Article 2.4); AR 21947-58 (HAPs estimates). Finally, the agreement provides that Sunflower will dismiss its civil rights lawsuit and stay its appeals of the 2007 permit denial pending issuance of a new permit. AR 11380.

Sunflower subsequently began the process of applying for an air permit for Holcomb 2. Between January and August of 2010, Sunflower submitted various portions of its permit application and supporting materials. See, e.g., AR 11405-07 (index of Sunflower submissions). As part of these materials, Sunflower submitted a schedule stating that it plans to commence construction of Holcomb 2 by June of 2012. AR 20864

(showing commencement of construction within 18 months of permit issuance). Sunflower also stated that the vast majority of the power from Holcomb 2 would be owned and used by Tri-State Generation and Transmission, Inc., a Colorado utility that holds development rights for Holcomb 2, because neither Sunflower nor other Kansas utilities need more than a small fraction of the 895 MW from the new plant. AR 10397-98 (permit application). Shortly after Sunflower finalized its permit application, however, Tri-State published and filed with the Colorado Public Utilities Commission a final Electric Resource Plan stating that it has no need for any new coal-fired power until at least 2027. AR 16139-44 (Sierra Club comments). When questioned, Tri-State advised the press that it planned to delay construction of Holcomb 2. AR 41357-58 (Sierra Club letter).

Throughout 2009 and 2010 Sunflower staff and KDHE permitting officials met regularly and were in constant contact with each other to negotiate and draft the permit application, supporting materials, the various draft permits, responses to comments on the draft permits, and the final permit for Holcomb 2. See, e.g., AR 23356-57 (Sunflower events chronology for 2009). KDHE and Sunflower exchanged a great deal of information and KDHE accepted Sunflower's proposed language for many critical components of the permit. See, e.g., AR 31436 (email from Sunflower engineer) ("Attached please find our proposed HAP language for the permit."). Indeed, Sunflower took the lead in drafting and modifying its own permit; Sunflower's chief engineer even requested, and KDHE provided, a Microsoft Word version of the draft permit so he could make his changes to the permit limits more easily. AR 38292; see also AR 25696 (email from Sunflower engineer) ("I will seek to develop the draft permit tomorrow

afternoon."). Sunflower and the Governor's office also pressured KDHE to dramatically accelerate the timeline for issuing the permit, and to advise the public that this accelerated timeline was "typical and expected." But see AR 27194 (email from KDHE permitting staff) ("This time frame is not typical for this type of PSD permit!"). Sunflower also requested that state legislators and executive branch officials pressure KDHE to limit the public's opportunity to comment on the permit and accelerate the permitting process. AR 39150-51 (Sunflower email).

KDHE issued an initial draft permit for Holcomb 2 on June 29, 2010, and provided public notice of hearings and a comment period. AR 20842 (draft permit); AR 11343 (notice). During this initial comment period, however, EPA discovered errors in Sunflower's air quality impact modeling. AR 7838-39 (EPA letter). Accordingly, Sunflower submitted a new modeling analysis and, on September 21, 2010, KDHE issued a new draft permit and public notice. AR 8110 (revised draft permit); AR 7754-57 (revised notice). During the first and second comment periods combined, KDHE received a total of 5,876 comments on the draft permit. AR 20865. Additionally, KDHE received numerous oral comments at each of four public hearings. See AR 18258; AR 12196; AR 15924; AR 11935 (hearing transcripts).

On November 2, 2010, Governor Parkinson dismissed KDHE Secretary Bremby and replaced him with Acting Secretary John Mitchell. On December 16, 2010, seven weeks after the close of the public comment period, Acting Secretary Mitchell issued a final permit to Sunflower for Holcomb 2 substantially in the form Sunflower sought. AR 20840-41 (cover letter from Mitchell); AR 20747 (final permit). Because KDHE issued the permit prior to January 2, 2011, Sunflower avoided compliance with EPA

regulations governing greenhouse gas emissions from coal-fired power plants. See EPA, Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31514, 31523 (June 3, 2010) (requiring greenhouse gas emissions permits as of January 2, 2011).

KDHE provided along with the final permit a 200-plus page "Responsiveness Summary" that addressed many of the substantive comments on the draft permits. AR 20978 et seq. KDHE also issued this Responsiveness Summary on December 16, 2010, seven weeks after the close of the comment period. In earlier correspondence, however, Secretary Mitchell had noted that KDHE would need about six months to prepare a thorough response to comments. AR 26770 (Mitchell email). Sunflower substantially drafted this Responsiveness Summary even though KDHE issued it as its own. See generally AR 21493 et seq. (Sunflower Response to Comments). Compare, e.g., id. at 21542-65 (Sunflower response re IGCC and natural gas) with, e.g., AR 21337-42 (Responsiveness Summary) (most paragraphs taken verbatim from Sunflower response).

On January 14, 2011, Sierra Club filed a timely petition for judicial review of the final permit. At KDHE's request, the appeal was transferred to this Court for direct review on February 4, 2011. See K.S.A. 65-3008a(b); K.S.A. 20-3018(c).

II. LEGAL BACKGROUND

The purpose of the Clean Air Act ("CAA" or "Act") is to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare." 42 U.S.C. § 7401(b)(1). States and the federal government, through EPA, share responsibility for achieving this goal. Among other duties, EPA must establish, and periodically revise, a list of air pollutants that may endanger public health or welfare. Id.

§ 7408(a)(1). EPA must also establish and periodically revise national ambient air quality standards ("NAAQS") that set maximum ambient concentrations of each such pollutant. Id. §§ 7409(a), (d). The agency must set these NAAQS at levels that protect public health and allow an adequate margin of safety. Id. § 7409(b).

The prevention of significant deterioration of air quality ("PSD") provisions of the CAA govern air quality in areas that currently meet the NAAQS. See id. §§ 7470–71. Under these provisions, all new "major emitting facilities" must obtain a permit prior to beginning construction. Id. § 7475. A facility is "major" if it has the potential to emit 250 tons per year or more of any air pollutant. Id. § 7479(1). Such a facility may only obtain a permit if the owner or operator first demonstrates that the new facility "will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard," and only if the new facility uses the "best available control technology" ("BACT") to limit emissions of each regulated pollutant, among other requirements. Id. § 7475(a). The CAA also requires an opportunity for public comment on the proposed facility and "alternatives thereto" before a final permit may issue. Id. § 7475(a)(2). EPA has published a detailed New Source Review Workshop Manual ("NSR Manual") to assist applicants and permitting authorities in complying with these and other CAA requirements. AR 42814 et seq. (NSR Manual).

The Act contains separate, nationally-applicable provisions governing emissions of hazardous air pollutants ("HAPs"), "which present, or may present, . . . a threat of adverse human health effects" including carcinogenic, neurotoxic, or mutagenic pollutants. 42 U.S.C. § 7412(b)(2). A new major source of HAPs must obtain a separate permit for emission of these toxic pollutants. A major source of HAPS is one that has the

potential to emit more than 10 tons per year of any individual HAP or more than 25 tons per year of all HAPs combined. Id. § 7412(a)(1). The HAPs permit must include emissions limitations based on application of the "maximum achievable control technology" ("MACT") for each HAP the facility will emit. Id. § 7412(g)(2).

Under the Act, each state must adopt a state implementation plan ("SIP"). The SIP is a comprehensive plan that must provide for the "implementation, maintenance, and enforcement" of all NAAQS and must include provisions for, among other things, emissions limitations and compliance schedules, enforcement mechanisms, monitoring and modeling, and public and local government participation. Id. § 7410(a)(2). States may assume responsibility for issuing PSD permits through approved SIPs that ensure such permits meet the standards set in the Act and regulations. See id. § 7471. Similarly, EPA may delegate to a state authority to issue HAPs permits, but only if such permits also meet the requirements of the Act and regulations. See id. § 7412(g)(2). States must submit SIPs to EPA for approval; once approved, states may not modify their SIP except through a SIP amendment that EPA approves. Id. §§ 7410(i), (l).

Kansas has submitted, and EPA has approved, a SIP governing air pollution and permitting throughout the state. See 40 C.F.R. § 52.870. The Kansas SIP grants authority to the Secretary of KDHE to issue PSD permits based on the relevant CAA criteria, and incorporates by reference the federal PSD permit regulations with only minor alternations. See K.A.R. 28-19-350(b) (incorporating by reference 40 C.F.R. § 52.21). The Kansas regulations governing HAPs permits also incorporate by reference the federal regulations nearly verbatim. See K.A.R. 28-19-750 (incorporating by reference 40 C.F.R. part 63 and its appendices); K.A.R. 28-19-752(a) (incorporating by

reference 40 C.F.R. §§ 63.40-63.44). Additionally, both Sunflower and KDHE state that they followed EPA's NSR Manual in preparing the application and air permit for Holcomb 2. See, e.g., AR 10516-24 (permit application).

ARGUMENT

The Kansas Judicial Review Act sets forth the standard of review for the issues on appeal. K.S.A. 77-621(c). It provides that the reviewing court shall set aside agency action if it determines "the agency has erroneously interpreted or applied the law," "the agency has engaged in an unlawful procedure or has failed to follow prescribed procedure," "the persons taking the agency action were improperly constituted as a decision-making body or subject to disqualification," "the agency action is based on a determination of fact" that is not supported by substantial evidence in light of the record as a whole, or "the agency action is otherwise unreasonable, arbitrary or capricious." Id. Sierra Club raised each of the issues on appeal in comments on the draft permit. See AR 16148-58; AR 16168-95; AR 41207-41264; AR 16205-10.

I. THE PERMITTING PROCESS DID NOT COMPLY WITH THE CAA AND KANSAS SIP.

The Kansas SIP specifically grants authority to the Secretary of KDHE to decide whether to issue PSD permits, but the 2009 Settlement Agreement and accompanying state legislation unlawfully direct that KDHE "shall" issue a permit to Sunflower for a coal-fired power plant. Moreover, both the Clean Air Act and the federally-approved Kansas SIP require KDHE to provide the public a meaningful opportunity to participate in the decision about *whether* to issue a permit. The Settlement Agreement and legislation took the decision whether to issue a permit away from KDHE before any opportunity for public comment, thereby undermining the very purpose of public

comment. Accordingly, the permit was issued pursuant to an unlawful procedure and by an improper decision-making body. K.S.A. 77-621(c). For these reasons alone, the Court should set aside the permit in order to ensure the integrity and fairness of Kansas administrative proceedings.

A. The Kansas SIP Grants KDHE Exclusive Authority to Issue Air Permits.

The federally-approved Kansas SIP specifically delegates authority to issue PSD permits to the Secretary of KDHE. See 40 C.F.R. § 52.21(a)(2)(iii) ("The Administrator has authority to issue any such permit."); K.A.R. 28-19-350(c) ("each reference to 'administrator' shall mean the 'secretary of health and environment or an authorized representative of the secretary'"). The Secretary must base a permit decision on a current BACT determination and air quality analysis, among other substantive criteria. See 40 C.F.R. §§ 52.21(j)–(m); K.A.R. 28-19-350(b). Additionally, the public must have an opportunity to comment on "the air quality impact of [the new facility], *alternatives thereto*, control technology requirements, and other appropriate considerations" in order to assist the Secretary in determining whether to issue the permit. 42 U.S.C. § 7475(a)(2) (emphasis added); see also K.A.R. 28-19-204.

The plain terms of the Settlement Agreement make clear, however, that then-Governor Parkinson made the decision to issue the Sunflower permit, not KDHE Acting Secretary Mitchell as the SIP requires. The Settlement Agreement explicitly provides that the KDHE Secretary "shall" issue a final permit to Sunflower, AR 11379, and the legislative amendment to the Kansas Air Quality Act that followed the Settlement Agreement likewise provides that "[t]he secretary shall timely approve a prevention of significant deterioration permit (PSD) to sunflower electric power corporation to be issued consistent with the settlement agreement executed May 4, 2009." K.S.A. 65-

3029(a) (emphasis added).

The Settlement Agreement and legislation even dictate the content of the permit by, for example, requiring the Secretary to accept Sunflower's estimate of actual HAPs emissions from the proposed facility (instead of conducting the required potential to emit analysis, see infra at 39-45) and by directing the Secretary to rely on the outdated 2007 draft permit as the basis for the new permit. AR 11377 (Settlement Agreement) (KDHE "does not dispute the accuracy of the data provided" regarding HAPs emissions); AR 11379 ("the Secretary shall issue the final permit substantially in the form of the draft final permit prepared by the KDHE technical staff on or about July 17, 2007"); see also AR 23356 (meeting summary stating that "Technical staff provided comments to Sec. & gov. office re: agreement between Sunflower/Governor for construction of one 895 MW Coal Plant; agreement signed without staff's recommendations").

Because the Kansas SIP specifically delegates authority to issue PSD permits to the Secretary, it was unlawful for the Governor and the legislature to step in and require KDHE to issue a permit to Sunflower. See United States ex rel. Accardi v. Shaughnessy, 347 U.S. 260, 267–68 (1954) (holding that where legally binding regulations delegated a particular discretionary decision to the Board of Immigration Appeals, the Attorney General could not dictate a decision of the Board, even though the Board was appointed by the Attorney General, its members served at his pleasure, and its decision was subject to his ultimate review); Portland Audubon Soc'y v. Endangered Species Comm., 984 F.2d 1534, 1545–46 (9th Cir. 1993) (holding that where "the Endangered Species Act explicitly vests discretion to make exemption decisions in the Committee and does not contemplate that the President or the White House will become involved in Committee

deliberations," the President and the White House "are not free to attempt to influence the decision-making processes of the Committee through ex parte communications"). See also Suburban Med. Ctr. v. Olathe Cmty. Hosp., 226 Kan. 320, 331, 597 P.2d 654 (1979) (permit proceedings "must be fair, open, and impartial") (quotation & citation omitted).

Moreover, neither the Settlement Agreement nor the legislative amendments to the Kansas Air Quality Act may modify the SIP provisions that require the Secretary of KDHE to issue PSD permits on the basis of the CAA criteria. 40 C.F.R. § 52.21(a)(2). The Kansas SIP, once approved by EPA, has the force of federal law which a state may not unilaterally modify. 42 U.S.C. §§ 7410(i), (l); see also Sierra Club v. Tenn. Valley Auth., 430 F.3d 1337, 1346 (11th Cir. 2005) (citing 40 C.F.R. § 52.1384); Duquesne Light Co. v. EPA, 698 F.2d 456, 468 n.12 (D.C. Cir. 1983) (citing 42 U.S.C. § 7410(i)). Similarly, any state legislation that revises or conflicts with an EPA-approved SIP is without effect. See Ky. Res. Council v. EPA, 304 F. Supp. 2d 920, 926 (W.D. Ky. 2004); see also Clean Air Council v. Mallory, 226 F. Supp. 2d 705, 723 (E.D. Pa. 2002) (holding that Pennsylvania's refusal to enforce portions of its SIP constituted a violation of the Clean Air Act). State legislation cannot supersede a state SIP and effectively designate a new permit decision maker or process unless EPA approves the change through federal notice and comment rulemaking. 40 C.F.R. § 51.105 ; United States v. Ford Motor Co., 814 F.2d 1099, 1102 (6th Cir. 1987), cert. denied, 484 U.S. 22 (1987) (noting that there is "overwhelming authority declaring that revisions of State Implementation Plans are ineffective until approved by EPA").

Because the former Governor and the state legislature made the decision that KDHE would issue a PSD permit to Sunflower, the permit decision was made by an

improper decision-making body, was issued through improper procedures, and must be set aside. K.S.A. 77-621(c)(5)-(6).

B. The Settlement Agreement and Legislation Unlawfully Precluded Meaningful Public Participation.

The Settlement Agreement and legislation unlawfully circumvented the public participation requirements of the Clean Air Act and the Kansas SIP because they predetermined the outcome of the permitting process before the public had an opportunity to comment. See AR 22024 (KDHE memo) ("EPA has expressed concern that KDHE will not meet federal requirements under the terms of the Agreement. The statement in the Agreement and HB 2369 says the Secretary will issue the permit for the Sunflower Electric H2 which is essentially the same permit as the permit drafted on July 17, 2009 [sic]. According to EPA, the public participation process is circumvented in this case since it has already been decided that the permit will be issued and what the permit will contain.").

The Clean Air Act dictates that permits may issue only "after adequate procedural opportunities for informed public participation in the *decisionmaking* process," 42 U.S.C. § 7470(5) (emphasis added), and specifically provides that the public must be given an opportunity to comment on alternatives to the proposed project, id. § 7475(a)(2). The Kansas Air Quality Act and implementing regulations likewise require the KDHE Secretary to consider and respond to all timely and relevant public comments before deciding whether to issue an air emission permit. See K.A.R. 28-19-204(f). These provisions require a meaningful opportunity for the public to comment and influence the ultimate decision, not merely an opportunity to create a record for a decision already made. In re Prairie State Generation Station, 12 E.A.D. 176, 2005 WL 735942, at *3

(EAB 2005) (the Secretary is required to "consider comments with a truly open mind, rather than with a view to defending a decision he or she already has made") (citation omitted); In re Weber #4–8, 11 E.A.D. 241, 2003 WL 23177505, at *4 (EAB 2003) ("The idea behind the regulations is that the decision maker have the benefit of the comments and the response thereto to inform his or her permit decision.") (emphasis in original); see also Tri-Cty. Concerned Citizens, Inc. v. Bd. of Cty. Comm'rs of Harper Cty., 95 P.3d 1012, 1018 (Kan. Ct. App. 2004) (a permitting authority may not prejudge the outcome of a permitting process, but rather must "'maintain[] an open mind and continue[] to listen to all the evidence presented before making the final decision'") (quoting McPherson Landfill, Inc., v. Bd. of Shawnee Cty. Comm'rs, 274 Kan. 303, 318, 49 P.3d 522 (2002)). Here, former Governor Parkinson made the decision to issue the permit, and the legislature endorsed that decision, before the permitting process even began. The fact that KDHE allowed Sunflower to prepare the response to public comments only highlights the fact that the public process for the permit was an exercise in justifying a decision already made. AR 21493 et seq.; see also AR 30543 (KDHE email) (Sunflower needs better rationalization for failure to consider IGCC).

This approach constitutes an unlawful procedure contrary to both the Kansas SIP and the CAA and creates in both fact and appearance a meaningless administrative process. Under these circumstances, the permit must be set aside. K.S.A. 77-621(c)(5)-(6). If the Court agrees with Sierra Club that the permit was issued through improper procedures, as it should, then the Court need not reach any of the additional reasons that the permit fails to comply with the Clean Air Act. In the alternative, however, each of the issues addressed below provides independent and additional grounds for the Court to

hold the permit unlawful.

II. THE SUNFLOWER AIR PERMIT DOES NOT CONTAIN ONE-HOUR EMISSIONS LIMITS FOR NITROGEN OXIDES AND SULFUR DIOXIDE.

The final permit for Holcomb 2 fails to include emissions limits that ensure compliance with the 1-hour nitrogen dioxide (NO_2) and sulfur dioxide (SO_2) NAAQS as the Kansas SIP and the CAA require.

Nitrogen oxides are air pollutants emitted primarily by electric generating units and mobile sources. See EPA, Primary National Ambient Air Quality Standard for Nitrogen Dioxide (Proposed Rule), 74 Fed. Reg. 34404, 34406 (July 15, 2009). These oxides (NO_x) are converted to NO_2 in the atmosphere. See, e.g., id. at 34409. Based on a substantial body of epidemiological and toxicological research, EPA has found that short-term exposure to elevated levels of NO_2 can cause significant adverse health effects. See id. at 34410. Children, the elderly, and asthmatic individuals are all particularly susceptible to these harmful effects. Id. at 34413. EPA found that these effects result from short-term spikes in NO_2 concentrations, even where the 24-hour concentration of NO_2 is well below the level of the annual NAAQS. Id. at 34414. Accordingly, EPA revised the NO_2 NAAQS to include a 1-hour standard to protect against these health effects. See EPA, Primary National Ambient Air Quality Standards for Nitrogen Dioxide (Final Rule), 75 Fed. Reg. 6474, 6477 (Feb. 9, 2010). EPA proposed the 1-hour NO_2 NAAQS on July 15, 2009, see 74 Fed. Reg. 34404, announced it in the Federal Register on January 22, 2010, published a final rule on February 9, 2010, and the standard became effective on April 12, 2010, see 75 Fed. Reg. at 6474.

Sulfur dioxide is an air pollutant emitted primarily by fossil fuel combustion at electric utilities. See EPA, Primary National Ambient Air Quality Standard for Sulfur

Dioxide (Final Rule), 75 Fed. Reg. 35520, 35524 (June 22, 2010). EPA found that spikes in SO_2 for periods as brief as 5 to 10 minutes cause respiratory morbidity, particularly among people with asthma. Id. at 35525; EPA, National Ambient Air Quality Standard for Sulfur Dioxide (Proposed Rule), 74 Fed. Reg. 64810, 64817 (Dec. 8, 2009). Accordingly, EPA also revised the SO_2 NAAQS to include a 1-hour standard. EPA proposed the revised NAAQS on December 8, 2009, published the final rule on June 22, 2010, and it became effective on August 23, 2010. See 75 Fed. Reg. 35520 (final rule); 74 Fed. Reg. 64810 (proposed rule).

Holcomb 2 will emit thousands of tons per year of both NO_x and SO_2 – a volume that easily qualifies it as a "major" source of these pollutants. See AR 21192 (final permit) (potential to emit, considering controls, of 1,910 tons per year of NO_x and 3,240 tons per year of SO_2); 42 U.S.C. § 7479(1). Accordingly, the CAA and Kansas SIP require KDHE to impose enforceable emissions limits to ensure that Holcomb 2 will not cause or contribute to a violation of the 1-hour NAAQS. Id. § 7475(a)(3).

A. "Action Levels" Are Not a Substitute for Enforceable Emissions Limits.

Despite undisputed evidence that Holcomb 2 would be a major source of NO_x and SO_2, the final permit fails to ensure that it will not cause or contribute to violations of the 1-hour NAAQS because the permit does not include enforceable limits on hourly emissions of NO_x and SO_2. Instead, it requires Sunflower to notify KDHE if the total NO_x and SO_x emissions from Holcomb 2 exceed the levels modeled in the permit application, averaged over any 1-hour period. See AR 21197 (final permit) (conditions 2 & 3). These notification provisions or "action levels" are not a lawful substitute for enforceable hourly emissions limits.

The CAA defines an emissions limit 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 (nor does KDHE claim otherwise, AR 21320 (Responsiveness Summary)). Rather it is a reporting requirement that may lead to some further action in the future. Accordingly, "action levels" do not prevent violations, or contributions to violations, of the NAAQS. See id. § 7475(a)(1) (permit must set forth "emissions limitations for such facility which conform to the requirements of this part").

Under the CAA and the Kansas SIP, a proposed new source must demonstrate that it will not cause or contribute to violations of any NAAQS in effect at the time the permit is issued. 42 U.S.C. § 7475(a)(3); 40 C.F.R. § 52.21(k)(1)(i). Both of the 1-hour NAAQS had long since been in effect when KDHE issued the Sunflower permit. EPA proposed both the 1-hour NO_2 and SO_2 NAAQS in 2009, see 74 Fed. Reg. at 34404 (NO_2); 74 Fed. Reg. 64810 (SO_2), putting applicants and permitting authorities on notice that these new rules were forthcoming. EPA finalized these rules on February 9, 2010, and June 22, 2010, respectively. See 75 Fed. Reg. 6474 (NO_2); 75 Fed. Reg. 35520 (SO_2). KDHE did not issue Sunflower's final permit until December 16, 2010. AR 20747. Indeed, EPA had published both final rules before Sunflower had finished submitting its first round of application materials in June 2010. See AR 11405-06.

The record demonstrates that KDHE and Sunflower were well aware of the need to comply with the 1-hour NAAQS for NO_2 and SO_2. See, e.g., AR 29725-28 (email between KDHE, EPA, and Sunflower) (counsel for KDHE advises KDHE staff that the 1-hour NAAQS "are applicable" based on legal rationale drafted by EPA). Following

KDHE's determination that the permit would have to comply with these NAAQS, Sunflower submitted, and KDHE and EPA commented on, modeling protocols for the 1-hour standards. See, e.g., AR 30672-75 (EPA comments on protocol); AR 31176-80 (email re EPA comments and addendum to protocol); AR 11405-07 (index of Sunflower submissions). Sunflower then submitted modeling that analyzed the impact of Holcomb 2 on the 1-hour NAAQS in June, and submitted revised modeling in August. See AR 11405-07 (index).

In the final permit, however, KDHE changed position and included only action levels, not the required emissions limits, for the two 1-hour NAAQS. In its response to public comments, KDHE argued that emissions limits to ensure compliance with the 1-hour NO_2 and SO_2 NAAQS are not required because Kansas has not yet amended its SIP to include these 1-hour standards, see AR 21300-02, 21320, even though EPA and others had repeatedly advised KDHE that compliance with the 1-hour NO_2 and SO_2 NAAQS is required, see AR 30170-73 (EPA letter); AR 13339-44 (EPA comments); AR 13345-46 (EPA comments). The record is silent as to when and why KDHE abandoned the correct position that Sunflower must comply with these NAAQS, AR 29725-28.

KDHE is wrong as a matter of law that Sunflower may avoid compliance with the 1-hour NAAQS. While the CAA provides that Kansas must amend its SIP within three years following the adoption of a new NAAQS, 42 U.S.C. § 7410(a)(1), the current Kansas SIP, as well as the Act itself, require a new source to demonstrate compliance with *all* NAAQS that are *in effect* at the time a permit is issued, id. § 7475(a)(3); 40 C.F.R. § 52.21(k)(1)(i). Under the plain language of the Act and the Kansas SIP, the Sunflower permit must ensure compliance with the 1-hour NAAQS for NO_2 and SO_2

because both of those NAAQS were in effect when KDHE issued the permit.

EPA has made clear in multiple guidance memoranda that new sources must comply with NAAQS that are in effect at the time an agency issues a final permit. See AR 41203, 41204-05 (EPA Guidance on Applicability of New NAAQS); see also AR 38297, 38300 (EPA 1-hour SO_2 Guidance). Similarly, courts have consistently recognized that an agency is required to apply the law in effect at the time it makes a decision on a permit application. See Ziffrin v. United States, 318 U.S. 73, 78 (1943) (where governing statute is amended after applicant submits his permit application but before agency renders its decision, agency is "required to act under the law as it existed" at the time of its decision rather than at the time of application); Alabama v. EPA, 557 F.2d 1101, 1110 (5th Cir. 1977) (appropriate standards to be applied to a permit are those in effect at time of initial permit issuance). EPA's Environmental Appeals Board ("EAB") has also recognized this basic rule. See In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490, 2006 WL 3361084, at *86-87 (EAB 2006); In re Phelps Dodge Corp. Verde Valley Ranch Dev., 10 E.A.D. 460, 2002 WL 1315601, at *16 n.10 (EAB 2002); see also In re Shell Gulf of Mexico, Inc., Shell Offshore, Inc. (Frontier Discovery Drilling Unit), OCS Appeal Nos. 10-01 through 10-04, slip op., 2010 WL 5478647, at *5 n.76 (EAB Dec. 30, 2010). EPA's guidance and the decisions of the EAB are particularly relevant here because EPA is the federal agency authorized to implement the Clean Air Act, and the Kansas SIP incorporates verbatim EPA's implementing regulations. Cf. Purvis v. Williams, 276 Kan. 182, 188, 73 P.3d 740, 745 (2003) ("Where possible in construing federal statutes, state courts should seek direction from the decisions of federal courts interpreting similar language.") (quotation & citation omitted).

The fact that Kansas has not yet amended its SIP to incorporate the 1-hour NAAQS does not exempt new sources from complying with these standards once they have taken effect, or exempt KDHE from the requirement to include enforceable emissions limits in the permit for Holcomb 2. In amending its SIP, Kansas must not only incorporate the new NAAQS, it must include compliance schedules, enforcement mechanisms, and many other provisions relating to the regulation of both new and existing sources, all of which must go through a public review and comment process and be submitted to EPA for approval. 42 U.S.C. § 7410(a)(2). For this reason, the CAA gives states a three-year window following the adoption of a new NAAQS to complete these substantial revisions, including the required public process. Id. §§ 7410(a)(1)-(2).

In contrast, nothing prevents new sources from incorporating and complying with all applicable existing NAAQS at the time they receive a permit. Indeed, exempting new sources from compliance with NAAQS that are in effect when an agency issues a permit would undermine the fundamental policy choices Congress made in adopting the PSD program: (1) that it is preferable to prevent air pollution from becoming a problem in the first place; and (2) that controls should be installed when new sources are constructed rather than as retrofits on existing sources. See S. Rep. No. 95-127, at 11 (1977) (Cmte. Rep.) ("This legislation defines 'significant deterioration' in all clean air areas as a specified amount of additional pollution. . . . This definition is intended to prevent any major decline in air quality currently existing in clean air areas and will provide a margin of safety for the future."); H.R. Rep. No. 294, at 127 (1976) (noting "'an ounce of prevention is worth a pound of cure.' Permitting unrestricted deterioration of air quality up to ambient standards involves trying to cure a condition after it has developed rather

than using practical and currently available means to prevent or minimize the condition in the first place."). Allowing Sunflower to avoid compliance with the existing 1-hour NO_2 and SO_2 NAAQS because KDHE has not yet amended the Kansas SIP to include them would defeat these statutory goals.

KDHE had every opportunity to include enforceable permit limits in Sunflower's permit in order to ensure compliance with the 1-hour NAAQS. Instead, it chose to issue a permit that violates the Clean Air Act and must be set aside because it includes only "action levels."

B. Sunflower's Modeling Makes Unlawful Assumptions About Emissions From the Existing Coal Plant at Holcomb Station.

Even if the "action levels" in the final permit constituted emissions limits – which they do not – they are still inadequate to ensure that Holcomb 2 will not cause or contribute to violations of the 1-hour NAAQS because the modeling supporting these "action levels" is flawed.

The Clean Air Act and Kansas SIP require applicants for a PSD permit to demonstrate that the emissions from a proposed new source will not cause or contribute to violations of any NAAQS. 42 U.S.C. § 7475(a)(3); 40 C.F.R. § 52.21(k). To meet this requirement, applicants for PSD permits must conduct an air quality analysis, including air dispersion modeling, that analyzes the emissions from the proposed new source in combination with background concentrations and emissions from nearby sources. See K.A.R. 28-19-350(d)(2) (adopting 40 C.F.R. part 51, App. W); AR 42964-65 (NSR Manual at C.1 to C.2). The permitting agency must determine on the basis of this air quality analysis that the proposed source will not cause or contribute to a violation of any NAAQS before granting a permit. Id. If the agency grants a permit, the air quality

analysis serves as the basis for enforceable emissions limits for the new source to ensure compliance with the NAAQS. See AR 42987 (NSR Manual at C.24).

Properly determining the background concentration of relevant pollutants is necessary to determine whether the additional emissions from the proposed new source will lead to violations of the NAAQS. Thus, applicants must explicitly model emissions from nearby sources that contribute substantially to background concentrations of regulated pollutants (in addition to collecting ambient monitoring data). See AR 42995 (NSR Manual at C.32). To model emissions from nearby sources, an applicant must generally assume the maximum possible emissions from such sources based on their design capacity. See AR 35265 (EPA 1-hour NO_2 Guidance at 28). If, however, a nearby source is subject to a federally-enforceable permit limit for the relevant NAAQS, then the applicant may use the permit limit to represent the source's maximum possible emissions. Id. In other words, an applicant may assume that a nearby source will emit less than the maximum amount its design allows if and only if it is subject to a federally-enforceable permit limit for the relevant NAAQS.

Sunflower's air quality analysis fails to demonstrate that Holcomb 2 will not cause or contribute to violations of the 1-hour NAAQS for SO_2 and NO_2 because it does not include the maximum possible 1-hour emissions of NO_x and SO_2 from Holcomb 1. See AR 35265 (EPA 1-hour NO_2 Guidance at 28) ("If a source assumes an enforceable limit on the hourly firing capacity of a boiler, this is reflected in the calculations. Otherwise, the design capacity of the source is used to compute the model emission rate."). The current permit for Holcomb 1 does not include emissions limits for the 1-hour NO_2 or SO_2 NAAQS. Instead, Holcomb 1 is subject to PSD permit limits based on

30-day average emissions, which ensure compliance with the *annual* NO_2 NAAQS and the *annual* and *24-hour* SO_2 NAAQS, the standards in effect at the time Sunflower built Holcomb 1. See AR 13342 (EPA Letter). Thus, unless KDHE imposes enforceable emission limits for Holcomb 1 that limit *hourly* emissions of NO_x and SO_2 (which it has chosen not to do), Sunflower must model Holcomb 1's maximum 1-hour emissions based on its design capacity. See AR 35265 (EPA 1-hour NO_2 Guidance at 28) (maximum allowable emission rates assuming design capacity or "federally-enforceable capacity limitation are used to compute hourly emissions for dispersion modeling against short-term NAAQS such as the new 1-hour NO_2 NAAQS").

Contrary to this requirement, Sunflower modeled Holcomb 1's emissions based on permit limitations for NAAQS with an averaging time of 30 days. See AR 10810-11 (permit application) (Holcomb 1 emissions were modeled "at the current emission limit allowed under the permit"). Hourly emissions, however, can and do fluctuate substantially – indeed, the substantial fluctuation in hourly emissions, and the adverse health effects stemming from these hourly fluctuations, are the very reason EPA promulgated 1-hour NAAQS for NO_2 and SO_2. See, e.g., 75 Fed. Reg. at 35530. For this reason, EPA told Sunflower and KDHE that an emissions limit with a 30-day averaging period, like that for Holcomb 1, could not be used to demonstrate compliance with the 1-hour NAAQS. See AR 13342 (EPA Letter) ("The existing unit needs the 1-hour limits because its emissions are important to the modeling demonstration for the proposed unit. To ensure the source does not cause or contribute to a violation of the NAAQS, the emission limits must be consistent with the modeling rates and have the same averaging period, i.e., in this case 1-hour average emission rates for the 1-hour NAAQS.").

Moreover, historical emissions data confirm that hourly emissions from Holcomb 1 are frequently higher than the modeled rates. KDHE used an emission rate of 1626.72 lb/hr. for SO_2 for Holcomb 1 and a NO_x emission rate of 1814.5 lb/hr. for Holcomb 1 in its modeling, but nothing restricts Holcomb 1 to those emissions levels and actual emissions of SO_2 and NO_x have exceeded those levels in recent years. AR 41459-41482 (attachment to Sierra Club comments). Indeed, as Sunflower's own chief engineer noted, Holcomb 1 exceeded the modeled emission rates for SO_2 and NO_x hundreds of times during the period from 2000-2009. See AR 51829-30. By relying on a permit limitation based on *30-day average* emissions to model maximum possible *hourly* emissions, Sunflower's modeling substantially underestimates maximum hourly emissions from Holcomb 1 and fails to properly demonstrate that Holcomb 2 will not cause or contribute to exceedences of the 1-hour NAAQS.

In response to comments on this point, KDHE asserted only that "there is no regulatory provision that requires permit limitations on existing sources at Holcomb Station." See AR 21347; AR 21320. While this may be true insofar as it goes – KDHE is not required to impose enforceable 1-hour emissions limits on Holcomb 1 – it is beside the point for purposes of the Holcomb 2 permit. If KDHE does not impose hourly limits on Holcomb 1, then the modeling for Holcomb 2 must assume maximum hourly emissions from Holcomb 1 based on its design capacity. See AR 35265 (EPA 1-hour NO_2 Guidance at 28). 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 addition of Holcomb 2 emissions 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 Holcomb 2, in combination with existing emissions, will not cause or contribute to exceedences of the NAAQS even if Holcomb 2 does not exceed the "action levels" in the permit.

Moreover, KDHE's response to public comments on this issue – that "there is no regulatory provision that requires permit limitations on existing sources at Holcomb Station," see AR 21347; AR 21320 – is arbitrary. The record reveals that KDHE was aware of the significance of this issue and attempted to develop a more detailed response to Sierra Club's comments but failed to include such a response. See, e.g., AR 51829-30 (email between Sunflower and KDHE regarding response to Sierra Club comments on this issue). As the EAB has held in the context of PSD permitting, "a failure to fulfill the obligation to respond to public comments is neither harmless, inconsequential, nor trivial. . . . Indeed, this requirement is designed to ensure that the decision maker gives serious consideration to public comments at the time of making his or her final permitting decision." In re Amerada Hess Corp. Port Reading Refinery, 12 E.A.D. 1, 2005 WL 289445, at *12 (EAB 2005) (quotation & citations omitted). An agency's failure to adequately respond to public comments warrants a remand of the PSD permit, as the defect cannot be cured on appeal. See id. at *14; In re Rockgen Energy Ctr., 8 E.A.D. 536, 1999 WL 673224, at *13 (EAB 1999) (remanding PSD permit where record did not clearly establish agency's compliance with public comment procedures). The party challenging the permit need not show particularized harm from deficiencies in the agency's response to public comments, see id.,, nor demonstrate that the ultimate

permitting decision would have been different but for the agency's inadequate response, see Weber, 2003 WL 23177505 at *5 (finding remand appropriate in light of "the importance of adhering fully to the public participation requirements of [the] regulations" even though the remand may not result in a different permit decision).

In addition to the legal defects in Sunflower's modeling protocol, which require a remand of the permit, KDHE's failure to offer any substantive response to public comments on this issue also requires a remand.

III. THE BACT DETERMINATIONS IN THE PERMIT ARE INADEQUATE.

Under the Clean Air Act and the Kansas SIP, KDHE may not issue a permit for the construction of Holcomb 2 unless all new and modified emission sources are subject to emission limits that reflect the "best available control technology" ("BACT") for each regulated pollutant. See 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j)(2) (incorporated by reference in K.A.R. 28-19-350). The CAA defines BACT as:

> an emissions limitation based on the maximum degree of reduction for each pollutant subject to regulation under this chapter emitted from or which results from any major emitting 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.

42 U.S.C. § 7479(3) (emphasis added); see also 40 C.F.R. § 52.21(b)(12) (incorporated by reference in K.A.R. 28-19-350).

Determining the emissions limits that constitute BACT is "[o]ne of the most critical elements of the PSD permitting process." In re Knauf Fiber Glass, GmbH, 8 E.A.D. 121, 1999 WL 64235, at *3 (EAB 1999) ("Knauf I"). In the NSR Manual, EPA established a top-down analysis to ensure that the BACT determination represents the

maximum achievable reduction through the use of the best available pollution control techniques. Alaska Dep't of Envt'l Conservation v. EPA, 540 U.S. 461, 475-76 (2004). "Although the top-down approach is not mandated by the [Clean Air] Act, if a state purports to follow this method, it should do so in a reasoned and justified manner." Alaska Dep't of Envt'l Conservation v. EPA, 298 F.3d 814, 822 (9th Cir. 2002). In this case, both Sunflower and KDHE claim to follow the top-down method from the NSR Manual. See AR 10516 (permit application) ("A BACT analysis was performed using the 'top-down' approach, which is described in USEPA guidance.") (citing NSR Manual); see also AR 10522-25.

The BACT selection process can be complicated, but its purpose is simple: "to promote the use of the best control technologies." In re General Motors, Inc., 10 E.A.D. 360, 2002 WL 373982, at *15 (EAB 2002) (citation omitted). A BACT analysis should always default to the best pollution control option available. See Citizens for Clean Air v. EPA, 959 F.2d 839, 845 (9th Cir. 1992); see also In re Inter-Power of N.Y., Inc., 5 E.A.D. 130, 1994 WL 114949, at *4 (EAB 1994) ("Under the 'top-down' approach, permit applicants must apply the most stringent control alternative, unless the applicant can demonstrate that the alternative is not technically or economically achievable."); In re Pennsauken Cty., N.J., Res. Recovery Facility, 2 E.A.D. 667, 1988 WL 249035, at *2 (Adm'r 1988) ("Thus, the 'top-down' approach shifts the burden of proof to the applicant to justify why the proposed source is unable to apply the best technology available."). In this way, the BACT analysis leads to increasingly stringent emissions limits as technology advances, thereby achieving the fundamental purpose of the CAA – to reduce air pollution. See 42 U.S.C. § 7401(b)(1).

A. The BACT Analysis Improperly Omits More Efficient Combustion Processes.

Under the "top-down" BACT method, Sunflower and KDHE must first identify all "potentially available" pollution control alternatives and rank them in descending order of control effectiveness; the most stringent control alternative presumptively constitutes BACT unless KDHE determines that the most stringent technology is not achievable. AR 42890 (NSR Manual at B.2). The BACT determination for Holcomb 2, however, fails to consider ultra-supercritical pulverized coal technology ("USPC") as a "potentially available" alternative – indeed, the application does not even mention USPC as a possibility. See AR 10399-400; 10505 et seq. (permit application). Because KDHE and Sunflower failed to even include USPC in the BACT analysis, let alone explain why it is not BACT, the permit must be set aside. See In re Desert Rock Energy Co., LLC, 14 E.A.D. --, PSD Appeal Nos. 08-03-08-06, slip op., 2009 WL 3126170, at *42 (EAB Sept. 24, 2009); Knauf I, 1999 WL 64235 at *10, 15; K.S.A. 77-621(c).

1. USPC Technology Is Available and More Effective Than the Control Technology Sunflower Proposed and KDHE Permitted.

There are three primary types of pulverized coal boilers: subcritical, supercritical, and ultra-supercritical. The primary difference among them is the operating temperature and pressure of the boiler: as the operating temperature and pressure increase, so does the efficiency of the boiler. See AR 41327 (Florida Power & Light BACT analysis by Black & Veatch at 3-1) (hereinafter "B&V FPL") ("The US DOE has defined ultra-supercritical steam cycles as operating pressures exceeding 3,600 psia and main superheat steam temperatures approaching 1,100 F."). Of these three types of pulverized coal boilers, subcritical is the least efficient and ultra-supercritical is the most efficient. Because USPC is an inherently more efficient production process, a USPC boiler emits lower

levels of all pollutants than a supercritical or subcritical boiler. See AR 41296-98 (Powers report at 9-11); AR 41324 (B&V FPL at 1-15). The CAA and Kansas SIP require Sunflower to consider USPC technology in the BACT analysis and its intentional exclusion renders the final permit unlawful. Desert Rock, 2009 WL 3126170 at *42.

Indeed, Sunflower's engineering contractor, Black & Veatch, determined that USPC was the most efficient, cleanest, and least cost option when it studied the issue in the BACT analysis for construction of a coal-fired power plant by Florida Power & Light in 2007. See AR 41324 (B&V FPL at 1-15). Black & Veatch ("B&V") considered "four commercially available coal-fired power generation technologies," including USPC, and concluded that USPC "will have good environmental performance because of its high efficiency" and that USPC "will be the best technical and economic choice" for the new Florida plant. Id. Black & Veatch, however, did not evaluate USPC, or even acknowledge it as an option, for Holcomb 2 – not in the 2006 initial B&V report for Sunflower's earlier application for a different facility, or in the 2010 B&V update to that report for this application. AR 11753 et seq. (2010 B&V study for Holcomb 2).

USPC also recently was selected as BACT for the Turk plant in Arkansas, which is similar to the Sunflower plant in many respects, including size. AR 65082, 65087 (Turk permit). Testimony supporting the choice of USPC for the Turk Plant comprehensively documented the performance benefits of USPC over supercritical PC. See AR 41296-97 (Powers report at 9-10) (quoting AEP testimony).

As the recent choice of USPC as BACT for the Turk plant demonstrates, and as Sunflower's own engineering contractor independently concluded, USPC is a "commercially demonstrated and proven" technology, see AR 41324 (B&V FPL at 1-15),

which means that Sunflower was required to consider it in the BACT analysis for Holcomb 2, AR 42899 (NSR Manual at B.11). Indeed, the EAB has squarely held that a BACT determination must consider the technologies selected as BACT for recently-permitted sources, such as the USPC Turk plant. See Inter-Power of N.Y., 1994 WL 114949 at *4 ("In determining the most stringent control option, the proposed source is required to look to other recently permitted sources."); In re American Electric Power Service Corp., John W. Turk Plant, Order Responding to Title V Petitions at p. 9 (Adm'r 2009), available at AR 30174, 30182 (it is "a fundamental tenet of the BACT requirement that, '[i]n determining the most stringent control option, the proposed source is required to look at other recently permitted sources.'"). Accordingly, the failure to even consider USPC technology in the BACT analysis for Holcomb 2 renders that analysis legally deficient. See Desert Rock, 2009 WL 3126170 at *38 ("While it is true that each BACT analysis is a case-by-case determination, when a technology has been considered a 'potentially available control technology' at otherwise seemingly similar facilities in previous permitting actions, one would expect some explanation as to why the previously 'potentially available control technology' is no longer potentially available at the latest facility.").

KDHE largely adopted Sunflower's response to public comments on the need to consider USPC. Compare AR 21672-73 (Sunflower response) with AR 21412-13 (KDHE response); compare AR 21499-501 (Sunflower) with AR 21312-13 (KDHE). Sunflower's arguments on this issue lack merit, and it was arbitrary for KDHE to uncritically accept them as its own, particularly in light of the contrary conclusions drawn by Sunflower's own contractor. First, KDHE argues that consideration of USPC was not

necessary because it is not a proven technology in the United States. See AR 21312-13 (Responsiveness Summary at 14-15). As Sunflower's own engineering contractor noted in its 2007 Florida analysis, however, "[t]he advancement of operation at ultrasupercritical steam conditions is somewhat new, but has been commercially demonstrated and proven around the world." AR 41324 (B&V FPL at 1-15 (emphasis added)); see also AR 41328 (B&V FPL at table 3-1) (listing dozens of "notable worldwide ultrasupercritical projects," including four in the United States). The NSR Manual also confirms that applicants must consider "technologies employed outside of the United States." AR 42893 (NSR Manual at B.5). Indeed, if BACT only required consideration of technologies that were already widely used, the BACT requirement would not advance or accomplish the increasing protection of air quality at the heart of the CAA's regulatory approach. See, e.g., Union Elec. Co. v. EPA, 427 U.S. 246, 256-57 (1976) (The requirements of the CAA "are of a 'technology-forcing character'. . . and are expressly designed to force regulated sources to develop pollution control devices that might at the time appear to be economically or technologically infeasible.") (citation omitted).

KDHE also asserts that USPC is not a reliable technology and is a risky investment. See AR 21412-13 (Responsiveness Summary at 14-15, 115). Again, KDHE's conclusions are undermined by Sunflower's engineering contractor, which noted that "[t]o date, several ultrasupercritical projects in the US, Europe, and Japan have been completed or are soon to be completed. . . . Although use of USCPC will be a technology advancement in the US . . . documented success of this technology in Europe and Japan shows that US[]PC is not a significant technology risk for FPL." AR 41329

(B&V FPL at 3-2 (emphasis added)). Moreover, even if Sunflower's concern were justified (which it is not), any concern with reliability and risk would properly be addressed in subsequent steps of a proper top-down BACT analysis. See AR 33904-05 (attachment to permit summary sheet) (KDHE explanation of steps in such an analysis). The presence of some reliability and risk issues does not justify entirely omitting USPC from the BACT analysis at the outset. See Desert Rock, 2009 WL 3126170 at *39 ("The business objective of avoiding risk associated with new, innovative or transferable control technologies and the technical feasibility of such technologies" do not justify excluding such technologies from the BACT analysis entirely).

Correspondence in the record reveals the true reason Sunflower omitted USPC from the BACT analysis. Early drafts of the Settlement Agreement between former Kansas Governor Parkinson and Sunflower actually specified that Holcomb 2 would use USPC technology; however, the negotiators ultimately eliminated the USPC requirement in favor of less efficient (and more polluting) supercritical technology in order to save Sunflower millions of dollars. See AR 21988 ("Went from *ultra* super critical in early draft to super critical in signed Agreement. This change saved millions of dollars and increased CO_2 emissions"). Sunflower's desire to cut corners and save costs by building a dirtier plant, however, cannot justify the omission of an available and more efficient combustion process from the BACT analysis. Desert Rock, 2009 WL 3126170 at *39. Nor can Sunflower rely on the terms of its Settlement Agreement with Kansas to justify this omission; the Clean Air Act and Kansas SIP require a full and complete BACT analysis. State law cannot override these federal requirements. 42 U.S.C. § 7416; Sierra Club v. Tenn. Valley Auth., 430 F.3d at 1346; see also supra at 8-12.

USPC should have been considered in the BACT analysis for Holcomb 2. Had it been, it would have been selected as BACT, based on studies conducted by Sunflower's own engineers and others demonstrating that USPC is inherently more efficient and less polluting than supercritical PC technology. The intentional and unjustifiable omission of USPC from the BACT analysis renders the permit unlawful.

2. The BACT Analysis for Holcomb 2 Omits IGCC and Natural Gas.

The CAA also explicitly requires Sunflower to consider "innovative fuel combustion techniques" among the available methods of emissions reductions. 42 U.S.C. § 7479(3); see also 40 C.F.R. § 52.21(b)(12) (incorporated by reference in K.A.R. 28-19-350). These include integrated gasification combined cycle ("IGCC") technology which, like USPC, is an inherently more efficient and less polluting production process. Other state permitting authorities have recognized that the Act requires consideration of IGCC: as the EAB recently noted, "IGCC has been considered a potentially applicable control technique under step 1 of BACT for coal-fired electric generating plants" in multiple instances. Desert Rock, 2009 WL 3126170 at *32; see also AR 41324 (B&V FPL at 1-15) ("IGCC has been demonstrated on a commercial scale for over ten years."). Similarly, the statutory definition of BACT explicitly includes consideration of emissions reductions achievable by using "clean fuels," such as natural gas. 42 U.S.C. § 7479(3). Both EPA and the EAB have consistently required consideration of clean fuels in a BACT analysis. See, e.g., In re N. Mich. Univ. Ripley Heating Plant, 14 E.A.D. --, PSD Appeal No. 08-02, slip op., 2009 WL 443976, at *11 (EAB Feb. 18, 2009). Indeed, the EPA Administrator recently objected to a state-issued PSD permit for a proposed new power plant that failed to consider natural gas as a primary fuel source. See In re Cash Creek Generation, Order Responding to Title V Petitions (Adm'r 2009), available at AR

68579 et seq. The permit for Holcomb 2 should be remanded with instructions to include IGCC and natural gas in the BACT analysis.

Moreover, KDHE's response to public comments regarding its failure to consider IGCC and natural gas is legally inadequate because it was prepared by Sunflower instead of KDHE. AR 49904 (email from Sunflower to KDHE with the rationale for rejecting IGCC attached); AR 49957 (same for natural gas); compare AR 21542-65 (Sunflower response re IGCC and natural gas) with AR 21337-42 (Responsiveness Summary) (most paragraphs taken verbatim from Sunflower response). Federal and Kansas regulations explicitly require the Secretary or director of the state permitting agency to consider and respond to public comments on a PSD permit. See 40 C.F.R. § 124.17(a), K.A.R. 28-19-350(k)(4) (requiring that the "written determination of the secretary" in response to public comments be publicly available) (emphasis added). This is not a mere administrative designation; rather, the purpose of requiring that the Secretary respond to public comments is "to ensure that the decision maker has the benefit of the comments and the responses thereto to inform his or her permit decision." Amerada Hess, 2005 WL 289445 at *13 (emphasis added). Outsourcing the agency response to the permittee and then adopting it wholesale is legally inadequate. See In the Matter of Atochem N. Am., Inc. Calvert City, Ky., 3 E.A.D. 498, 1991 WL 158260, at *1 (Adm'r 1991) (remanding permit for failure to comply with requirement of 40 C.F.R. § 124.17(a) that "the Director" or his legal designee personally respond to comments). KDHE abdicated its statutory and regulatory duty to respond to public comments on the Holcomb 2 permit by effectively delegating that responsibility to Sunflower.

B. The Emissions Limits in Sunflower's Permit Are Too High.

Even if supercritical PC technology constitutes BACT for Holcomb 2 – which it

does not – the final permit still must be remanded because numerous specific emissions limits are not based on adequate BACT determinations. Rather than conduct a proper BACT analysis and impose the lowest possible emissions limits, KDHE allowed Sunflower to include unjustifiably weak emissions limits in its permit to save costs. The Court need look no further than the permit for Plant Washington, a recently-permitted coal-fired power plant in Georgia, to conclude that the BACT analysis and resulting emissions limits for Holcomb 2 are legally deficient.

As Sierra Club noted in comments on the draft permit, Plant Washington is virtually identical to Holcomb 2 – it is the same size as Holcomb 2, will use the same type of boiler as Holcomb 2, and will primarily burn the same type of coal as Holcomb 2. See AR 41217 (Sahu comments at 11) (Plant Washington is an 850-MW supercritical PC plant that will burn a mix of PRB and Illinois coal). Even though the Plant Washington permit also improperly omits consideration of USPC, it at least requires more effective pollution control technology and contains significantly lower emission limits for numerous pollutants than the Holcomb 2 permit.

As the EAB has held, "the existence of a similar facility with a lower emissions limit creates an obligation for [the permit applicant] to consider and document whether that same emission level can be achieved at [the] proposed facility." In re Indeck-Elwood, LLC, 13 E.A.D. 126, 2006 WL 3361087, at *37 (EAB Sept. 27, 2006); see also Inter-Power of N.Y., 1994 WL 114949 at *4 ("In determining the most stringent control option, the proposed source is required to look to other recently permitted sources."). If a permit applicant selects an emission limit that does not reflect the most stringent limit among recently permitted similar facilities, the EAB has found that the burden is on the

applicant to explain why it did not select the more stringent limits. See Indeck-Elwood, 2006 WL 3361087 at *37. Sunflower and KDHE have offered only unsupported conclusions that the lower emissions limits for Plant Washington are not achievable at Holcomb 2. Such assertions fail to meet the requirements of the Clean Air Act and the Kansas SIP.

For example, the Plant Washington permit includes lower NO_x emissions limits than the Holcomb permit. The Plant Washington permit sets a twelve-month rolling average NO_x limit of 0.030 lb/MMBtu (pounds per million British Thermal Units). See AR 43754 (Plant Washington permit at 2.13(r)). In contrast, the Holcomb permit only requires a twelve-month rolling average NO_x limit of 0.05 lb/MMBtu. See AR 20753 (final permit). Plant Washington plans to use the same pollution control technology as Holcomb 2 for NO_x, but contains lower emissions limits based on achieving higher operational efficiencies for the same equipment. As early as January 2010, EPA advised KDHE and Sunflower that they needed to consider lower NO_x limits in the BACT analysis, AR 26825 (KDHE meeting notes), yet in the many subsequent revisions to its permit application, Sunflower failed to do so. In response to comments that Holcomb 2 can and should achieve these higher efficiencies and lower NO_x emissions, KDHE merely noted that the Holcomb permit limit is "consistent" with other permitted units, and dismissed lower limits as not achievable – despite the fact that the permit for a nearly identical facility recently determined that lower limits are achievable. See AR 21379-82 (Responsiveness Summary at 82-84). Extensive technical literature and the actual performance of numerous existing units all confirm that the higher efficiencies the Plant Washington permit requires are in fact achievable. See AR 41218-26 (Sahu comments);

AR 13340 (EPA comments). KDHE's failure to impose these stricter and achievable limits – or adequately and rationally explain its refusal to do so – is arbitrary.

Similarly, the Plant Washington permit includes a significantly more stringent emissions limit for particulate matter than the Holcomb 2 permit, both by including more stringent limits for all filterable particulates, and by including separate, more stringent limits for fine particulates, which are the most hazardous to human health. Specifically, the Plant Washington permit includes a filterable particulate emissions limit of 0.010 lb/MMBtu on a 24-hour average basis, a separate emissions limit for fine particulates of 0.0123 lb/MMBtu on a 3-hour average basis, and a limit for coarse particulates of 0.018 lb/MMBtu on a 3-hour average basis. See AR 41240 (Sahu comments at 34); AR 43752-53 (Plant Washington permit at 2.13(d)-(e)). In contrast, the Holcomb 2 permit only requires a filterable particulate limit of 0.012 lb/MMBtu on a 30-day average basis and 0.015 lb/MMBtu on a 24-hour average basis. AR 20754 (final permit). Moreover, the Holcomb permit "requires" the same short-term limit of 0.018 lb/MMBtu for both coarse and fine particulates, but allows that level to *increase* to 0.025 lb/MMBtu if Sunflower does not meet initial performance tests. AR 20755 (final permit). Even the limit of 0.018 lb/MMBtu is unlawfully weak, and the "contingency" limit of 0.025 lb/MMBtu certainly cannot be justified as BACT. See AR 41240-45 (Sahu comments at 34-39).

In response to extensive comments demonstrating that lower emissions levels are achievable for these pollutants – as demonstrated by the lower permitted levels for Plant Washington, among other sources – KDHE stated that Plant Washington is not yet operational and that "KDHE believes the BACT analysis [for Holcomb 2] was performed in compliance with all applicable requirements." AR 21403-04 (Responsiveness

Summary at 105-06). As with the emissions limits for NO_x, KDHE's refusal to either fully consider and impose more stringent emissions limits for particulate matter or fully and rationally explain its refusal to do so cannot be justified.

As the emissions limits for Plant Washington show, the emissions limits in the Holcomb 2 permit are unlawfully weak and are based on an inadequate BACT analysis. Accordingly, the permit must be set aside. K.S.A. 77-621(c).

IV. THE SUNFLOWER AIR PERMIT DOES NOT CONTAIN ADEQUATE EMISSIONS LIMITS FOR HAZARDOUS AIR POLLUTANTS.

The final permit fails to include adequate emissions limits for hazardous air pollutants ("HAPs") as required by federal and state law. Section 112 of the Clean Air Act contains nationally-applicable provisions governing the emissions of hazardous air pollutants – highly toxic pollutants "which present, or may present, . . . a threat of adverse human health effects" including carcinogenic, neurotoxic, or mutagenic pollutants. 42 U.S.C. § 7412(b)(2). According to EPA, exposure to HAPs may result in "an increased chance of getting cancer or experiencing other serious health effects." See http://www.epa.gov/ttn/atw/allabout.html. The Clean Air Act contains a list of HAPs that includes, among others, hydrochloric acid, hydrogen fluoride, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, selenium, sulfuric acid, benzene, polycyclic organic matter, and radionuclides. See 42 U.S.C. § 7412(b)(1). EPA has found that "[c]oal- and oil-fired electric utility steam generating units are major sources (as defined in section 112(a)(1) of the CAA) of hydrogen chloride and hydrogen fluoride emissions, emit a significant number of the 188 HAPs on the section 112(b) list [including but not limited to those listed above], and are the leading anthropogenic sources of mercury emissions in the U.S." See EPA, Notice of Regulatory

Finding, 65 Fed. Reg. 79825, 79827-28 (Dec. 20, 2000).

The CAA requires that a new "major source" of HAPs obtain a separate permit for these toxic pollutants. For purposes of section 112, a "major source" is:

> any stationary source or group of sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

42 U.S.C. § 7412(a)(1). A section 112 permit for a new major source must include emissions limitations based on application of the "maximum achievable control technology" ("MACT") for each HAP the facility will emit. Id. § 7412(g)(2). A MACT analysis looks solely at the maximum emissions reductions achievable, see Natural Res. Def. Council v. EPA, 529 F.3d 1077, 1079 n.2 (D.C. Cir. 2008), and accordingly will often result in more stringent emissions limits than a BACT analysis, Sierra Club v. EPA, 479 F.3d 875, 877 (D.C. Cir. 2007) (MACT reflects "the most stringent standards achievable" for controlling emissions) (quotation & citation omitted). These limits are not required, however, if a source's potential to emit HAPs does not exceed the major source thresholds.

Holcomb 2, as currently configured, would be one of the largest coal-fired power plants in the nation – it would be the 29th largest coal-fired unit in the country and the 6th largest using sub-bituminous coal. AR 21979. In an attachment to the Settlement Agreement, however, Sunflower estimated that the potential to emit HAPs from a new plant at Holcomb Station would be far lower than the potential to emit for comparable or even smaller plants. AR 21947-57 (HAPs estimates); see, e.g., AR 21813, 21818 (MACT Analysis for 649 MW supercritical plant). Indeed, EPA noted that "Sunflower's HAPS numbers are about three orders of magnitude under what EPA has seen on similar

projects." AR 23367-68; see also AR 23508 ("the Agreement signed May 4 does not establish adequate limits for HAP emitted for the new unit, including, for example, HAP acid gases, metals, organics or mercury"). Nonetheless, the Agreement provides that KDHE must accept Sunflower's emissions estimates for HAPs. AR 11377. Sunflower relied on these unusually low estimates to avoid compliance with the stringent "MACT" emissions limits that most plants the size of Holcomb 2 must meet. AR 10415-16 (permit application).

In accordance with the Settlement Agreement, KDHE accepted Sunflower's HAPs estimates and did not include MACT emissions limits for HAPs in Sunflower's final permit on the grounds that Holcomb 2 does not have the potential to emit HAPs above the 10/25 tons per year major source threshold. AR 21189. KDHE's approach is wrong as a matter of law for at least two reasons. First, KDHE failed to calculate the total potential to emit HAPs at Holcomb 2 as required by the CAA. Second, 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, but these limits are not enforceable as a practical matter and so are legally inadequate.

A. KDHE Failed to Calculate Holcomb 2's Potential to Emit HAPs.

1. KDHE Relied on Flawed Methods to Calculate Potential to Emit.

Under the Clean Air Act, a source's "potential to emit" HAPs determines whether the source is "major." See 42 U.S.C. § 7412(a)(1); see also 40 C.F.R. §§ 63.2, 63.41. Sunflower initially employed three methods to calculate the potential to emit HAPs for Holcomb 2. AR 8475 (application materials); AR 21947 (HAPs attachment). The method that relies on federally-promulgated emissions factors for coal plants leads to a potential to emit estimate for Holcomb 2 of 49.93 tons per year for all HAPs, well in

excess of the 25 tons per year threshold for a major source. AR 8475. Sunflower, however, generated substantially lower estimates using two other flawed calculation methods.

While Sunflower submitted calculations using three methods, the final permit application omits any mention of the calculation using the federal emission factors, under which Holcomb 2 easily qualifies as a major source, and instead only presents the results of the two flawed methods, under which Holcomb 2 does not exceed the major source threshold. AR 10415-16 (permit application) (presenting only the "Holcomb 1 Test Basis" and EPRI Factor results). Sunflower's selective exclusion of the most relevant data – and KDHE's acceptance of this approach – is improper.

Nor can the two flawed methods that Sunflower included in its final application support a determination that Holcomb 2 will be a minor source of HAPs. First, Sunflower estimated emissions from Holcomb 2 using emissions data from Holcomb 1 scaled up to reflect the size difference of the two units. Id. (permit application). KDHE may not rely on this "Holcomb 1 Test Basis" calculation because that method estimates actual emissions, instead of calculating Holcomb 2's potential to emit. See AR 43130 (NSR Manual at c.2) (stating that the potential to emit calculation "must embrace all potential, not actual, emissions expected to occur from a source on a continuous or regular basis") (emphasis added).

CAA regulations define potential to emit as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design," taking into account operational limitations that constrain emissions if and only if those limitations are federally enforceable. 40 C.F.R. § 63.2; K.A.R. 28-19-750. As such,

potential to emit reflects a facility's worst case emissions scenario. See AR 42851 (NSR Manual at A.19). In contrast, "actual emissions" refers to "the actual rate of emissions of a pollutant" from a facility, based on the facility's "actual operating rates, and types of materials processed, stored, or combusted during the selected time period." 40 C.F.R. § 63.71. As a result, a source's actual emissions are almost always lower than its potential to emit. See EPA, Approval and Promulgation of Implementation Plans, 65 Fed. Reg. 2560, 2567 (Jan. 18, 2000). In its own guidance to air permit applicants, KDHE recognizes that "potential to emit" and "actual emissions" are distinct, and explains that a facility's recorded actual emissions are generally lower than its potential to emit. See KDHE, Kansas Air Quality Program, Class I Operating Permit Application Forms and Instructions, at 3 (Sept. 14, 2004), available at http://www.kdheks.gov/air-permit/forms/Reg_Class_I_Application.pdf.

Notwithstanding KDHE's recognition that "actual emissions" are different from and generally lower than "potential to emit," KDHE accepted Sunflower's calculation of Holcomb 2's potential to emit HAPs based on two isolated tests of actual emissions from Holcomb 1. See AR 10979-10980 (permit application at 1-27 to 1-28). These "Holcomb 1 Test Basis" calculations do not represent Holcomb 2's potential to emit HAPs as required by the CAA, since a source with recorded actual emissions below the 10/25 tons per year threshold may have the potential to emit greater quantities of HAPs. See AR 43130 (NSR Manual at c.2) ("Historic usage rates alone are not sufficient to establish potential to emit."); EPA, 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 "EPA PTE Guidance"), available at

http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/limit-pte-rpt.pdf (noting that "a source that has maintained actual emissions at levels below the major source threshold could still be subject to major source requirements if it has the potential to emit major amounts of air pollutants").

Second, in a separate attempt to demonstrate that Holcomb 2 is not a major source of HAPs, Sunflower estimated Holcomb 2's potential to emit using emission factors generated by the Electric Power Research Institute ("EPRI"), a private group representing the electric utility industry. See Research Consulting Assocs. v. Electric Power Research Institute, 104 F.R.D. 619, 620 (D. Mass. 1985) (describing the EPRI as "a trade association serving the electric utility industry"). These estimates are inadequate to establish that Holcomb 2 is not a major source of HAPs because the data underlying the EPRI factors are unknown to KDHE and the public.

Emission factors are representative values that attempt to relate a particular activity – such as combusting a certain quantity of coal via a specific process – to a quantity of pollution released into the atmosphere. EPA, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, at 1 (5th ed. 1995), available at http://www.epa.gov/ttn/chief/ap42/c00s00.pdf (hereinafter "AP 42"). For over forty years, EPA has developed and published emission factors in its AP 42 compilation. The CAA explicitly mandates public disclosure and participation in the federal government's generation of the AP 42 factors. See 42 U.S.C. § 7430. This congressional mandate reflects the fact that the use of a particular emission factor can be outcome-determinative in permitting decisions, as well as the reality that an emission factor's quality depends upon the quality of its underlying data and analysis. Similarly,

EPA has recognized that emission factors may be useful in estimating potential to emit, see AR 43130 (NSR Manual at c.2), but EPA publishes with its emissions factors a rating of the quality of individual factors because the reliability of emission factors varies based on the data and methodology used to generate them. See AP 42 at 8-10. As this ranking system illustrates, not all emission factors are of equal quality, and scrutinizing the data and methodology underlying the factor is essential to determine the accuracy of the potential to emit estimate for which it is used.

The EPRI emission factors are substantially lower than the AP-42 factors for the same pollutants from the same sources. See AR 21947 (HAPs estimates using AP 42 and EPRI factors). The data and methodology underlying the EPRI emission factors, however, are not available to the public, nor did Sunflower (or KDHE) provide these data as part of the permitting process. Accordingly, there is no way to determine whether these substantially lower factors are appropriate to estimate potential emissions from Holcomb 2. Contrary to the mandate of the CAA, KDHE accepted these estimates without receiving, scrutinizing, or publicizing the underlying data and methodology. See 40 C.F.R. § 63.5(d)(2) (requiring that applications to construct sources of HAPs "include calculation of emission estimates in sufficient detail to permit assessment of the validity of the calculations").

The AP 42-based estimates demonstrate that Holcomb 2 is, by Sunflower's own admission, a major source of HAPs. See AR 21947. KDHE's decision to ignore these estimates and rely on estimates using two approaches that are contrary to law is improper.

2. KDHE Erroneously Ignored HAPs Emissions at Holcomb 2 From Sources Other Than the Main Boiler.

In addition to erroneously estimating the potential of the main boiler at Holcomb

2 to emit HAPs, KDHE unlawfully failed to consider emissions from additional sources of HAPs at the facility. These additional sources include the auxiliary boiler, emergency engines, and material handling equipment. See AR 20748 (final permit at 2) (describing Holcomb 2 as including "one steam generator (H2), one companion cooling tower, one auxiliary boiler, one emergency diesel power generator, one replacement diesel fire pump . . . one emergency DFP booster pump and coal, lime, powdered activated carbon (PAC), and waste powder handling equipment . . ."); see also AR 41263 (Sahu comments at 57) (noting that "there will be numerous HAP metal emissions from material handling sources" and "[t]he other combustion sources such as the auxiliary boiler or the diesel engines will create and emit numerous organic HAPs."). However, these components of the project disappear when Sunflower estimates the potential to emit HAPs at Holcomb 2. See AR 8475 (Sunflower HAPs estimates at 1) (providing HAPs emission estimates solely for the proposed Holcomb 2 steam generator). Without estimating the potential emissions from the other project components, KDHE cannot substantiate its conclusion that Holcomb 2 will not emit major quantities of HAPs.

Isolating the potential emissions from the main boiler at Holcomb 2 from other sources of HAPs is contrary to the CAA implementing regulations, which Kansas has adopted. Under the CAA, a "major source" of HAPs is "any stationary source or group of stationary sources located within a contiguous area and under common control" that has the potential to emit HAPs above the 10/25 tons per year threshold. 42 U.S.C. § 7412(a)(1); 40 C.F.R. § 63.2 (emphasis added). In turn, a "stationary source" is "any building, structure, facility, or installation which emits or may emit any air pollutant." 40 C.F.R. § 63.2. EPA has "made clear that in determining whether a source is major,

emissions from all sources of hazardous air pollutants within a plant site must be aggregated, so long as the sources are geographically adjacent and under common control." Nat'l Mining Ass'n v. EPA, 59 F.3d 1351, 1355 (D.C. Cir. 1995) (citing 59 Fed. Reg. 12408, 12412 (Mar. 16, 1994)).

KDHE misreads the federal regulations to support its failure to estimate emissions from all of the HAP sources at Holcomb 2. In the response to public comments, KDHE states that the major source determination is based on whether the "process or production unit, in and of itself has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs." AR 21366-67 (Responsiveness Summary at 68-69) (citing 40 C.F.R. part 63.40). However, the regulation defines "process or production unit" as "any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product," 40 C.F.R. § 63.41, which plainly captures the main boiler at Holcomb 2 *and* the other structures essential to its functioning. The provision does not permit an entity constructing a new stationary source – which may be comprised of multiple components such as a main boiler, auxiliary boiler, and emergency equipment, see 40 C.F.R. § 63.2 – to disaggregate the emissions from each subcomponent of that new stationary source in order to conclude that HAPs emissions will be "minor."

KDHE's failure to assess the potential emissions from all the HAP sources at Holcomb 2 contravenes the plain language of the CAA implementing regulations and the D.C. Circuit's ruling in Nat'l Mining Ass'n, rendering the decision to exempt Holcomb 2 from the major source MACT requirement unlawful.

B. Holcomb 2 Does Not Qualify as a "Synthetic Minor Source."

Where, as here, a proposed source cannot establish that its potential to emit HAPs

at its design capacity is below the major source threshold, the source may seek to avoid MACT review by qualifying as a "synthetic minor source." A synthetic minor source is one which possesses the design capacity to emit quantities of a pollutant above the major source threshold, but is subject to enforceable legal limits on its operations that will reduce its potential to emit. See United States v. Marine Shale Processors, 81 F.3d 1329, 1352 (5th Cir. 1996). Because "synthetic minor" status allows a facility to escape the requirement to install MACT to control its HAPs emissions, it is essential that "the conditions placed on emissions to limit a source's potential to emit are enforceable by EPA and citizens as a legal and practical matter, thereby providing the public with credible assurances that otherwise major sources are not avoiding applicable requirements of the Act." EPA PTE Guidance at 2; see also Weiler v. Chatham Forest Prods., Inc., 392 F.3d 532, 535 (2d Cir. 2004) ("a proposed facility that is physically capable of emitting major levels of the relevant pollutants is to be considered a major emitting facility under the [Clean Air] Act unless there are legally and practicably enforceable mechanisms in place to make certain that the emissions remain below the relevant levels") (emphasis added); Nat'l Mining Ass'n, 59 F.3d at 1362 (a facility's potential to emit may only be limited by "effective controls") (emphasis in original). In short, emissions limits supporting synthetic minor source status must be practicably enforceable to ensure that otherwise major sources do not circumvent CAA compliance simply by obtaining general permit language. United States v. La.-Pac. Corp., 682 F. Supp. 1122, 1133 (D. Colo. 1987).

KDHE included a general provision in the Holcomb 2 permit stating simply that "[e]missions from Holcomb 2 shall not exceed 10 tons per year for any single Hazardous

Air Pollutant (HAP), or 25 tons per year of any combination of HAPs in any consecutive 12-month period." AR 20756 (final permit at 10). The permit does not include any restrictions on operations at Holcomb 2 to ensure compliance with these emission levels or any continuous monitoring requirement to demonstrate that emissions do not exceed these levels. KDHE's simple restatement of the CAA's major source threshold as a permit "condition" is not a practicably enforceable provision for limiting HAPs emissions from Holcomb 2 and is an inadequate basis for granting Holcomb 2 synthetic minor source status. See La.-Pac., 682 F. Supp. at 1131 (rejecting source's argument that blanket limitation on actual annual emissions should be considered as a limitation on its potential to emit).

The CAA's implementing regulations enumerate the categories of practicably enforceable permit conditions that restrict a source's potential to emit and may accordingly support synthetic minor source status. See 40 C.F.R. § 52.21(b)(4) (incorporated by reference in K.A.R. 28-19-350). The regulations specify that only "physical or operational limitation[s] on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed" may be considered as limits on potential to emit. Id. (emphasis added). EPA guidance likewise instructs that a permit condition purporting to limit potential to emit must explicitly control the source's operations in a manner that ensures reduced emissions. See EPA PTE Guidance at 6. EPA provides as examples of satisfactory conditions "a [permit] limitation constraining an operation to one (time limit specified) shift per day or limitations that effectively limit operations to 2000 hours per year," "limitations on the amount of material used, for

example a permit limitation constraining an operation to using no more than 1000 gallons of paint per month," or permit terms that require a minimum operating temperature to ensure more complete combustion of raw materials and an attendant reduction in HAPs emissions. Id.

Similarly, the Kansas air regulations allow reduction of potential to emit based on "a federally enforceable operational restriction . . . either alone or in conjunction with a federally enforceable permit condition regarding properly maintained and operated air pollution control equipment." K.A.R. 28-19-302(b); see also K.A.R. 28-19-501(a). Under the Kansas regulations, like the federal regulations they incorporate by reference, operational restrictions may only reduce a source's potential to emit if "the restrictions are permanent, quantifiable and otherwise enforceable as a practical matter." K.A.R. 28-19-501(b).

Conspicuously absent from these descriptions of permit conditions that effectively limit potential to emit is any mention of blanket restrictions on actual emissions such as the limits KDHE included in the Sunflower permit. This is because, as discussed above, potential to emit and actual emissions are neither equivalent nor interchangeable. As one federal court has observed, "[t]he concept of 'potential to emit' is the cornerstone of the entire PSD program. Expanding the definition of this term to include explicit limitations on emissions would virtually wipe away the entire PSD program because a carefully worded permit . . . would completely exempt any source from PSD review." La.-Pac., 682 F. Supp. at 1133. Moreover, the operational limitations that effectively constrain potential to emit are fundamentally different from limits on actual emissions in terms of enforceability: "Compliance with [operational limitations] could be easily verified

through the testimony of officers, all manner of internal correspondence, and accounting, purchasing, and production records. In contrast, compliance with blanket restrictions on actual emissions would be virtually impossible to verify or enforce." Id. at 1133; see also AR 42837 (NSR Manual at A.5) ("For example, a permit that limits actual source emissions on an annual basis only (e.g., the facility is limited solely to 249 tpy) cannot be considered in determining potential to emit. It contains none of the basic requirements and is therefore not capable of ensuring continual compliance, i.e., it is not enforceable as a practical matter."). The generic limits on HAPs emissions in the Sunflower permit are particularly deficient in this regard, since the permit does not even require continuous emissions monitoring to demonstrate and ensure compliance. See AR 24555 ("EPA thinks [Sunflower] need[s] continuous monitoring for minor source status or case-by-case MACT."). The bare requirement that Holcomb 2 not emit total HAPs that exceed the major source threshold does not establish that it is a minor source under the CAA.

Sunflower and KDHE have failed to demonstrate that Holcomb 2 is not a major source of HAPs. To comply with the Clean Air Act, Sunflower must either obtain a permit as a major source of HAPs with MACT limits or properly and legally demonstrate that it is a minor source. See 42 U.S.C. § 7412(g)(2).

CONCLUSION

For the foregoing reasons, Petitioner Sierra Club respectfully requests that the Court grant its petition for review of the final clean air permit KDHE issued to Sunflower for Holcomb 2, declare the permit unlawful, and set it aside.

Respectfully submitted this _____ day of August, 2011.

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I hereby certify true and correct copies of the Brief of Appellant were served on the following parties this _____ day of August, 2011.

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