

IN THE COURT OF APPEALS OF THE STATE OF KANSAS

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| SIERRA CLUB, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| vs. |) | Case No. _____ |
| |) | |
| 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, |) | |
| |) | |
| Respondents. |) | |
| _____ |) | |

PETITION FOR JUDICIAL REVIEW
Pursuant to Kan. Stat. Ann. Chapters 65 and 77

Petitioner, Sierra Club, by and through its attorney, Robert V. Eye of Kauffman & Eye,¹ hereby present this Petition for Judicial Review and alleges and states as follows:

1. Pursuant to K.S.A. 77-606 *et. seq.*, Sierra Club seeks judicial review of the final Air Emission Source Construction Permit (the “Permit”) issued to Sunflower Electric Power Corporation (“Sunflower”) by the Kansas Department of Health and Environment (“KDHE”) and signed by John W. Mitchell, Acting Secretary of KDHE, on December 16, 2010. A copy of the final Permit is attached hereto as Exhibit 1.

JURISDICTION AND VENUE

2. This Court has jurisdiction over this petition for review of final agency action pursuant K.S.A. 77-601 *et. seq.* and the Kansas Air Quality Act which provides that this Court shall have original jurisdiction to review the Permit at issue here. K.S.A. 65-3008a(b). These

¹ Counsel for Petitioner also includes Todd D. True and Amanda W. Goodin of Earthjustice. Motions for leave of these counsel to appear *pro hac vice* have been filed concurrently with this petition.

same statutes also make venue proper in this Court.

PARTIES

3. Petitioner's addresses are:

Kansas Sierra Club
16 E. 13th Street
Lawrence, KS 66044

Sierra Club
National Headquarters
85 Second Street, 2nd Floor
San Francisco, CA 94105

4. Respondent Kansas Department of Health and Environment is located at 1000 S.W. Jackson, Topeka, Kansas 66612.

5. Respondent Kansas Department of Health and Environment is the agency responsible for protection of human health and the environment in Kansas, including the issuance of air permits pursuant to the requirements of the federal Clean Air Act under authority delegated by the U.S. Environmental Protection Agency ("EPA"). John W. Mitchell then-Acting Secretary of KDHE signed the Permit at issue here pursuant to K.S.A. 65-3008.

FACTS THAT DEMONSTRATE SIERRA CLUB IS ENTITLED TO JUDICIAL REVIEW

6. The Permit issued by KDHE on December 16, 2010, is final agency action as required under K.S.A. 77-607.

7. The Sierra Club has standing to challenge the Permit pursuant to K.S.A. 65-3008a(b) because it and its members participated in the public comment process and the public hearing on the proposed draft permit. Sierra Club also has standing pursuant to K.S.A. 77-611(b) as "a person who was a party to the agency proceedings that led to the agency action" and K.S.A. 77-611(d). A copy of Sierra Club's comments on the proposed draft permit is attached hereto as Exhibit 2.

8. Sierra Club members live, work, recreate, farm, and engage in other economic activities that will be adversely impacted by the Holcomb Expansion. They include senior citizens, children, people with asthma, and other individuals who are especially vulnerable to harm from exposure to fine particulate matter, ground-level ozone, and other harmful air pollutants that will be emitted by the project's new coal-fired electric generating unit. The aesthetic, conservation, recreational, economic, scientific, informational, and procedural interests of Sierra Club and its members have been, are being, and, unless the relief prayed for herein is granted, will continue to be adversely affected and irreparably injured by KDHE's failure to comply with federal and state law as described below.

9. The Sierra Club is not required to exhaust administrative remedies before seeking judicial review under the provisions of the Kansas Air Quality Act. K.S.A. 65-3008a(b).

10. This Petition is timely because it is filed within thirty (30) days of the issuance of the Permit. K.S.A. 77-613(d).

BACKGROUND

11. The Holcomb Expansion will emit substantial volumes of numerous pollutants that cause serious harm to human health and the environment. These pollutants include particulate matter, nitrogen oxides, sulfur dioxide, ozone-forming constituents, mercury, acid gases, other hazardous air pollutants, and greenhouse gases. The U.S. Environmental Protection Agency has determined that all of these pollutants pose a significant risk to human health and the environment.

12. On October 18, 2007, then KDHE Secretary Roderick Bremby issued a final order denying a previous air permit application from Sunflower for new coal-fired generating units at Holcomb Station based on a determination that the expanded plant's carbon dioxide emissions would cause unacceptable harm to human health and the environment. For that permit

application process, KDHE received 779 public comments; it took 10 months from the close of the public comment period for KDHE to make a final permit decision, including preparation of responses to those comments.

13. On May 5, 2009, the Kansas Governor announced that Kansas and Sunflower had reached an agreement that would allow one 895-megawatt coal-fired power plant to be built. This Settlement Agreement was followed by passage of state legislation stating that Sunflower “shall” receive an air permit for the new plant. The Settlement Agreement provides that the permit shall be substantially the same as the 2007 permit that was denied. The Settlement Agreement also specifies that KDHE shall accept the accuracy of data submitted by Sunflower regarding the emissions of hazardous air pollutants from the new plant. The emissions estimates provided by Sunflower are attached to the Settlement Agreement.

14. On January 13, 2010, Sunflower submitted a new permit application for one 895-MW coal-fired power plant. On July 1, 2010, KDHE made a draft permit available for public comment.

15. The permit application states that the majority of the electricity generated by the new plant is not needed in Kansas, but will instead be owned by Tri-State Generation and Transmission Association, Inc. (“Tri-State”), a Colorado utility. Of the 895 MW the new plant will generate, the permit application states that 695 MW will be owned by Tri-State.

16. Tri-State developed a draft plan evaluating its energy resource needs for the period 2010-2029 and made it available to the public on September 17, 2010. It filed its final resource plan with the Colorado Public Utilities Commission on November 30, 2010, following public comment on the draft. In its plan, Tri-State modeled a range of future scenarios to guide its resource planning and acquisition of electrical capacity. Of the 24 scenarios modeled in the

final Tri-State resource plan, the output of only one shows a need to add any new coal generation capacity, and the capacity required by that one scenario is only 302 MW and is not needed until 2027.

17. During the initial public comment period on the draft permit that began on July 1, 2010, EPA identified critical errors in the modeling used to support the permit application. Sunflower agreed to address these errors and submitted a revised permit application on August 23, 2010.

18. KDHE made the revised final draft permit available for public comment on September 23, 2010. The public comment period on the revised final draft permit lasted 31 days, from September 23, 2010 until October 23, 2010.

19. On September 9, 2010, Rick Brunetti, KDHE Director of the Bureau of Air and Radiation, reported to a joint state legislative committee on energy and environmental policy that the comment period for the complete draft permit would be 45 days, consistent with the earlier public comment period on the incomplete draft permit.

20. On September 13, 2010, Sunflower directly contacted state legislators and executive officials via email to request that KDHE be urged to limit the public's opportunity to comment on the permit and to expedite the permitting process.

21. On September 16, 2010, a spokesperson for KDHE reported the second comment period would be 30 days.

22. During the public comment periods on the draft permits, 5,876 public comments were submitted to KDHE.

23. Following the close of public comment, on November 2, 2010, Secretary Bremby was dismissed as the head of KDHE.

24. KDHE issued the final Permit on December 16, 2010, seven weeks after the close of the public comment period.

25. On January 2, 2011, federal regulations governing greenhouse gas emissions from new sources, including coal-fired power plants, became effective. These final rules were published in the Federal Register on June 3, 2010. 75 Fed. Reg. 31514 (June 3, 2010). If the final Permit had been issued on or after January 2, 2011, the Permit would have been required to include emissions limits for greenhouse gases.

PETITIONER'S REASONS THAT RELIEF SHOULD BE GRANTED

26. On December 16, 2010, KDHE issued the Permit to Sunflower authorizing construction and operation of one new 895 megawatt coal-fired generating unit ("Holcomb Unit 2") and associated equipment (collectively, the "Holcomb Expansion") at Holcomb Generating Station in Holcomb, Finney County, Kansas, at the site of an existing generating unit owned by Sunflower ("Holcomb 1").

27. KDHE is authorized to issue permits allowing the construction of new major stationary sources of regulated air pollutants that meet the minimum requirements of the Prevention of Significant Deterioration ("PSD") provisions of the federal Clean Air Act and implementing regulations, pursuant to delegated authority. 40 C.F.R. § 52.870.

28. The Permit is unlawful because it fails to meet the minimum requirements of the federal Clean Air Act, 42 U.S.C. §§ 7401 *et seq.* and implementing regulations; the Kansas Air Quality Act, K.S.A. 65-3001 *et seq.* and implementing regulations; and the Kansas Administrative Procedure Act, K.S.A. 77-501 *et seq.* Additionally, the Permit was issued by an unlawful procedure and in bad faith; the Permit is based on unsupported determinations of fact; and the Permit is otherwise unreasonable, arbitrary or capricious. K.S.A. 77-621. Accordingly, the Permit must be set aside.

I. THE EMISSIONS LIMITATIONS IN THE PERMIT ARE INADEQUATE

A. The Final Permit Fails to Comply With the Standards Governing Emissions of Nitrogen Dioxide and Sulfur Dioxide.

29. Under the federal Clean Air Act (“CAA”), no person may construct a “major stationary source” of regulated air pollutants unless they demonstrate that the source will not cause or contribute to air pollution in excess of any national ambient air quality control standard (“NAAQS”), any maximum allowable increase or maximum allowable concentration for any pollutant, or any other applicable emission standard or standard of performance. 42 U.S.C. § 7475(a)(3). The Holcomb Expansion will constitute a major stationary source of regulated air pollutants within the meaning of the CAA.

30. On January 22, 2010, the EPA announced a new 1-hour nitrogen dioxide (“NO₂”) NAAQS to protect public health. The final rule was published in the Federal Register on February 9, 2010, and the new standard became effective on April 12, 2010.

31. On June 22, 2010 the EPA published in the Federal Register a new 1-hour sulfur dioxide (“SO₂”) NAAQS; that new standard became effective on August 23, 2010.

32. Both the 1-hour NO₂ NAAQS and the 1-hour SO₂ NAAQS were in effect at the time KDHE issued the Permit for the Holcomb Expansion; however, the Permit fails to demonstrate that the Holcomb Expansion will not cause or contribute to violations of these standards, in violation of federal and Kansas law.

33. The Permit does not contain enforceable emissions limits to prevent exceedences of the 1-hour NO₂ NAAQS and the 1-hour SO₂ NAAQS. Instead, it contains provisions requiring Sunflower to notify KDHE if the total nitrogen oxide (“NO_x”) and sulfur oxide (“SO_x”) emissions from Holcomb Station exceed the levels modeled in the permit application, averaged over any one-hour period. These notification provisions are not a lawful substitute for

enforceable emissions limits.

34. KDHE has argued that the Holcomb Expansion is not required to comply with all applicable NAAQS because under the Clean Air Act, states have three years to revise their State Implementation Plans (“SIPs”) after a new NAAQS is promulgated. As EPA has confirmed in formal guidance, however, this three-year SIP revision period in no way eliminates the obligation for all new major stationary sources to comply with all NAAQS.

35. Even if the notification provisions were enforceable permit conditions, they fail to ensure that the Holcomb Expansion will not cause or contribute to exceedences of the 1-hour NO₂ NAAQS and the 1-hour SO₂ NAAQS and associated increments because the modeling used to support the notification provisions is flawed, and the emissions notification provisions do not apply to all sources of these pollutants, do not apply at all times, and will not be monitored sufficiently to ensure notice of exceedences.

36. The Permit relies on modeling to demonstrate that the Holcomb Expansion will not cause or contribute to violations of the 1-hour NO₂ NAAQS and the 1-hour SO₂ NAAQS, but this modeling fails to demonstrate compliance due to numerous substantial shortcomings:

a. The modeling attempts to demonstrate that Holcomb Station will not cause or contribute to exceedences of the NAAQS so long as the emissions attributable to Holcomb Station are at or below a certain level. The modeling does this, in part, by incorporating emissions from existing sources, most significantly emissions from Holcomb 1, to demonstrate that the addition of the emissions from the Holcomb Expansion will not cause or contribute to exceedences. However, the baseline emissions from Holcomb 1 may – and likely will be – higher than assumed in the modeling; if these baseline emissions are higher, then the Holcomb Expansion may well cause or contribute

to NAAQS exceedences. The assumptions used in the modeling about the NO_x and SO_x² emissions from Holcomb 1 are not enforceable, so nothing prevents higher emission levels. Indeed, NO_x and SO_x emissions from Holcomb 1 have in the recent past actually been higher than the levels assumed in the modeling. KDHE did not require modeling that assumes higher emissions levels from Holcomb 1. Based on past emissions data and the lack of enforceable limits, the NO_x and SO_x emissions from Holcomb 1 may and likely will be higher than assumed; accordingly, the modeling fails to demonstrate that the Holcomb Expansion will not cause or contribute to exceedences of the NAAQS.

b. Additionally, the modeling assumes a certain ratio of NO₂/NO_x emissions from the Holcomb Expansion, but this ratio is also not enforceable, so higher NO₂/NO_x ratios are allowed. Higher ratios, however, were not modeled to demonstrate compliance. Because the Permit allows the NO_x emissions from the Holcomb Expansion to have a higher NO₂/NO_x ratio than assumed, the modeling fails to demonstrate that the Holcomb Expansion will not cause or contribute to exceedences of the new NO₂ NAAQS.

c. EPA has specified certain “default” or preferred models that applicants should use to model compliance with NAAQS. The model Sunflower used to demonstrate compliance, however, is a non-default model that requires prior EPA approval and justification, which Sunflower failed to obtain or adequately provide. Additionally, Sunflower relied on a non-default and unjustified in-stack NO₂/NO_x ratio, and the 3-year averaging methodology used in the modeling is flawed and unjustified.

² NO_x and SO_x refer to all nitrogen oxides and sulfur oxides, respectively, including but not limited to NO₂ and SO₂, which are the specific pollutants regulated by the new 1-hour NAAQS. NO_x emissions from Holcomb 1 and Holcomb 2 primarily consist of nitrogen monoxide (“NO”), which immediately forms NO₂ once released into the atmosphere. SO_x emissions from Holcomb 1 and Holcomb 2 are almost entirely SO₂.

d. The modeling relies on unrealistic and unenforceable assumptions regarding the sulfur content of the coal that will be burned. The modeling relies on the annual average sulfur content of the coal that Sunflower will use, but the actual sulfur content frequently can and will be well above the annual average for a one-hour period. The modeling should be based on worst-case emissions, using the highest-sulfur coal that the facility plans to burn. KDHE failed to respond to comments on the draft permit that provided detailed alternative calculations addressing this issue.

e. The modeling relies on Significant Impact Levels (“SILs”) that are much larger than the applicable SILs in guidance issued by the EPA. Under the EPA guidance, a source whose potential contribution to an exceedence of the NAAQS is below a threshold significant impact level is not deemed to contribute to a violation of a NAAQS. By relying on larger SILs than those issued by EPA, Sunflower has failed to demonstrate that the Holcomb Expansion will not contribute to exceedences of the NAAQS. Moreover, the text of the Clean Air Act does not authorize a source to cause or contribute to any exceedences of the NAAQS, no matter how small the contribution. 42 U.S.C. § 7475(a)(3).

f. Finally, the modeling assumes certain background concentrations of NO_x and SO₂, but these assumed background concentrations are not reasonable and not adequately supported.

37. The notification provisions of the Permit are inadequate because they do not apply during periods of malfunction; nor are there any limits for which even notification is required during construction of the Holcomb Expansion. The NAAQS must be complied with at all times, and the final Permit fails to demonstrate compliance during these significant periods.

38. Finally, the notification provisions of the Permit are inadequate because they fail to require continuous monitoring of emissions. If the Holcomb Expansion's emissions are not monitored at all times, then it will not be possible for Sunflower to notify KDHE whether its emissions exceed the levels specified in the Permit because Sunflower will not be aware that these levels have been exceeded.

B. The Permit Fails to Include Adequate Emissions Limitations for Hazardous Air Pollutants ("HAPs").

39. The Clean Air Act requires that any "stationary source" that has the potential to emit more than 10 tons per year of any single hazardous air pollutant or more than 25 tons per year of all hazardous air pollutants must be subject to emissions limitations based on the maximum achievable control technology ("MACT") for all hazardous air pollutants. 42 U.S.C. § 7412. The MACT requirement is more stringent than the best available control technology ("BACT") requirement applicable to other regulated pollutants, as the hazardous air pollutants covered under this provision are those that are the most severely toxic to human health and the environment, even in small amounts. HAPs that the Holcomb Expansion will emit include mercury and acid gases such as hydrogen chloride ("HCl") and hydrogen fluoride ("HF").

40. KDHE did not include MACT emissions limitations for HAPs in the Permit on the grounds that Holcomb Expansion is not a "major" source (i.e., does not have the potential to emit more than 10 tons per year of any single hazardous air pollutant or more than 25 tons per year of all hazardous air pollutants). Instead, KDHE included as emissions limits in the Permit only the requirement that Holcomb 2 may not emit more than 10 tons per year of any single hazardous air pollutant or more than 25 tons per year of all hazardous air pollutants and based its determination that the Holcomb Expansion is a minor source status on these limitations.

41. The Settlement Agreement between Sunflower and the Kansas Governor includes

emissions estimates from Sunflower that the Holcomb Expansion will emit less than 10 tons per year of any single hazardous air pollutant and less than 25 tons per year of all hazardous air pollutants, and provides that KDHE must accept the accuracy of this data. KDHE may not allow Sunflower to escape MACT limits on the basis of these unsupported estimates.

42. KDHE's determination that Holcomb is not a major source is flawed because KDHE substantially underestimated the potential emissions from the Holcomb 2 boiler, failed to limit or even estimate emissions from numerous other HAPs emission sources that are included in the Holcomb Expansion, and included a permit limit for the boiler only that is not enforceable. Accordingly, the Permit fails to ensure that the Holcomb Expansion will not emit amounts of these hazardous pollutants above the major source thresholds.

43. Under the Clean Air Act, whether a source qualifies as "major" is based on the source's "potential to emit" HAPs. 42 U.S.C. § 7412. This "potential to emit" standard is a protective one, and requires any facility that could possibly exceed the major source threshold to include stringent emissions limits to reduce its HAPs emissions. Rather than calculating Holcomb's total potential to emit HAPs, however, the Permit estimates Holcomb 2's actual HAPs emissions based on stack testing at Holcomb 1. Actual emissions cannot be used as a surrogate for potential emissions. KDHE must properly calculate the maximum potential emissions from Holcomb 2 based on the highest emission factors and operation at maximum capacity for the design of the plant. By improperly relying on actual emissions, KDHE used a less protective standard and substantially underestimated the potential emissions from the Holcomb boiler. Estimates of actual emissions cannot exempt Holcomb from the MACT requirement.

44. In addition to improperly relying on actual emissions from Holcomb 1, KDHE

improperly relied on emissions factors from the Electric Power Research Institute (“EPRI”) to estimate the HAPs emissions from the Holcomb 2 boiler. The EPRI emissions factors are substantially lower than the AP 42 emissions factors developed and published by the federal government for the same pollutants. While the basis for and data underlying the federal AP 42 factors is public information, the EPRI is a membership-based group that only discloses the data and basis for its emissions factors at a substantial price (around \$200,000 per factor). KDHE did not disclose the basis for the EPRI emissions factors on which it relied to estimate that Holcomb will not be a major source. While KDHE is not required to use the AP 42 factors, KDHE must demonstrate that the emissions factors it relied on are appropriate, and must disclose the basis for these factors and allow the public the chance to comment on whether these factors are in fact accurate and appropriate. Given the substantial discrepancy between the EPRI emissions factors and the AP 42 emissions factors, there is reason to believe that the EPRI factors are not in fact appropriate. Indeed, the EPRI factors are not meant to be used to calculate a source’s maximum potential emissions (as required by the Clean Air Act); rather, they are designed to aid sources in reporting actual emissions for the Toxic Release Inventory, which is an inventory of reported emissions governed by a different federal law and different standards. KDHE has failed to demonstrate that reliance on the EPRI emissions factors is appropriate and has failed to give the public an opportunity to comment on this critical analysis.

45. Additionally, KDHE failed to adequately consider whether malfunctions of pollution control equipment would cause the Holcomb 2 boiler to exceed the major source threshold. Specifically, it is virtually certain that the dry scrubber used to control SO₂ emissions will malfunction at some point, and KDHE failed to consider or account for this contingency. KDHE also assumed that during routine maintenance activities for the scrubber, only 1/3 of

emissions would be uncontrolled, but KDHE provides no justification for this assumption and no permit condition to ensure that this assumption is enforceable. These omissions also caused KDHE to underestimate the total emissions from the Holcomb 2 boiler.

46. The Permit fails to limit or even estimate emissions from numerous HAPs sources that are included in the Holcomb Expansion. The definition of “major source” in the Clean Air Act requires that HAPs emissions from all sources necessary to the operation of Holcomb 2 be aggregated and considered as part of the source’s potential to emit. 42 U.S.C. § 7412(a)(1). However, the Permit only estimates and limits HAPs emissions from the boiler for Holcomb 2; there are no estimates or limits of any sort for multiple other sources that are necessary for Holcomb 2 to operate, such as the auxiliary boiler, the emergency engines, and various fugitive emissions sources. Many of these sources will emit HAPs – for example, the material handling equipment and the auxiliary boiler will both emit numerous HAPs. Without emissions estimates and enforceable limits that cover all sources necessary to the operation of Holcomb 2, KDHE has failed to demonstrate that the Holcomb Expansion is not a major source of HAPs.

47. For all of these and other reasons, KDHE substantially underestimated the potential to emit HAPs of the Holcomb Expansion. Indeed, other coal plants of similar size and design are major sources of HAPs, and had KDHE accurately calculated Holcomb’s true potential to emit HAPs, the Holcomb Expansion would be subject to MACT limits for these hazardous toxins.

48. The Permit contains a limit for HAPs emissions from the Holcomb 2 boiler of 10 tons per year of a single HAP and 25 tons per year of all HAPs. However, these permit limits are not enforceable and so do not adequately limit the boiler emissions. The Permit fails to require continuous monitoring of HAPs emissions; instead, the Permit allows sporadic stack tests to

demonstrate compliance. Without continuous monitoring, there is no way to know whether Holcomb is exceeding the 10/25 ton per year threshold. For the reasons discussed above, it is likely that Holcomb will exceed this threshold, as KDHE's estimates substantially underestimate Holcomb's emissions. Without adequate monitoring, KDHE cannot rely on the permit limit to ensure that Holcomb will stay below the major source threshold. Moreover, HAPs emissions from sources other than the boiler are not monitored or tested at all under the Permit and are not even limited. Because Holcomb is a major source of HAPs, the Permit must include MACT limits for all hazardous air pollutants.

49. Even if the Holcomb Expansion, taken alone, were not a major source of HAPs (which it is), Holcomb Station as a whole is a major source of HAPs and so should be subject to MACT requirements. "Major source" is defined in the Clean Air Act as any "group of stationary sources located within a contiguous area and under common control" that has the potential to emit, "in the aggregate," 10 or more tons per year of any one HAP or 25 or more tons per year of a combination of HAPs. 42 U.S.C. § 7412(a)(1). Under this definition, it is clear that Holcomb Station – including the existing Holcomb 1 unit, the proposed new Holcomb 2 unit, and all auxiliary and associated facilities (material handling equipment, auxiliary boilers, emergency generators, etc.), together constitute a single source. Holcomb 2, in combination with the other sources at Holcomb Station (including Holcomb 1), has the potential to emit HAPs above the 10/25 major source threshold; therefore, Holcomb Station is a major source.

50. Mercury is a hazardous air pollutant. While the Permit does include specific emissions limits for mercury, they are too high. Much lower emissions levels are easily achievable. The mercury limits in the Permit therefore are not MACT; nor are they adequately protective of human health and the environment.

C. The Permit Fails to Include Clean Fuels and Innovative Combustion Techniques in the BACT Analysis.

51. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

52. The definition of BACT in the Clean Air Act explicitly includes “innovative fuel combustion techniques” among the available methods of emissions reductions that must be considered as part of the BACT determination. 42 U.S.C. § 7479(3). The statutory definition of BACT also explicitly includes consideration of emissions reductions achievable by using “clean fuels.” 42 U.S.C. § 7479(3).

53. In the BACT analysis for the Permit, KDHE failed to even include innovative fuel combustion techniques and clean fuels that would substantially reduce the emission of numerous regulated pollutants from the Holcomb Expansion. Specifically, KDHE failed to include ultra-supercritical pulverized coal combustion techniques, the use of natural gas as a primary fuel source, and integrated gasification combined cycle technology.

54. Ultra-supercritical pulverized coal (“USPC”) is a readily available combustion technique that is inherently more efficient – and therefore less polluting – than the supercritical technology identified by KDHE as BACT for the Holcomb Expansion. Indeed, Sunflower’s engineering contractor, Black & Veatch, determined USPC was the most efficient, cleanest, and least cost option when it studied the issue for Florida Power & Light in 2007, and on the basis of this analysis USPC was selected as BACT for that plant. However, Black & Veatch did not

evaluate USPC, or even acknowledge it as an option, in its analysis for the Holcomb Expansion – either in its 2006 initial report for Sunflower’s application for a different facility, or in its 2010 update to that report for the application for this Permit.

55. KDHE attempted to justify its failure to even include USPC in the BACT analysis on the grounds that USPC is too new and not adequately demonstrated in the United States, and also on the grounds that Sunflower is too small a company to have to consider the newer, more efficient combustion techniques that other companies are employing. A proper BACT analysis requires consideration of cutting-edge technologies, not just existing and well-established processes, and BACT is not based on the size of the company proposing a new major source (nor would Tri-State, the primary owner of the capacity from the Holcomb Expansion, be considered a small entity even if this could be a consideration). Moreover, even if any of these factors could have been considered, USPC should still have been part of the BACT analysis and the public should have been given a chance to comment on the reasons it was not selected.

56. Similarly, KDHE’s failure to include integrated gasification combined cycle (“IGCC”) technology in the BACT analysis renders that analysis and the Permit deficient. Other state permitting authorities have recognized that the Clean Air Act requires consideration of IGCC: as the EPA’s Environmental Appeals Board 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. In re Desert Rock Energy Co., PSD Appeal No. 08-03 et al., slip op. at 57 (E.A.B. Sept. 24, 2009). KDHE is properly guided by the consideration of IGCC for similar facilities in other states, as 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.’” In re American Electric Power Service Corp., John W. Turk Plant,

Order Responding to Title V Petitions at p.9 (Adm'r 2009). As EPA has made clear, KDHE and Sunflower must consider IGCC in the BACT determination or persuasively explain why IGCC should not be considered potentially available in this instance, despite its availability at other similar facilities. Reasons that IGCC might not be BACT for this plant should have been considered in the BACT analysis; they are not reasons to fail to even include IGCC in the analysis.

57. Finally, KDHE's failure to consider natural gas as a primary fuel source and its failure to impose emissions limitations consistent with the use of natural gas render the Permit invalid. KDHE attempts to justify its failure to consider natural gas on the grounds that natural gas is too expensive with volatile and high prices; however, these assertions are based on incorrect and outdated information. Moreover, such price considerations should only play a role in the final stages of the BACT analysis; they do not justify the failure to include a plainly available and inherently less-polluting alternative in the analysis.

58. KDHE's failure to include numerous inherently less-polluting combustion processes and cleaner fuels in the BACT analysis renders that analysis deficient. Substantially lower emissions limits for many regulated pollutants would be possible with the use of these processes and fuels, and KDHE cannot justify its failure to include these options in the analysis.

D. The Permit Fails to Include Adequate Emissions Limitations for Sulfur Dioxide.

59. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the "best available control technology" ("BACT") for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

60. To ensure that the BACT determination is reasonably moored to the Clean Air Act's statutory requirement that BACT represent the maximum achievable reduction through the use of the best available pollution control techniques, 42 U.S.C. § 7479(3), EPA established a top-down analysis process outlined in the New Source Review ("NSR") Manual. Both KDHE and Sunflower claim to follow the top-down method from the NSR Manual in the BACT determinations for the Permit.

61. The emissions limit for sulfur dioxide ("SO₂") in the Permit is 0.085 lb/mmBtu or 0.060 lb/mmBtu, depending on whether the scrubber inlet SO₂ is greater or less than 0.9 lb/mmBtu, on a 30-day rolling average basis. This emissions limit is too high and is the result of an inadequate BACT determination.

62. The final Permit selects a dry scrubber as BACT for SO₂, despite the fact that a wet scrubber would clearly remove higher levels of SO₂ and would therefore lead to a more stringent emissions limitation. Sunflower would prefer to install a dry scrubber for Holcomb 2 because Holcomb 1 (the existing unit) uses a dry scrubber, and using the same pollution control technology at both plants will lead to cost savings. BACT, however, requires a new unit to install the best available control technology, not the technology that is most convenient for the applicant.

63. KDHE improperly rejected a wet scrubber as BACT and selected a dry scrubber as BACT based on numerous errors and inconsistencies throughout the BACT analysis for SO₂. For example, the BACT analysis assumes that a wet scrubber has a removal efficiency of only 94%, when in fact wet scrubbers regularly achieve higher removal efficiencies. For example, the permit for Plant Washington assumes a wet scrubber efficiency of more than 97%. Likewise, a substantial body of technical literature persuasively demonstrates that wet scrubbers can achieve

greater than 99% efficiency. Properly assuming a greater efficiency for wet scrubbers would lead to the selection of a wet scrubber as BACT and, as a result, a more stringent emissions limit in the Permit.

64. SO₂ emissions levels far lower than the SO₂ emissions limits in the Permit are being and have been achieved by existing units using wet scrubbers, and KDHE has failed to adequately justify why such lower emissions levels are not achievable by the Holcomb Expansion.

65. KDHE improperly dismissed the fact that wet scrubbers achieve higher efficiencies on the grounds that these higher efficiencies are only achieved for higher-sulfur coal, and cannot be achieved with the lower-sulfur Powder River Basin (“PRB”) coal that Sunflower plans to use. However, KDHE also acknowledged that a wet scrubber would achieve higher SO₂ removal for low-sulfur PRB coal than a dry scrubber. Moreover, numerous existing plants burning the same type of coal that will be used at Holcomb Station (PRB coal) rely on wet scrubbers for SO₂ control and achieve high efficiency levels. Because a wet scrubber would achieve higher SO₂ removal for PRB coal than a dry scrubber, KDHE should have selected a wet scrubber as BACT.

66. The BACT analysis attempts to justify the selection of a dry scrubber over a wet scrubber based, in part, on cost savings resulting from the fact that the existing Holcomb 1 uses a dry scrubber, but the pollution control technology at the existing unit is not properly part of the BACT determination for a new major source. The BACT analysis also points to factors such as water use that KDHE claims justify the erroneous selection of a dry scrubber as BACT. However, these other factors may only be considered at the costs and environmental impacts stages of the BACT analysis; they may not be used to dismiss a more effective control

technology in the first stages of the BACT analysis. KDHE inappropriately weighted these factors by including them at the wrong stage of the analysis.

67. Moreover, even if a dry scrubber were properly selected as BACT (which it was not), the emissions limits are based on an inadequate determination of the feasible removal efficiency of a dry scrubber. For example, in the BACT analysis the removal efficiency of a dry scrubber is assumed at various points in the analysis to be anywhere from 90.56% to 93.1%. Neither these efficiency levels nor this discrepancy are adequately justified.

E. The Permit Fails to Include Adequate Emissions Limitations for Nitrogen Oxides.

68. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

69. The emissions limit for nitrogen oxides (“NO_x”) in the Permit is 0.05 lb/MMBtu on a 30-day rolling average basis, excluding periods of startup and shutdown. This emissions limit is too high and is the result of a BACT determination that is inadequate for numerous reasons.

70. KDHE inappropriately based the NO_x emissions limit on the emissions levels achieved at existing, older facilities without rationally assessing whether a more stringent emissions limit would be achievable by the Holcomb Expansion. BACT requires consideration of what is achievable, not just what has been achieved; accordingly, the BACT determination is inadequate.

71. As part of the BACT determination, KDHE must consider whether emissions

limits imposed in other permits are achievable at the Holcomb Expansion; where other permits found achievable and actually imposed stricter emissions limits, KDHE must impose a limit that is at least as stringent or justify why a similarly stringent emissions limit is not achievable. For example, the PSD permit for Plant Washington, a recently permitted and substantially similar plant in Georgia, includes a much more stringent NO_x emissions limit than the Holcomb Expansion Permit. KDHE's assertion that such a limit is not achievable at the Holcomb Expansion is based only on the fact that this limit has not yet been achieved by Plant Washington because that plant has not yet been built. This is an inadequate justification for failure to consider a more stringent limit; KDHE has failed to adequately explain why a lower NO_x emissions limit is not achievable for the Holcomb Expansion, despite the fact that it was determined to be achievable for Plant Washington and other plants.

72. Even if it was appropriate to rely only on emissions limits that have been achieved at existing and operating plants to determine BACT (which it is not), the Holcomb Expansion NO_x emissions limits are still too high. Existing facilities have, in fact, achieved lower emissions levels than the 0.05 lb/MMBtu limit in the Permit. Multiple existing facilities have sustained these lower emissions levels for periods of a full year, and several have consistently sustained these levels for far longer. As demonstrated by the emissions levels at these existing plants, lower NO_x emissions levels are sustainable over the lifetime of the Holcomb Expansion.

73. Technical literature also clearly demonstrates that lower NO_x emissions levels are achievable at Holcomb Expansion. KDHE either failed to consider or gave too little weight to numerous studies showing that lower NO_x emissions are achievable.

74. KDHE mistakenly asserts that a lower NO_x emissions rate would not be achievable without increases in carbon monoxide ("CO") and volatile organic compound

(“VOC”) emissions; however, new low-NO_x burners can achieve low levels of NO_x emissions as well as low CO values. Tests on existing burners dating as far back as 2002 demonstrate that it is feasible to lower NO_x emissions while also maintaining low CO and VOC emissions. KDHE failed to consider this available information and instead relied on the erroneous assertion that there is always a trade-off between NO_x emissions and CO and VOC emissions to justify the high NO_x emissions limits in the Permit.

75. Other substantial errors and mistaken assumptions in the NO_x BACT analysis similarly contribute to the inappropriately high NO_x emissions limit in the Permit. For example, KDHE mistakenly assumes a low efficiency for the selective catalytic reduction (“SCR”) used to control NO_x emissions and fails to include an efficiency limit (expressed as a required percent reduction in NO_x emissions) in the Permit. Additionally, the economic analysis of SCR is improperly based on overly conservative assumptions regarding the baseline NO_x emissions rate; as a result of these overly conservative estimates, the cost-effectiveness of SCR is skewed.

76. Finally, the BACT analysis is incomplete because it does not include information on the burner configuration that will be used for NO_x control, despite the fact that the burner configuration will have a substantial effect on the level of NO_x removal. The BACT analysis is incomplete without this information.

F. The Permit Fails to Include Adequate Emissions Limitations for Particulate Matter.

77. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control

technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

78. The emissions limits for filterable and total particulate matter (“PM”) are too high and are the result of inadequate and incomplete BACT determinations. Additionally, the emissions limits for fine particulate matter (PM_{2.5}) are too high and unsupported.

79. The Permit includes only a single emissions limit for all filterable particulates, regardless of size. However, the Permit can and should include separate emissions limitations based on complete BACT analyses for total particulate matter (“PM”), large particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}). KDHE’s assertion that there are insufficient data about the distribution of particle size to include a separate filterable PM_{2.5} limit is incorrect. Similarly, the Permit includes the same limit for total PM₁₀ and PM_{2.5}, without adequate justification.

80. The BACT analysis for PM_{2.5} is based entirely on the BACT analysis for PM₁₀. KDHE failed to consider numerous pollution control options specific to PM_{2.5}. Additionally, the PM_{2.5} total BACT limit is based on inadequate BACT determinations for VOCs, SAM, SO₂, and NO_x (SO₂, NO_x, and VOCs are all precursors to PM_{2.5}, and SAM is a subset of PM_{2.5}).

81. The emissions limits for filterable PM are improperly based on the limits at other existing facilities, not a rational examination of all available control technology to determine the lowest achievable limit for the Holcomb Expansion.

82. Even looking only at other similar facilities, the BACT limits for filterable PM are too high. The limits in the Plant Washington permit are much more stringent, and data from other states show that lower emissions levels are achievable. KDHE has failed to justify why lower emissions limits are not achievable here.

83. The BACT analysis is incomplete because it does not include a determination of

the filter media that will be used for the filter bags. The filter media and type of bag are key components in determining the efficiency of the baghouse filter, and this information should have been included in the BACT analysis and made available for public comment.

84. The Permit allows the proposed total PM limit of 0.018 lb/mmBtu to be increased to 0.025 lb/mmBtu if Sunflower fails to meet the lower limit. This higher “contingency” limit is not justified; Sunflower can and should comply with the lower PM emissions limit.

85. Additionally, the PM limits in the Permit are internally inconsistent: neither the 0.018 lb/mmBtu limit nor the 0.025 lb/mmBtu “contingency” limit equate to the 748 tons per year limit for PM₁₀. KDHE failed to respond to specific comments on the draft permit highlighting these inconsistent calculations.

86. The modeling used to demonstrate compliance with the PM NAAQS relies on Significant Impact Levels (“SILs”) for fine particulate matter (PM_{2.5}) that are much larger than the applicable SILs promulgated by the EPA. 75 Fed. Reg. 64,864 (Oct. 20, 2010). Under the final PM_{2.5} SIL rule, *id.*, a source whose contribution to an exceedence of the NAAQS is below a threshold significant impact level is not deemed to contribute to the violation. By relying on larger SILs than those promulgated by EPA, KDHE has failed to demonstrate that the Holcomb Expansion will not contribute to exceedences of the NAAQS. Moreover, the text of the Clean Air Act does not authorize a source to cause or contribute to any exceedences of the NAAQS, no matter how small the contribution.

87. Finally, the Permit improperly fails to require monitoring and reporting of ammonia, which is a precursor to PM_{2.5}.

G. The Permit Fails to Include Adequate Emissions Limitations for Volatile Organic Compounds and Carbon Monoxide.

88. Under the CAA, no person may construct a major stationary source of regulated

air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

89. The emissions limits for volatile organic compounds (“VOCs”) and carbon monoxide (“CO”) in the Permit are too high and are the result of BACT determinations that are inadequate.

90. The Permit fails to consider existing and available technology that would reduce the CO and VOC emissions from the Holcomb Expansion. KDHE incorrectly assumed that lower VOC and CO limits would not be achievable without increasing NO_x emissions.

91. KDHE acknowledged that two recent permits (Plant Washington and Desert Rock) contain VOC and CO emissions limits significantly lower than the VOC and CO emissions limit in the Permit while also containing lower NO_x limits than the limits in the Permit. KDHE failed to adequately justify why such lower emissions limits are not achievable by the Holcomb Expansion.

H. The Permit Fails to Include Adequate Emissions Limitations for Sulfuric Acid Mist.

92. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

93. The emissions limit for sulfuric acid mist (“H₂SO₄” or “SAM”) in the Permit is 0.0037 lb/mmBtu on a 3-hour average basis. This emissions limit is the result of a BACT determination that is inadequate for numerous reasons.

94. The Permit fails to consider existing and available technology, such as a lower conversion SCR (selective catalytic reduction) catalyst, that would reduce the SAM emissions from the Holcomb Expansion.

95. KDHE acknowledged that multiple recent permits contain emissions limits significantly lower than the SAM emissions limit in the Permit, but failed to adequately justify why such lower emissions limits are not achievable by the Holcomb Expansion.

I. The Permit Fails to Include Adequate Emissions Limitations for Multiple Pollutants for Periods of Startup and Shutdown.

96. Under the CAA, no person may construct a major stationary source of regulated air pollutants unless they demonstrate that the source will be subject to the “best available control technology” (“BACT”) for each regulated pollutant. 42 U.S.C. § 7475(a)(4). The BACT requirement is expressed as an emissions limitation in the Permit for each pollutant based on the lowest level of emissions that can be achieved by application of the best available control technology for each pollutant. 40 C.F.R. § 52.21(b)(12).

97. BACT requirements cannot be waived or otherwise ignored during periods of startup and shutdown. See In re: Tallmadge Generating Station, PSD Appeal No. 02-12, (E.A.B., May 22, 2003); see also In re: Rockgen Energy Center, PSD Appeal No. 99-1, (E.A.B., August 25, 1999). Only if KDHE demonstrates that compliance with the generally applicable BACT requirements during periods of startup and shutdown is not feasible, may KDHE set secondary BACT limits that apply during those periods. For such secondary limits, KDHE must demonstrate on the record that the proposed permit minimizes emissions during startup and

shutdown and minimizes the periods during which any less stringent emissions limitations apply.

98. For NO_x, SO₂, and PM, the Permit's BACT determinations and resulting emissions limits during periods of startup and shutdown are inadequate. The basis for the startup and shutdown limits is "general guidance" from equipment manufacturers; however, the specific equipment vendors for NO_x, SO₂, and PM have not even been selected yet, so it is not clear what guidance KDHE used or could have known to use.

J. The Modeling, Monitoring, and Emissions Inventories Are Inadequate.

99. The modeling used to support the conclusions that the Holcomb Expansion will not cause or contribute to violations of the NAAQS is deficient. The Holcomb Expansion will emit substantial volumes of two ozone precursors: VOCs and NO_x. The qualitative ozone ambient impact analysis substantially underestimates the project's impacts on ground level ozone. Accordingly, KDHE has failed to demonstrate that the Holcomb Expansion will not contribute to exceedences of the NAAQS. The modeling also assumes that the Holcomb Expansion will only burn PRB coal and fails to consider whether emissions will change if the Holcomb Expansion burns Kansas coal.

100. The Clean Air Act requires site-specific air quality monitoring for every PSD permit application. 42 U.S.C. §§ 7475(e). These ambient air quality data must be collected at and around the site of the new source, and are used to establish the baseline concentrations of regulated pollutants. This baseline is then used to assess whether the new source will cause a violation of NAAQS or increment.

101. The Permit is not based on adequate ambient air monitoring. No site-specific monitoring was conducted; instead, KDHE relied on air monitoring data from existing monitors. These data are insufficient because the monitors are too far from Holcomb to be representative of the ambient air quality at Holcomb; because the monitoring data are not sufficiently current; and

because the monitoring data do not meet the requisite data quality standards.

102. Finally, the emissions inventories used to demonstrate compliance with the NAAQS are deficient. Emissions inventories are used to perform dispersion modeling to demonstrate compliance with the NAAQS and increments. The emissions from all sources at the Holcomb Station, as well as all increases in emissions from all major, minor and area sources must be included in the modeling for increment consumption. This includes increased emissions from traffic and from concentrated animal feeding operations.

103. A large number of concentrated animal feeding operations have been added to the area within 50 km of the Holcomb Station since Holcomb 1 was built. These operations emit PM, PM₁₀, and PM_{2.5}. However, none of these area sources is included in the inventory of increment consuming sources. Accordingly, the emissions inventories fail to include all necessary sources and the modeling fails to demonstrate that Holcomb will not cause or contribute to a violation of the NAAQS or increment.

K. The Permit Fails to Include Required New Source Performance Standards.

104. In addition to being subject to BACT requirements, Holcomb 2 is also subject to New Source Performance Standards (“NSPS”). These are separate legal standards and must be included separately in the Permit as independently enforceable permit conditions. While the Permit identifies the relevant NSPS standards, it does not include them as permit conditions. Accordingly, the Permit fails to include all applicable legal requirements.

L. The Permit Is Not Adequately Enforceable.

105. In many areas, the Permit is vague and does not include enforceable permit conditions. This failure to include many critical operating parameters as enforceable permit conditions means that there is no means under the Permit to ensure that Holcomb 2 will operate as assumed, and therefore no assurance that the emissions from Holcomb 2 will not cause or

contribute to a NAAQS violation.

106. For example, the modeling and BACT determinations are based on a maximum heat output for Holcomb 2 of 8700 mmBtu/hr, but this maximum hourly heat output is not included as an enforceable condition in the Permit. Additionally, the Permit needs to define both a maximum hourly and an average annual heat output and both need to be enforceable permit conditions. While in the past, such limits were not necessary to determine compliance with the NAAQS, recent NAAQS include 1-hour limits for NO_x, SO_x, and ozone; ensuring compliance with these 1-hour standards requires hourly heat output limits.

107. The Permit does not require adequate compliance monitoring. The Permit inappropriately allows Sunflower to use compliance monitoring for certain pollutants to serve as a surrogate for compliance monitoring for other pollutants based on an inadequate assessment of correlation. Specifically, the Permit allows PM to be used as a surrogate for PM₁₀ and PM_{2.5}, and allows CO, PM, and SO₂ to be used as surrogates for VOC, lead, and SAM. This correlation approach to compliance monitoring was not included in the draft permit and the public was not given an opportunity to comment on the adequacy of the surrogates.

108. The Permit does not include adequate short-term emissions limits and compliance monitoring. Thirty-day rolling average permit limits do not ensure that NAAQS with short-term standards are met. Each of the regulated pollutants should have maximum hourly emission rates incorporated into the Permit along with the method by which compliance will be demonstrated.

II. THE PERMIT FAILS TO PROTECT HUMAN HEALTH AND WELFARE.

109. Under the federally-approved Kansas State Implementation Plan (“SIP”), the Secretary of KDHE has the authority to deny a PSD permit if s/he finds that “any specific emissions source . . . will tend to be significantly injurious to human health or welfare.”

K.A.R. 28-19-13; see also 40 C.F.R. § 52.870(c) (listing K.A.R. 28-19-13 as part of the

federally-approved Kansas SIP).

110. Under the Clean Air Act, for a state to revise its SIP, it must (1) give notice and an opportunity for public comment, and (2) submit the revisions to EPA for approval. 42 U.S.C. § 7410(l). The Clean Air Act provides that states may not unilaterally modify SIP provisions. Id. § 7410(i); see also Sierra Club v. TVA, 430 F.3d 1337, 1346 (11th Cir. 2007) (citing 40 C.F.R. § 52.1384); Duquesne Light Co. v. U.S. EPA, 698 F.2d 456, 468 n.12 (D.C. Cir. 1983) (noting that states cannot unilaterally modify any requirement under their SIP without EPA approval). Additionally, states are prohibited from adopting or enforcing any limitation or standard that is less stringent than the approved SIP. 42 U.S.C. § 7416. State legislation does not supersede a state SIP, unless and until the change is approved by U.S. EPA through a federal notice and comment rulemaking process. 40 C.F.R. § 51.105.

111. Under the approved Kansas SIP, the Secretary has the discretion to deny a permit to prevent future emissions that would be injurious to health or welfare. See 40 C.F.R. § 52.870(c) (citing K.A.R. 28-19-13). This provision allows the Secretary to deny a permit even when other minimum requirements are met if the permit poses unacceptable risks to public health and welfare. This provision gave the Secretary of KDHE the authority to deny Sunflower's 2006 permit application for a different facility because it posed unacceptable risks to public health and welfare. K.A.R. 28-19-13 (granting Secretary authority to prevent injurious emissions "[c]ompliance with the provisions of these emission control regulations (including exemptions included therein) notwithstanding"). The Parkinson-Sunflower Settlement Agreement and the ensuing state legislative amendments to the Kansas Air Quality Act attempt to strip this discretion by limiting the Secretary's authority to deny permits generally and by specifically providing that the Secretary "shall" issue a PSD permit for the Holcomb 2 project.

2009 Kan. Sess. Laws 141, New Section 42 & § 24. Until these legislative amendments and executive agreements are approved by the EPA Administrator as appropriate amendments to the Kansas SIP, they are without effect and the Secretary retains the discretion to deny a permit on the grounds that future emissions would be injurious to the public health or welfare.

112. The greenhouse gases the Holcomb Expansion will emit will be “significantly injurious” to human health and welfare. The Secretary has already found this to be the case in his 2007 denial of Sunflower’s permit application for a different project. Since that time, the evidence of harm caused by greenhouse gases and global warming has only grown stronger, and the EPA has formally found that these pollutants endanger human health and the environment. See 74 Fed. Reg. 18886 *et seq.* (April 24, 2009); 74 Fed. Reg. 66496 *et seq.* (Dec. 15, 2009). KDHE has failed to explain why the 2007 determination does not govern here and has failed to adequately respond to the substantial evidence provided during the public comment period of the harm caused by the greenhouse gases that the Holcomb Expansion will emit.

113. The Holcomb Expansion will injure human health and welfare in numerous other ways as well. The Holcomb Expansion will emit thousands of tons each year of air pollutants including particulate matter, mercury, and ozone-forming constituents. All of these cause serious harm to human health and the environment. The Holcomb Expansion will not comply with all effective NAAQS (including the 1-hour NO₂ and SO₂ NAAQS) and does not include MACT limits to control emissions of hazardous air pollutants; by failing to comply with these minimum standards, the project will cause serious harm to human health and the environment.

114. Moreover, even if the Permit ensured that the Holcomb Expansion would comply with all applicable NAAQS (which it does not), evidence presented to KDHE demonstrates that even at emissions levels below the NAAQS, the pollutants emitted by the expansion will harm

human health in significant ways.

115. KDHE failed to evaluate the Permit under the governing provisions of the Kansas SIP and failed to consider the harm to human health and the environment that the project will cause. Accordingly, the Permit is unlawful.

III. THE PERMIT IS INVALID BECAUSE THE PLANT WILL NOT BE BUILT WITHIN 18 MONTHS.

116. Under federal and Kansas law, an applicant that receives a PSD permit must commence construction within 18 months or the permit becomes invalid. 40 C.F.R. § 52.21(r)(2), incorporated by reference in K.A.R. 28-19-350.

117. This 18-month time limit is a critical component of the permitting process. As the Environmental Appeals Board has held, “[i]t is inappropriate for [an applicant] to bank a BACT determination that may well be outdated and to retain allotted PSD increment in the hopes that [the] facility might be constructed at some later date.” See In re West Suburban Recycling and Energy Center, LP, 8 E.A.D. 192 (E.A.B. 1999) (holding a PSD permit invalid where there was no reasonable likelihood of completing the plant); In re New York Power Authority, 1 E.A.D. 825, 826 (Adm’r 1983) (PSD permit application should be denied where “there is no realistic prospect that construction of the project would commence, as required by § 52.21(r)(2), within eighteen (18) months after issuance of a final PSD permit.”).

118. Sunflower and Tri-State’s own predictions demonstrate that there is no need for most of the capacity from the Holcomb Expansion, and there is no realistic prospect that the project will be constructed within 18 months. See supra at ¶¶ 15-16 (describing power purchase agreements and Tri-State’s analysis of its resource needs). For this additional reason, KDHE should not have issued the Permit.

IV. THE PERMITTING PROCESS WAS UNLAWFUL.

A. The Permit Was Issued in Bad Faith and Based on Improper Political Influence.

119. Under the Kansas Judicial Review Act, this Court may set aside an agency decision that follows an unlawful procedure, where the decision maker acted in bad faith or was otherwise subject to disqualification, or where the action was otherwise unreasonable, arbitrary or capricious. K.S.A. 77-621(c); see also id. § 77-619(a) (authorizing the court to receive additional evidence regarding “(1) Improper constitution as a decision-making body; or improper motive or grounds for disqualification, of those taking the agency action; or (2) unlawfulness of procedure or of decision-making process.”).

120. The decision to issue the Permit and the emissions limitations in the Permit did not follow proper procedure. The Settlement Agreement and state legislation establishing that Sunflower “shall” receive an air permit predetermined the outcome of the permitting process. The provision of the Settlement Agreement stipulating that the Permit shall be substantially the same as the 2007 draft permit predetermined the erroneous selection of less effective pollution control technology as BACT and led to unlawfully high emissions limits in the Permit. Similarly, the HAPs estimates provided by Sunflower and the provision of the Settlement Agreement stipulating that KDHE must accept these estimates as accurate predetermined the erroneous conclusion that Sunflower is not a major source of HAPs. Rather than determine whether the Permit complied with all relevant law, including the provisions of the Kansas CAA State Implementation Plan (“SIP”) and the requisite BACT determinations, KDHE issued the Permit to satisfy state-level political agreements reflected in state law that cannot supersede the Kansas SIP. See supra at ¶ 110 (discussing relationship between federal and state law).

121. On at least one occasion, Sunflower requested that executive and legislative officials directly contact KDHE to pressure KDHE to expedite the permitting process and limit

the public's opportunity to comment. Accordingly, the evidence also indicates that the permitting process was subject to improper political influence and conducted in bad faith.

B. KDHE Failed to Adequately Respond to Public Comments.

122. The Kansas Air Quality Act and implementing regulations require KDHE to thoroughly respond to all public comments on a draft air permit before issuing a final permit. K.A.R. 28-19-204; id. § 28-19-350(k).

123. KDHE spent seven weeks responding to 5,876 public comments on the draft permit. In contrast, for Sunflower's 2007 permit application, KDHE received 779 public comments and took 10 months to issue the final permit decision.

124. Even considering the first and second comment period together, the Permit's issuance took less time than estimated for an average complex permit, according to KDHE's information sheet on the permit application review timeline.

125. The unusually short time period KDHE took to respond to comments on the Permit cannot be justified by any need to expedite the Holcomb Expansion due to urgently needed capacity – to the contrary, Sunflower and Tri-State's own predictions demonstrate that the capacity from the Holcomb Expansion will not be needed for many years, if ever.

126. The final Permit includes only minimal changes from the draft permit. The air emissions limitations for the Holcomb 2 steam generator (which is the portion of the Expansion responsible for the highest volume of emissions) are virtually unchanged from the draft to the final Permit, despite the numerous comments describing in detail why these limits must be more stringent.

127. In numerous instances, including the examples discussed above, KDHE failed to adequately respond to public comments on the draft permit before issuing the final Permit.

WHEREFORE, Petitioner respectfully requests a Declaration that the Permit is unlawful;

an Order setting aside the Permit and remanding the matter to the KDHE for further proceedings to redress substantive and procedural failures in the Permit and permitting process; an injunction prohibiting Sunflower from proceeding with construction of the Holcomb Expansion until such time as a valid and lawful permit is issued; an award of the cost of litigation, including reasonable attorney's fees and witness fees; and such further relief as the Court deems just and equitable.

Respectfully submitted this 14th day of January, 2011.

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