Schiff Hardin LLP
233 South Wacker Drive
Suite 6600
Chicago, IL 60606

T 312.258.5500
F 312.258.5600

schiffhardin.com

Stephen J. Bonebrake
312.258.5646
sbonebrake@schiffhardin.com

September 12, 2016

VIA HAND DELIVERY
AND EMAIL (a-and-r-Docket@epa.gov)

Administrator McCarthy
U.S. Environmental Protection Agency
EPA Docket Center
WJC West Building, Room 3334
1301 Constitution Avenue, NW, Washington, DC 20004

Re: Petition for Reconsideration of the United States Environmental Protection Agency's Final Rule Designating Williamson County, Illinois, Nonattainment under Air Quality Designations for the 2010 Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard – Round 2

EPA Docket ID No. EPA-HQ-OAR-2014-0464

Dear Administrator McCarthy:

On behalf of Southern Illinois Power Cooperative ("SIPC"), the undersigned petitions the U.S. Environmental Protection Agency ("EPA" or the "Agency") to reconsider aspects of the Air Quality Designations for the 2010 Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard – Round 2 (EPA-HQ-OAR-2014-0464) (hereinafter, the "2016 Designations"). 81 Fed. Reg. 45,039 (July 12, 2016). The rule becomes effective on September 12, 2016, 60 days after the date of publication in the *Federal Register*, which was on July 12, 2016. Therefore, this petition for reconsideration is timely. 42 U.S.C. § 7607(b)(1).[1]

[1] Concurrent with the filing of this petition for consideration, pursuant to 42 U.S.C. § 7607(b), on September 9, 2016, SIPC filed for judicial review of EPA's nonattainment designation for Williamson

I. INTRODUCTION

On July 12, 2016, EPA published the 2016 Designations. 81 Fed. Reg. 45,039. *See* **Exhibit 1.** The rule established air quality designations under the revised Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520 (June 22, 2010) ("2010 SO_2 NAAQS"), for certain areas subject to a March 2, 2015, consent decree entered by the U.S. District Court for the Northern District of California ("Consent Decree"). *Sierra Club v. McCarthy*, No. 13-CV-03953-SI, 2015 WL 889142 (N.D. Cal. Mar. 2, 2015), *appeal docketed*, 15-15894 (9th Cir. May 1, 2015). SIPC is the owner and operator of the Marion Power Station located in Williamson County, Illinois ("Marion Station"). SIPC submits this petition for reconsideration ("Petition") pursuant to Section 307(d)(7)(B) (42 U.S.C. § 7607) of the Clean Air Act ("CAA") of EPA's designation of Williamson County, Illinois, as nonattainment of the 2010 SO_2 NAAQS.

This Petition focuses narrowly on the nonattainment designation for Williamson County. SIPC requests that EPA reconsider the nonattainment designation and instead designate Williamson County (which includes the area around Marion Station) as in attainment of the 2010 SO2 NAAQS. In the alternative, if EPA believes that there is insufficient information to support an attainment designation, SIPC requests that EPA designate Williamson County as unclassifiable given the absence of any valid and compelling data demonstrating nonattainment and the significant conflicts between the modeling submitted to EPA. In no event, however, does the available information support a finding of nonattainment.

Reconsideration and reversal of the Williamson County nonattainment designation for the 2010 SO2 NAAQS is warranted for the following reasons:

County, Illinois in the United States Court of Appeals for the Seventh Circuit. *SIPC v. EPA*, Case No. 16-3398 (filed September 9, 2016).

(1) EPA's nonattainment designation was based upon unreliable and non-representative data and inaccurate assumptions and inputs;

(2) Modeling data and supporting information submitted by SIPC during the public comment period demonstrates that Williamson County is attaining the 2010 SO_2 NAAQS;

(3) Updated modeling data submitted with this Petition provides corroborative and compelling support that the third-party modeling relied upon by EPA – when corrected for known deficiencies – in fact demonstrates that Williamson County attains the 2010 SO_2 NAAQS; and

(4) EPA may not base a nonattainment designation on modeling data alone.

II. BACKGROUND

A. Factual Background

On June 22, 2010, EPA promulgated a primary SO_2 NAAQS at a one-hour SO_2 concentration of 75 parts per billion (ppb) (196.5 ug/m3) (established by a 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations). Consistent with Section 107(d) of the CAA, the Illinois Environmental Protection Agency ("Illinois EPA") submitted its initial designation recommendations to EPA on June 2, 2011, including a recommended designation of unclassifiable for Williamson County.[2] On July 25, 2013, EPA promulgated a final rule establishing air quality designations for 29 areas under the 2010 SO_2 NAAQS. Air Quality Designations for the 2010 Sulfur Dioxide (S02) Primary National Ambient Air Quality

[2] In accordance with the CAA and EPA guidance, Illinois EPA designated all counties that lacked sufficient SO2 ambient air quality monitoring data as unclassifiable. *See* Illinois EPA letter to EPA Region V re 2010 SO_2 NAAQS, at 1 (June 2, 2011), www.epa.gov/sites/production/files/2016-03/documents/il-rec.pdf.

Standard, 78 Fed. Reg. 47,191 (Aug. 5, 2013). However, EPA did not issue a designation for Williamson County.

As a result of EPA's failure to issue timely designations, three lawsuits were filed against EPA alleging that EPA had failed to perform a nondiscretionary duty under the CAA. Indeed, some petitioners argued that EPA is required to designate areas unclassifiable with respect to the 2010 SO_2 NAAQS where EPA is not able to determine, based upon available information, whether the area is or is not meeting the 1-hour SO_2 NAAQS. In an attempt to resolve EPA's failure to act, as noted above, in March 2015 EPA entered a Consent Decree with the Sierra Club and the Natural Resources Defense Council. *See Sierra Club v. McCarthy*, *supra*, **Exhibit 2.** Notably, the Consent Decree established an artificial, accelerated timeline that required that EPA designate by July 2, 2016 any undesignated area under the 2010 SO_2 NAAQS that contains any large stationary source of SO_2 emissions. *Id.* at 4. As discussed below, both the CAA and EPA historic practice mandate the use of actual, monitored, ambient air quality to designate regions as attainment, nonattainment, or unclassifiable of a NAAQS. The Consent Decree inappropriately precluded the ability to use monitoring data for areas containing large stationary sources without existing monitors, including SIPC's Marion Station in Williamson County.

As a consequence, EPA had but sixteen (16) months to solicit and attempt to evaluate any available data upon which to base its 2016 Designations. On September 18, 2015, Illinois EPA submitted modeling data to support Illinois EPA's recommendation that EPA designate the area in the vicinity of Marion Station (Williamson County) as attaining the 2010 SO_2 NAAQS. *See* Illinois EPA letter to EPA Region V re: Updated Recommendations for 2010 SO_2 NAAQS (September 18, 2015), and accompanying Illinois EPA Technical Support Document for SO_2 Designation Recommendations for Electric Power Facility Areas (September 18, 2015),

collectively **Exhibit 3**. Shortly thereafter, EPA Region 5 notified Illinois EPA directly that it had received public comments and modeling data from Sierra Club that supported a nonattainment designation for the Marion Station area, and solicited comments from Illinois EPA on the reasonableness of Sierra Club's modeling.[3] *See* EPA Region 5 letter to Illinois EPA, re: Sierra Club modeling (October 20, 2015), **Exhibit 4**. On November 9, 2015, Illinois EPA concluded that Sierra Club's modeling could not be relied upon because it was flawed and not representative of ambient air quality around the Marion Station. *See* Illinois EPA letter to EPA Region V, re: Sierra Club Sulfur Dioxide Modeling (Nov. 9, 2015), **Exhibit 6**. In particular, Illinois EPA objected to Sierra Club's failure to: (i) utilize variable stack temperature and flue gas exit velocities required by EPA's Modeling Technical Assistance Document for the 2010 SO_2 NAAQS ("Modeling TAD") (**Exhibit 7**); (ii) utilize fenceline receptors to demarcate non-ambient air areas (i.e., those where public access is precluded); and (iii) utilize more representative background concentrations and inputs. *Id.*

On or about December 21, 2015, SIPC's consultant AECOM, submitted modeling to Illinois EPA to support an attainment finding for Marion Station. *See* AECOM, Marion Power Plant Southern Illinois Power Cooperative SO2 Modeling Archive (Dec. 21, 2015), **Exhibit 8**. While AECOM's modeling results mirrored Illinois EPA's finding of attainment, its modeling differed from Illinois EPA's modeling in several key respects. AECOM corrected source characterization and modeling inputs utilized in Illinois EPA's modeling submitted to EPA, including correcting stack diameters and building heights at the Marion Station and the handling of invalid data affecting stack temperature and exit velocity inputs. Most significantly,

[3] Sierra Club's modeling was not made publically available for any entity other than Illinois EPA to review and evaluate. Indeed, SIPC did not obtain a copy of Sierra Club's modeling – upon which EPA based its final nonattainment designation for Marion Station under the 2016 Designations – until August 24, 2016, in response to a Freedom of Information Act request submitted by SIPC. *See* **Exhibit 5**.

consistent with EPA's Modeling TAD, AECOM corrected Illinois EPA's inclusion of modeling receptors in areas where public access is prohibited on Marion Station's property. *See* Illinois EPA 120-Day Comment letter to EPA Region V on Proposed Designation, at 1 (April 19, 2016), **Exhibit 9**. Unfortunately, Illinois EPA did not submit AECOM's corrected modeling to EPA. *See* EPA Technical Support Document ("TSD") for Illinois, at 59,[4] for EPA Region V, Proposed Designation for Illinois under 2016 Designations (February 16, 2016), *collectively* **Exhibit 10**.

On February 16, 2016, without the benefit of AECOM's corrected modeling, EPA issued its preliminary recommendation to designate the area around Marion Station in nonattainment of the 2010 SO_2 NAAQS based upon modeling data in EPA's possession at the time, which consisted only of the uncorrected Illinois EPA modeling and the Sierra Club modeling that Illinois EPA had already determined was flawed for multiple reasons.[5] *Id.* While EPA admitted that Sierra Club used "less reliable" data in their model, the Agency nonetheless based its initial designation on Sierra Club's modeling because – according to EPA – it was "a more reliable assessment" of ambient conditions around Marion Station than the uncorrected Illinois EPA modeling. *Id.* Notably, the deficiencies identified by AECOM in Illinois EPA's modeling were similarly present in Sierra Club's modeling, including the placement of modeling receptors on non-public property within the property boundary of Marion Station. *See* Final TSD for Illinois for 2016 Designations, at 22, 31 (July 2, 2016) ("Final TSD"), **Exhibit 11**. EPA did not properly evaluate whether the modeling receptors were inappropriately located on non-public property. *See*, *infra*, at Section IV.C.i.

[4] EPA makes no reference in the technical analysis for Williamson County that it knew of, received or evaluated the modeling AECOM submitted on behalf of SIPC to Illinois EPA in December 2015.

[5] EPA did not perform any independent modeling of Marion Station. EPA's preliminary and, later, final designation was based exclusively on EPA's review of Illinois EPA and third-party modeling data.

To ensure that EPA reviewed and considered SIPC's air quality modeling, which included necessary corrections to Illinois EPA's modeling, AECOM submitted modeling directly to EPA on behalf of SIPC on March 30, 2016. The modeling was largely identical to the modeling submitted by AECOM to Illinois EPA in December 2015, with the exception that AECOM relied upon more current emissions data from 2013-2015 and the most current version of AERMOD (the modeling software utilized by Illinois EPA and Sierra Club and recommended by EPA's Modeling TAD). Subsequently, on April 19, 2016, Illinois EPA submitted to EPA a 120-Day Comment letter in response to EPA's proposed nonattainment designation for Marion Station. *See* Exhibit 9. In that formal response, Illinois EPA found that AECOM's March 2016 modeling, which was submitted to EPA, corrected and improved upon Illinois EPA's modeling and provided substantial support for designating the area around Marion Station in attainment of the 2010 SO_2 NAAQS. *Id.* at 1, 3 ("support[ing] the methodology and inputs, and agree[ing] with the results" of AECOM's "re-model" that utilized "refined inputs" from those used by Illinois EPA). In addition, Illinois EPA concluded that AECOM's receptor placement "followed Federal guidance provided in the [Modeling TAD]." *Id.* at 2.

On July 2, 2016, EPA promulgated the 2016 Recommendations. EPA rejected Illinois EPA's recommendation and the supporting modeling independently provided by AECOM and designated Marion Station (and Williamson County) as nonattainment of the 2010 SO_2 NAAQS.

B. <u>Regulatory Background</u>

EPA's directive under the CAA is unambiguous and unassailable. An area that "does not meet" the NAAQS is designated nonattainment. An area that "meets the [NAAQS]" is designated attainment. And an area that "cannot be classified on the *basis of available information* as meeting or not meeting the [NAAQS]" is designated unclassifiable. 42 U.S.C. §

7407(d)(1)(A)(i)-(iii) (emphasis added). EPA may not base a designation on just any available information. Rather, the data must be sufficiently compelling and reliable that it is representative of actual ambient air quality. *See* EPA Responses to Significant Comments on the 2016 Designations, at 78 (June 30, 2016) ("designations should be *made based on representative data*, including for both unclassifiable/attainment and nonattainment") (emphasis added), www.epa.gov/sites/production/files/2016-07/documents/so2d-r2-response-to-comments-06302016.pdf ("Response to Comments"); s*ee also* EPA, Draft TSD Nebraska Area Designation for the 2010 SO_2 Primary National Ambient Air Quality Standard 47 n.6 (March 30, 2016), www3.epa.gov/so2designations/round2/07_NE_tsd.pdf ("[area] [d]esignations are intended to address *current actual air quality*…and, thus, are unlike attainment plan modeling, which must provide assurances that attainment will occur") (emphasis added).

An area is designated unclassifiable where there is no compelling data indicating attainment or nonattainment. By analogue, an attainment or nonattainment designation is justifiable only where compelling data exists. The need for compelling data requires that EPA not rely upon data that is "reasonably consider[ed] to be unsound" in issuing a designation. *Mississippi Comm'n Envtl. Quality v. EPA*, 790 F.3d 138, 154 (D.C. Cir. 2015). As a result, "[i]n the absence of information *clearly demonstrating* a designation of 'attainment' or 'nonattainment,'" EPA informed states that the CAA requires issuance of an unclassifiable designation. *See* EPA, "Updated Guidance for Area Designations for the 2010 Primary SO_2 NAAQS," at 5, www.epa.gov/sites/production/files/2016-06/documents/20150320so2designations.pdf (March 20, 2015) (emphasis added) ("EPA 2015 Designation Guidance").[6]

[6] *See also, supra*, EPA, Draft TSD for Nebraska, at 33.

Most recently, EPA reversed its initial proposed nonattainment designation for Franklin County, Missouri based on the presence of conflicting modeling data results. *See* EPA Final TSD for Missouri under 2016 Designations (July 2, 2016), www.epa.gov/sites/production/files/2016-07/documents/r7_mo_final_designation_tsd_ 07012016.pdf. Both Ameren Missouri (the owner of the primary SO_2 source in Franklin County) and the Missouri Department of Natural Resources submitted modeling supporting an attainment or unclassifiable designation. Sierra Club modeling – like here – supported a finding of nonattainment. In reviewing the available modeling data, EPA concluded that an unclassifiable designation was warranted because of flaws identified in each of the modeling runs submitted. *See* Response to Comments at 78 (unclassifiable appropriate "[b]ased on all the available and reliable data, including new information following the notification of our intended nonattainment designation").[7]

Taken as a whole, in order for a designation to be based on "actual air quality" – and thus reasonable and lawful – the data (whether monitoring or modeling) relied upon must be considered:

(1) reliable – meaning the data must not be based on incorrect or questionable inputs or assumptions;

(2) supportable – meaning that the available data does not support a different designation;

(3) representative – meaning that the data accurately reflects conditions that are, or have in the past, occurred in the designation area; and

[7] *See also* EPA Final TSD for Missouri, at 26 ("the EPA's view is that the modeling results widely vary and greatly depend upon how the modeling was conducted, as discussed in this Technical Support Document. Because of the issues present in the modeling methodologies, the EPA does not have a clear basis to determine whether the area currently meets or does not meet the 2010 SO2 NAAQS based on all currently available information").

(4) inclusive – meaning that the data takes into account all available information (provided it is reliable and representative).

As further discussed below, EPA relied upon Sierra Club and Illinois EPA modeling data that was neither reliable nor representative because the modeling contained incorrect data inputs and assumptions. Indeed, Illinois EPA acknowledged as much in its November 9, 2015, letter to EPA. *See* Exhibit 6. At the same time, EPA improperly disregarded modeling data earlier submitted by AECOM that supported an attainment designation. In addition, modeling refinements submitted with this petition further support an attainment designation. Therefore, EPA's nonattainment designation for Marion Station was not based upon all available, reliable, information. When all reliable information is considered, modeling demonstrates that the area around the Marion Station is attaining the 2010 SO_2 NAAQS. The existence of compelling data requires that EPA designate the area in attainment. At most, if EPA finds that there are legitimate conflicts between the modeling submitted by the various parties, then an unclassifiable designation is warranted. In no case does the available information support a nonattainment designation.

III. STANDARD FOR RECONSIDERATION

Upon request, the CAA directs EPA to reconsider any issue that has been raised "with reasonable specificity" during the public comment period. 42 U.S.C. § 7607(d)(7)(B). This does not mean that EPA is precluded from considering new information. Indeed, the CAA provides that EPA must consider issues that are of "central relevance to the outcome of the rule" that were "impracticable to raise" or that "arose after the period for public comment." *Id.* An issue is of "central relevance" if it "provides substantial support for the argument that the promulgated regulation should be revised." EPA, Basis for Denial of Petitions to Reconsider the CAA

Section 111(b) Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Utility Generating Units 2 (April 2016), www.epa.gov/sites/production/files/2016-04/documents/111b_recondocument_april2016.pdf.

Thus, on reconsideration, EPA must evaluate whether a reexamination of existing information or consideration of new information substantially supports a different outcome. To the extent additional information can substantiate whether certain data relied upon or ignored by EPA impacted modeling results, EPA is required to consider such information. *See Catawba County v. EPA*, 571 F.3d 20, 51 (D.C. Cir. 2009) (EPA calculations on reconsideration demonstrated that a correction in speciation profile would not have impacted area designations for the 1997 particulate matter NAAQS); *see also* Response to Comments at 78 (finding "new information" sufficient to reverse a proposed designation under the 2010 SO_2 NAAQS). Similarly, EPA must also consider information that evidences that data or information relied upon by the Agency to reach its designation was unreliable, non-representative or unsupportable.

IV. ARGUMENT

A. EPA's Reliance on Third-Party Data to Discredit a State Attainment Designation Was Arbitrary and Capricious.

The NAAQS designation process is a cooperative effort between the EPA and the states. *See, e.g., Med. Advocates for Healthy Air v. U.S. E.P.A.*, No. C 11-3515 SI, 2012 WL 710352, at *1 (N.D. Cal. Mar. 5, 2012); *see also S. Coast Air Quality Mgmt. Dist. v. E.P.A.*, 472 F.3d 882, 886 (D.C. Cir. 2006) *decision clarified on denial of reh'g*, 489 F.3d 1245 (D.C. Cir. 2007). While the designation process allows for public comment and input, neither the CAA nor EPA regulations empower third-parties, like Sierra Club, to control the designation process. *See Mississippi Comm'n on Envtl. Quality v. E.P.A.*, 790 F.3d 138, 145 (D.C. Cir. 2015) ("EPA works collaboratively with the *states* to determine the NAAQS-attainment status for all areas

within a respective state's borders.") (emphasis added). Indeed, it is the state that issues the NAAQS designation recommendation to EPA. Thus, EPA's task was to review Illinois EPA's designation recommendation, *not* to review Sierra Club modeling and base a nonattainment designation on such third-party data. *See Pennsylvania, Dep't of Envtl. Prot. v. E.P.A.*, 429 F.3d 1125, 1126 (D.C. Cir. 2005) ("[a]fter receiving state recommendations, EPA promulgates final designations").

But here, EPA effectively ignored both Illinois EPA's modeling and recommendations – provided to EPA no less than three separate times – to designate Marion Station as attainment of the 2010 SO2 NAAQS. As noted above, on September 18, 2015, Illinois EPA submitted modeling supporting an attainment designation. On November 9, 2015, Illinois EPA again notified EPA of its recommendation to designate Williamson County as attainment, this time by way of itemizing the deficiencies in Sierra Club's modeling that EPA later relied upon in its 2016 Designations. Lastly, on April 19, 2016, Illinois EPA agreed with AECOM's modeling (submitted on behalf of SIPC) and determined that it provided substantial evidence supporting an attainment designation for Marion Station.

As discussed in more detail below, EPA did – albeit briefly – evaluate the modeling provided by Illinois EPA. In the Final TSD, EPA concluded that *both* Illinois EPA and Sierra Club modeling were based on potentially significant deficiencies in modeling inputs. *See* Exhibit 11 at 30 (Illinois EPA and Sierra Club modeling relied on different meteorological data, emission average periods, Marion Station stack parameters and building heights; and modeling receptor placements). Yet, in substantiating its nonattainment designation, EPA relied upon Sierra Club modeling despite the Agency's acknowledgement that it used "modeling inputs in a less reliable fashion than Illinois [EPA]." *See* Exhibit 10 at 59. Reliance on unreliable and non-

representative data is, on its own, impermissible in promulgating a rule. But the Agency's decision-making is even more flawed taking into consideration that EPA looked only towards Illinois EPA's modeling to substantiate the "credib[ility]" of Sierra Club's modeling. *See* Exhibit 11 at 31. That is, EPA speculated that if Illinois EPA's modeling had used emission rates relied upon by Sierra Club, Illinois EPA would have modeled nonattainment. *See id.* But this ignored other errors in Illinois EPA's modeling. *See* Exhibit 9 at 1 (acknowledging "discrepancies" in its modeling identified by AECOM). At best, EPA's misuse of Illinois EPA's modeling can be characterized as an improper extraction and recharacterization of third-party data that ignored underlying flaws and inaccuracies. Indeed, EPA itself acknowledged that Sierra Club's modeling was based on faulty and non-representative modeling inputs. *See* Exhibit 11 at 30, 31; *see also* Exhibit 10 at 59. For all of these reasons, EPA's decision to rely on Sierra Club modeling was improper.

B. It was Arbitrary and Capricious for EPA to Designate Williamson County under the 2010 SO_2 NAAQS Based on Modeling Data Alone.

If a designation may be based upon modeling data, then SIPC believes for the reasons set forth in this petition that the area around the Marion Station should be designated attainment. However, EPA's reliance upon modeling data alone to make its designation is, by itself, impermissible and a separate basis for setting aside the nonattainment designation.

Neither the CAA nor EPA regulations explicitly authorize EPA to rely on modeling data alone to designate an area as attaining or not attaining a NAAQS. Indeed, initial area designations have historically always been based upon monitoring data rather than modeling data. *See* Exhibit 7 at 1.[8] This is because, in part, modeling is generally conservative in contrast

[8] *See also* EPA Region V letter to Governor of Illinois Pat Quinn, re response to Illinois EPA air quality recommendation for 2010 SO_2 NAAQS, at 1 (designating as nonattainment only those areas where "*monitoring data indicates violations* of the 1-hour SO_2 standard," while leaving areas without

to monitoring, and tends to over-predict ambient concentrations when determining compliance with a NAAQS. *See* 40 C.F.R. Part 51, App. W, subsection 9.1.2 (Studies of Model Accuracy) ("[m]odels are more reliable for estimating longer time-averaged concentrations than for estimating short-term concentrations at specific locations"); subsection 10.2.2(b) (Use of Measured Data in Lieu of Model Estimates) (noting that reliance on monitoring data alone is acceptable "only in the case of a NAAQS assessment"). Reliance on modeling alone is also inconsistent with the plain language of the CAA. *See* 42 U.S.C. § 7407(d)(1)(A) (attainment, nonattainment and unclassifiable designations should be based on actual emissions); *see also* 42 U.S.C. § 7407(d)(3) (redesignations are to be "on the basis of *air quality data*") (emphasis added); 42 U.S.C. § 7407(d)(6)(A) (designations for the 1997 PM2.5 NAAQS must be "based on air quality *monitoring* data) (emphasis added).

With respect to the 2010 SO_2 NAAQS, EPA initially declared that area designations must be determined by ambient SO_2 monitoring data. *See* 74 Fed. Reg. 64,810, 64,846 (Dec. 8, 2009) ("monitoring data are used to determine whether an area is in violation of the SO_2 NAAQS"). In EPA's final rule, EPA confirmed that compliance should be determined "based on 3 years of complete, quality assured, certified *monitoring* data." 75 Fed. Reg. at 35,569. However, for the first time EPA also discussed a hybrid modeling and monitoring approach under the 2010 SO_2 NAAQS where insufficient monitoring data was available. *Id.* at 35,570-71. EPA based its change in position on recognition that many areas would *initially* be designated unclassifiable because of a lack of ambient monitoring data. *Id.* at 35,571. That did not occur in Williamson County. Instead, the accelerated designation schedule under the Consent Decree precluded a designation based on monitoring data.

---

monitoring data for "future actions") (emphasis added), www.epa.gov/sites/production/files/2016-03/documents/il-epa-resp.pdf.

As noted above, EPA entered into a Consent Decree with Sierra Club that forced the accelerated 2016 Designations for certain yet-undesignated areas under the 2010 SO_2 NAAQS. Yet the Consent Decree, as a matter of law, cannot authorize an otherwise prohibited action under the CAA. That is, the CAA (and EPA's own statements in the preamble to the 2010 SO_2 NAAQS) directs EPA to designate areas that lack sufficient available monitoring data as unclassifiable. *See* 42 U.S.C. § 7407(d)(1)(A)(iii). On EPA's own admission, the Consent Decree "affect[ed]…the extent to which the EPA will be able to use [monitored data]." *See* EPA, Data Requirements Rule for 2010 SO_2 NAAQS, 80 Fed. Reg. 51,052, 51,083 (Aug. 21, 2016). As a result, because of the absence of actual monitored data to designate Williamson County under the 2010 SO_2 NAAQS, EPA was required under the CAA to, at worse, designate the area as unclassifiable. EPA's reliance on modeling to designate Williamson County as nonattainment of the 2010 SO_2 NAAQS was inconsistent with the Clean Air Act and, thus, arbitrary and capricious.

C. EPA Improperly Relied Upon Flawed Modeling to Base Its Nonattainment Designation.

EPA's nonattainment designation for Marion Station is fundamentally flawed because it ignores and mischaracterizes available data and is based on a number of inaccurate, unreliable and non-representative modeling inputs, as described and *admitted* by EPA in the Final TSD. This is not proper. *See Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (an agency "must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made'"). SIPC addresses the flaws in EPA's assessment and designation conclusion below.

i. *EPA Improperly Included Receptors on Secured Non-Public Property*.

EPA relied upon insufficient, incomplete and inaccurate data to determine that the area

located to the northeast of Lake Egypt Road ("Northern Property") constituted ambient air and should be included in any model for Marion Station. Instead, available data demonstrates that public access is prevented on the Northern Property to the extent necessary to exclude modeling receptors on that property. In addition, to avoid any doubt on the issue SIPC has taken additional measures to ensure public access is prohibited.

NAAQS designations are intended to reflect actual ambient air quality conditions. Thus, because the CAA dictates the use of actual emissions, EPA designations are generally based on actual data collected from areas where ambient monitors can be feasibly located. As modeled data is intended to provide data representative of actual conditions, EPA policy directs sources to avoid modeling areas where public access is generally prohibited. *See* Exhibit 7 at 8-9. EPA correctly noted that a "*key* factor in in determining whether plant property is considered ambient air is the *degree to which* the public has access to the area." Exhibit 11 at 23 (emphasis added). Thus, public access does not need to be impossible. *See* Memorandum from Stephen D. Page, Director, Office of Air Quality Planning & Standards, EPA at 6 n.1 (June 22, 2007), **Exhibit 12** ("[p]reclude does not necessarily imply that public access is absolutely impossible, but rather that the likelihood of such access is small"). Rather, consistent with EPA guidance and past practice, EPA must consider the *totality* of measures taken to preclude public access to determine whether they are an "*adequate* barrier to preclude access to the public." EPA Model Clearinghouse Record, No. 99-V-03 (September 18, 1999) (discussing a "combination" of measures used to restrict access) (emphasis added), **Exhibit 13**; *see also* EPA Model Clearinghouse Record, No. 99-V-02 (August 30, 1999), **Exhibit 14**.

EPA did not follow its own directive. Indeed, EPA admitted that it lacked sufficient information "as to the manner or degree to which public access is restricted" to determine

whether the public access to the Northern Property is adequately protected. *See* Exhibit 11 at 23. EPA's lack of information on public access is due, in part, to Illinois EPA's failure to provide EPA with the modeling AECOM submitted on behalf of SIPC to Illinois EPA on December 21, 2015. SIPC excluded modeling receptors from the Northern Property in its December 2015 modeling. Neither Illinois EPA nor Sierra Club excluded receptors from the Northern Property. *Id.* at 22. As a consequence, this Petition is the first time that SIPC has had the opportunity to respond to EPA's apparent confusion about site control at Marion Station and to provide the information needed for EPA to properly determine that the general public does not, in fact, have access on the Northern Property. *See id.* at 23*; see also* 42 U.S.C. § 7607(d)(7)(B) (issues or data that were impracticable to raise during public comment may be considered in a petition for reconsideration).

Nevertheless, rather than seeking information from SIPC about site access, EPA apparently looked for and relied upon *just two* (2) stock Google Maps images (a single Google "street view" image and a single Google satellite image) to conclude that the public had "easy access" to "most" of the Northern Property. *Id.* at 24-25, Figures 7 and 8. This is wholly deficient from both an evidentiary and a legal standpoint. EPA's historic practice is to rely on information provided by the source *and*, where appropriate, a site-visit to determine if "ambient air" exists. *See* Exhibit 13 (evidencing EPA's reliance on information provided about on-site security measures and a "tour of the…facility," which EPA described as being "useful and should help bring [the site access] issue to resolution"); Exhibit 14 (EPA noting that a "site visit will likely be necessary" to determine whether public access is adequately precluded). No such site-visit ever occurred at Marion Station.[9] EPA's Final TSD admits that it based its evaluation

[9] SIPC has no record of any EPA site visit to evaluate whether public access was precluded at or in the vicinity of Marion Station.

on the degree to which public access is available on the Northern Property entirely upon the two Google images.

As a result, EPA's erroneous conclusion about public access is based upon the Agency's superficial review of images that appear to depict a relatively low guard rail separating the Northern Property from Lake Egypt Road. However, images are often deceiving. Had EPA visited Marion Station, the Agency would have recognized that the satellite imagery wholly fails to reflect that public access is more than adequately prohibited for the following reasons:

(1) Access to the Northern Property along the 300-yard section depicted in Figure 7 of EPA's Final TSD is prohibited by man-made barriers:

a. A barbed-wire fence prohibits access to the Northern Property along either side of the brief 300-yard guard rail section. *See* **Exhibit 15** and **Exhibit 16**. The barbed-wire fence abutting this section is *not* visible in either image relied upon by EPA.

b. The 300-yard guard rail section was located on top of a spillway servicing the Lake of Egypt. *See* Exhibit 16 (illustrating Lake Egypt Road sitting atop of spillway, with Lake of Egypt to the left and the Northern Property to the right); *see also* **Exhibit 17** (security camera image depicting Lake Egypt Road separating the Northern Property and the Lake of Egypt). The Lake Egypt Road runs parallel immediately to the South of this 300-yard section. No pedestrian crossing or walkway is present alongside the Lake of Egypt road at this location. *See id.* Vehicles travel at or above the 55 mph listed speed limit, restricting the likelihood of public incursion onto the Northern Property.

c. The spillway is elevated over thirty (30) feet above the Northern Property.

See **Exhibit 18** (photograph taken at the base of the 30 foot elevation drop). A steep gradient descends onto the Northern Property immediately to the North of the guardrail depicted in Exhibits 15 and 16. *See* Exhibit 17.

(2) Natural barriers further restrict public access.

a. The Lake of Egypt to the South of the Northern Property restricts public access points. *See* Exhibit 16 and Exhibit 17.

b. The significant gradient between the guard rail and the Northern Property is a deterrent for public access. *See* Exhibit 17.

(3) SIPC has always – and will continue – to take additional reasonable measures to secure against public access to the Northern Property. Specifically:

a. Warning signs are posted along the entire Northern Property boundary notifying the public that the area is restricted. *See* Exhibit 16 and **Exhibit 19**.

b. SIPC operates and maintains a security camera that is regularly monitored by the on-duty boiler operator at Marion Station. *See* Affidavit of Robert Todd Gallenbach, Vice President of Operations for SIPC at Marion Station, at ¶¶ 5-7, **Exhibit 20**. The security camera feed provides a complete, unobstructed, view of all access points to the Northern Property (i.e., the area depicted in Figure 8 of EPA's Final TSD). *Id.* at Attachment 1; *see also* Exhibit 17.[10] In the unlikely event that an unauthorized member of the public gains access to the Northern Property, the boiler operator monitoring the security camera will notify security to promptly remove such individuals from the property. *See Affidavit* at ¶ 8.

[10] SIPC also operates another security camera which covers other portions of the Marion Station property (areas where public access is also restricted through natural and man-made barriers).

(4) In an abundance of caution, SIPC recently added a barbed-wire security fence behind the existing guardrail located on the 300-yard stretch of spillway with a barbed-wire security fence.[11] In addition, new "restricted area" warning signs were posted on the new barbed-wire fencing. Images of the fencing and warning signs are provided in **Exhibit 21, Exhibit 22, Exhibit 23 and Exhibit 24**. While public access has been adequately precluded by existing, long-standing, site control measures, the new fence in this limited area provides still further assurance that the Northern Property is secure from public access.

SIPC assumes that USEPA was unaware of these significant site control measures at the time it made its final designation. Based upon these measures, collectively, it is clear that public access to the Northern Property is more than adequately prohibited.

EPA erred by concluding that public access is available merely because of two historic images that showed the absence of a fence along a brief 300-yard section. *See In the Matter of Hibbing Taconite Company*, PSD Appeal No. 87-3, at 17-18 (July 19, 1989) ("The test for ambient air exclusion does *not require a continuous fence* around the perimeter of the property. *Other types of physical barriers* can effectively preclude access.") (emphasis added), **Exhibit 25**. EPA has previously found that physical barriers like those described above, in conjunction with security sign postings and 24-hour security camera surveillance is more than adequate to preclude public access. Exhibit 13 ("[a] combination of fencing and other physical barriers, posting, and use of the 24-hour security camera surveillance and truck patrolling system should provide an adequate barrier to preclude access to the public"). In fact, EPA has found the use of video surveillance alone adequate to restrict access to the general public. *See* Exhibit 13.

[11] *See* Exhibit 13 (finding the installation of "more fencing, and signage…appropriate" to ensure site access is restricted).

EPA itself acknowledged that the "removal of receptors from the area northeast of the plant may represent the *most significant difference* between [AECOM's] modeling and the modeling by Illinois [EPA] and Sierra Club. Exhibit 11 at 30 (emphasis added).[12] Thus, it is irrefutable that the proper selection of receptor locations is of "central relevance to the outcome" of EPA's 2016 Designations for Marion Station. Indeed, in Illinois EPA's 120-Day Comment Letter to EPA advocating for an attainment designation for Marion Station, Illinois EPA informed EPA that it supported AECOM's modeling in part because it properly excluded receptors from areas (like the Northern Property) where public access is prohibited. *See* Exhibit 9. EPA's finding that the public has access to the Northern Property both ignored contrary information and was based upon insufficient information. As a result, EPA's determination was improper. When all available information is considered, the evidence substantially supports the finding that Illinois EPA and Sierra Club modeling improperly included receptors on the Northern Property.

When the receptors on the Northern Property are excluded, as required by EPA's guidance given SIPC's substantial site control measures, modeling conclusively demonstrates attainment of the 2010 SO_2 NAAQS. *See* Exhibit 11 at 28, Table 4 (AECOM's March 2016 Modeling demonstrates default modeling of 190.4 ug/m3); *see also, infra,* Section IV.D, AECOM's Updated Modeling for Marion Station, September 2016, at Section 5.0, Table 5-1 (demonstrating default modeling of 191.0 ug/m3).

ii. *It was Improper for EPA to Rely on Modeling Based on Inaccurate or Non-Representative Modeling Inputs.*

Aside from reliance upon the improper inclusion of receptors on the Northern Property,

[12] SIPC agrees. As evidenced by the modeling submitted by AECOM on March 30, 2016 and with this Petition, the exclusion of receptors in the Northern Property has a significant impact on both the total ambient levels around Marion Station and the area of peak concentration (which occurs within the Northern Property *if* receptors are not excluded). *See infra,* Section IV.D.

EPA's nonattainment conclusion is flawed because it relies upon modeling that contains other significant flaws while essentially ignoring the AECOM modeling that supports an attainment designation and that Illinois EPA supported.

There is no dispute that modeling provided by Illinois EPA and Sierra Club rely upon modeling parameters and inputs that differ significantly from those used by AECOM. Both Illinois EPA and EPA highlight five significant mistakes (in addition to receptor placement) in the modeling provided by Illinois EPA and Sierra Club: (1) background data; (2) emission rates; (3) stack parameters; (4) building heights; and (5) hourly stack temperature and exit velocity. *See* Exhibit 9; Exhibit 11 at 21-30. Significantly, because EPA did not perform an independent modeling analysis, EPA was "*not clear how significant* [of an impact]…the revisions to stack parameters and building heights" (as well as other modeling parameters) would have on modeling results. Exhibit 11 at 30. Nonetheless, EPA issued a nonattainment designation based upon these flawed modeling submissions even in the face of Illinois EPA's information that made clear that the modeling submissions by it and Sierra Club were flawed and did not reflect the most accurate data. .

Modeling must "*clearly demonstrat[e]* that an area and its associated boundary are properly designated 'attainment' or 'nonattainment'" to warrant anything but an unclassifiable designation. *See* EPA 2015 Designation Guidance at Attachment 2, pg. 3 (emphasis added). EPA made no such demonstration here. Instead, in contradictory fashion, EPA on the one hand wholly disavowed AECOM's modeling because it "inappropriately removed [modeling] receptors" (it did not, as discussed above) while simultaneously accepting Sierra Club (and Illinois EPA) modeling as "credible" despite the above-noted mistakes and inaccuracies in modeling inputs. *See* Exhibit 11 at 31. EPA may not rely upon "unsound" data in issuing a

designation. *See Mississippi Comm'n*, 790 F.3d at 154. And it certainly may not do so knowingly without significant justification or substantiation.

AECOM analyzed the modeling inputs relied upon by Sierra Club and determined that the differences have a material impact on modeling results. *See* AECOM, Updated 1-Hour SO_2 NAAQS Compliance Modeling Demonstration for the Marion Power Plant, at Section 2.1 (September 2016) ("2016 AECOM Report"), attached as **Exhibit 26**.[13]

(1) Background data. Sierra Club used constant, rather than hourly and seasonal variations, in background concentrations. This does not conform with EPA's Modeling TAD. *See* Exhibit 7 at Section 5.2. Sierra Club also utilized a non-geographically appropriate – and, thus, non-representative – background concentration derived from an ambient monitor in Oglesby, Illinois using data from 2011 through 2013, despite the fact that Sierra Club modeling used emissions data from 2012 through 2014. Finally, contrary to EPA's Modeling TAD, Sierra Club inappropriately included emissions from Ameren Missouri's Joppa Power Plant located over 48 kilometers from Marion Station. *Id.* at Section 8.1.

(2) Emission Rates. Sierra Club (and Illinois EPA) relied upon emission data that is not representative of current (and future) emission rates at Marion Station. In 2015, emission rates at Marion Station decreased significantly as a result of measures taken by SIPC to comply with the federal Mercury and Air Toxics Standard (MATS) and the Cross-State Air Pollution Rule (CSAPR). *See* Exhibit 11 at 26, Table 2 (illustrating that actual SO2 emissions decreased by approximately 50% in 2015); *see also* Exhibit 26, at Section 5.0. As a result, AECOM's modeling, which relied upon

[13] Notably, both Illinois EPA and EPA reached many of these same conclusions; yet, EPA ignored Illinois EPA's recommendations and relied upon Sierra Club's modeling for designation.

emissions data from 2013-15, is far more representative than Sierra Club modeling based on 2012-2014 emissions data. EPA's rationale – that the use of 2012-14 data is credible because it represents only a 7% increase from 2013-15 data utilized by AECOM – is irrelevant and fundamentally unsound. *See* Exhibit 11 at 30. A 7% difference could clearly make the difference between attainment and nonattainment.[14] As noted above, area designations are intended to reflect *actual* ambient conditions. The use of emissions data that does not reflect federally mandated reductions generates results that are not representative of actual ambient conditions and is improper.

(3) Corrected Source Characterization – Stack Parameters and Building Heights. AECOM modeling used more representative building heights and stack parameters (stack diameter and stack height) for Unit 123 at Marion Station. Illinois EPA acknowledged that AECOM's source characterization parameters were more reliable and accurate inputs for modeling. *See* Exhibit 9. As demonstrated in Section IV.D of this Petition, *infra*, even minor corrections to building dimensions can have a significant impact on attainment modeling. EPA acknowledged that Sierra Club's modeling included incorrect source characterization inputs but, in conclusory fashion, relied upon the *absence* of information quantifying the impact of those deficiencies to substantiate EPA's reliance on Sierra Club's modeling. *See* Exhibit 11 at 30. EPA's reliance on insufficient and non-compelling data is contrary to both EPA's own Modeling TAD and the CAA.

[14] Indeed, 7% of the 2010 SO2 NAAQS limit of 196.4 ug/m3 amounts to an undeniably significant 14 ug/m3 difference.

(4) Stack Temperature and Flow. AECOM modeling relied upon hourly varying stack temperatures, velocities and flow rate data. Not only is this approach consistent with EPA's Modeling TAD (as opposed to Sierra Club's use of constant values), but it allowed AECOM's modeling to substitute representative stack temperature data for periods without valid data. Critically, EPA agreed that such "input data *improved the representation* of source characteristics." Exhibit 11 at 25 (emphasis added). As a result, EPA's reliance on modeling that used non-representative stack temperature and flow inputs was inconsistent with EPA's Modeling TAD and, therefore, not appropriate.

SIPC does not contend that EPA's designation was improper only because it relied on modeling that contained a single non-representative or inaccurate data input. Instead, SIPC contends that EPA's nonattainment designation was wholly based upon a plethora of errors and inconsistencies in the modeling upon which EPA relied, while simultaneously ignoring or discrediting better information provided by SIPC and AECOM. EPA's mandate is to evaluate *all* available data and to designate an area as attainment or nonattainment only where *compelling* data supports that designation. Based on the *totality* of inaccurate, faulty and non-representative data in Sierra Club's modeling, that modeling cannot – and does ***not*** – provide compelling data that the area around the Marion Station is in nonattainment of the 2010 SO_2 NAAQS. Therefore, EPA's reliance on Sierra Club's modeling was improper.

iii. *EPA Improperly Ignored AERMOD Modeling that Utilized More Representative Source Characterization Inputs.*

AECOM's March 2016 modeling included modeling runs that adjusted stack temperature inputs to more accurately represent emission characteristics from Marion Station stacks. *See* AECOM, Characterization of 1-Hour SO_2 Concentrations for the Marion Power Plant (March

2016), **Exhibit 27;** *see also* Exhibit 8. EPA rejected these modeling runs without any evaluation because EPA argued they constituted an alternative model that required pre-approval under EPA's modeling regulations, 40 C.F.R. Part 51, Appendix W. *See* Exhibit 11 at 22. EPA is mistaken. While EPA correctly noted that the use of alternative *modeling* requires EPA approval under Appendix W, AECOM's adjustment of stack temperature *inputs* to account for moisture in the flue gas (referred to as the "AERMOIST formulation") did not use or implement an alternate model. *See* Exhibit 8 (discussing corrections to various stack inputs). Appendix W does not require EPA approval to use more representative source inputs. Therefore, EPA must reconsider and evaluate AECOM's modeling runs utilizing AERMOIST.

Appendix W is unambiguous. Section 3.2.2 sets forth specific criteria and conditions to evaluate the "acceptability of an alternative *model*." *See* 40 C.F.R. Part 51, Appendix W, subsection 3.2.1(a) (emphasis added); subsection 3.2.2(a) ("where "an alternative model is more appropriate than a preferred model, that model may be used subject to the recommendations of this subsection"); subsection 3.2.2(e) (identifying the 5 conditions for approvability of an alternative model).[15] Wholly absent from the rule is any requirement that conditions the use of an alternate input to an existing model upon EPA approval. This makes sense. Each emission source generally possesses unique source characteristics that must be input into a model to

[15] EPA recently issued guidance clarifying that the use of so-called "beta options" in AERMOD modeling requires "adhere[nce] to the requirements of Section 3.2 in the current 2005 version of the *Guideline on Air Quality Models* (Appendix W)." *See* EPA Memorandum, Clarification of the Approval Process for Regulatory Application of the AERMOD Modeling System Beta Options (Dec. 10, 2015), https://www3.epa.gov/ttn/scram/guidance/clarification/AERMOD_Beta_Options_Memo-20151210.pdf. Beta options such as "LOWWIND3" and "ADJ_U*" utilize changes to EPA's preferred modeling approaches under AERMOD. As a result, use of beta option alternative models requires EPA approval under Appendix W. Both AECOM and Illinois EPA submitted data and information supporting the use of LOWWIND3 at Marion Station in accordance with Appendix W. *See* Exhibit 8; Exhibit 9 ("Illinois EPA supports allowing the use of such beta options such as LOWWIND3").

generate a source-specific result. Changes in source characterization inputs are an inherent part of site-specific modeling and, therefore, do not require EPA approval.[16]

Unit 4 at Marion Station operates a wet limestone flue gas desulfurization device, which causes high stack moisture content in the flue gas and increased buoyancy in the resulting plume. *See* Exhibit 26 at Section 4.6. AERMOD can effectively model this unique source characteristic by merely changing the hourly input stack temperature of the model's default dry plume (*i.e.*, the AERMOIST formulation). *Id.* No modification of the underlying model occurs. *Id.*

As discussed above, EPA must rely on modeling that is representative of actual conditions. The incorporation of AERMOIST into the default AERMOD modeling more accurately reflects actual ambient conditions around Marion Station. The impact on modeling results is significant. In AECOM's March 2016 modeling, AECOM demonstrated an 8% decrease (approximately 15 ug/m3) in modeled emissions as compared to modeling without AERMOIST. *See* Exhibit 27, Table 4-1 (comparing modeled concentrations in "current default" to "current default with AERMOIST"). Similarly, AECOM's updated September 2016 modeling indicated a 4% decrease (approximately 8 ug/m3). *See* Exhibit 26, Table 5-1 (comparing modeled concentrations in Scenario 1 to Scenario 2). In both runs, use of AERMOIST demonstrated that the area around Marion Station is in attainment of the 2010 SO_2 NAAQS.

D. Even Absent the Exclusion of Modeling Receptors from the Northern Property, Marion Station Models Attainment of the 2010 SO2 NAAQS.

The exclusion of modeling receptors from the Northern Property is consistent with EPA

[16] *See* EPA Region 4 Response to Eastman Chemical's Additional EASTMOD Information, attached as Appendix B to AECOM March 2016 modeling (Exhibit 27) submission to EPA ("EPA Region 4 has determined that the proposed AERLIFT component of EASTMOD is a source characterization procedure and is not an integral part of the AERMOD Modeling system").

guidance and the CAA. EPA's principal objection to AECOM's modeling, however, is the exclusion of receptors from this area. Conversely, SIPC's principal objection to EPA's determination – apart from EPA's improper inclusion of the receptors at the Northern Property – is EPA's reliance on non-representative modeling provided by Sierra Club. In order to address these discrepancies, AECOM ran additional modeling that conservatively (i) included receptors[17] in the Northern Property while (ii) utilizing more representative source characterization modeling inputs. The modeling demonstrates that even when *including* receptors in the non-public Northern Property, Marion Station models *attainment* of the 2010 SO_2 NAAQS.

The results (and additional analysis) of AECOM's updated modeling are included in the 2016 AECOM Report (Exhibit 26) and AECOM's supporting modeling files provided thereto.[18] AECOM utilized more accurate (*i.e.,* more representative) building dimensions based upon site-specific surveys taken in 2016 for two buildings located in close proximity to the Unit 123 stack.

[17] As further discussed in the 2016 AECOM Report, AECOM conservatively added additional receptors along Lake Egypt Road to address EPA's concerns that modeling should include roadways. SIPC notes that EPA's Modeling TAD effective at the date EPA promulgated the 2016 Designations did not require receptors on roadways. *See* Exhibit 7 at Section 4.2 ("[i]n areas where it is not feasible to place a monitor…receptors can be ignored or not placed"). Indeed, this makes particular sense with respect to Lake Egypt Road where the listed speed limit is 55 mph with shoulder, making the placement of monitors virtually impossible. In August 2016, *after* EPA designated Williamson County nonattainment, EPA issued an updated modeling TAD, in which the Agency advised that it may be appropriate to locate receptors "near" roadways. *See* https://www.epa.gov/sites/production/files/2016-06/documents/so2modelingtad.pdf. Thus, although not required, SIPC directed AECOM to update its default model to include receptors along Lake Egypt Road.

SIPC further notes that the inclusion of receptors on Lake Egypt Road addresses the concern EPA expressed in the Final TSD regarding the location of peak 3-year average 99th percentile 1-hour average concentrations. EPA noted that AECOM's modeling indicated peek concentrations occurred to the South-Southwest of Marion Station, while both Illinois EPA's and Sierra Club's modeling indicated peak concentrations to the North. *See* Exhibit 11 at 28-29. In the 2016 AECOM Report, default modeling now indicates that peak concentrations occur to the Northeast of the Marion Station stacks. Exhibit 26 at Section 5.0. Nevertheless, even with peak concentrations to the North of Marion Station, default modeling demonstrated *attainment* of the 2010 SO2 NAAQS.

[18] Note: Due to email size restrictions, a CD containing the modeling files for the 2016 AECOM Report was hand-delivered to EPA along with a copy of this Petition. Modeling files were not provided in the email submission of this Petition.

See 2016 AECOM Report at Sections 4.1, 5.0. The use of more representative building dimensions in conjunction with AECOM's default modeling inputs relied upon in AECOM's March 2016 modeling demonstrates that the highest ambient concentration of SO_2 is 194.9 ug/m3, ***below*** the 2010 SO2 NAAQS. *Id.* at Table 5-1. Further, when receptors are properly excluded from the Northern Property, modeling indicates that the highest ambient concentrations at receptor locations are even lower (191.0 ug/m3). *Id.*

In sum, modeling provides substantial support that Marion Station is in attainment of the 2010 SO_2 NAAQS, regardless of the use or exclusion of receptors in the Northern Property.

CONCLUSION

For the reasons stated above, SIPC requests that EPA reconsider its 2016 Designation for Williamson County, Illinois and designate the area around Marion Station as in attainment of the 2010 SO_2 NAAQS. In the alternative, SIPC requests that EPA designate the area around Marion Station as unclassifiable of the 2010 SO_2 NAAQS if EPA determines that the existence of conflicting modeling data precludes an attainment designation at this time.

Respectfully submitted,

Southern Illinois Power Cooperative

Stephen J. Bonebrake
J. Michael Showalter
David M. Loring
Schiff Hardin LLP
233 South Wacker Drive, Suite 6600
Chicago, Illinois 60606
Counsel for Southern Illinois Power Cooperative

EXHIBIT LIST

Exhibit 1	EPA Final Rule - 2016 Designations, 81 Fed. Reg. 45039 (July 12, 2016)
Exhibit 2	*Sierra Club v. McCarthy* (N.D. Cal. Mar. 2, 2015) – Consent Decree
Exhibit 3	Illinois EPA September 18, 2015 2010 SO_2 NAAQS Recommendations
Exhibit 4	EPA Region 5 October 20, 2015 letter to Illinois EPA re Sierra Club
Exhibit 5	Illinois EPA August 24, 2016 letter re SIPC FOIA Request
Exhibit 6	Illinois EPA November 9, 2015 letter to EPA Region 5 re Sierra Club
Exhibit 7	EPA Modeling TAD, December 2013
Exhibit 8	AECOM SO_2 Modeling on behalf of SIPC, December 21, 2015
Exhibit 9	Illinois EPA 120-Day letter to EPA re Proposed Designations, April 19, 2016
Exhibit 10	EPA Region 5 Preliminary Recommendations to Illinois, February 16, 2016
Exhibit 11	EPA Final TSD, July 2, 2016
Exhibit 12	EPA Memorandum, Interpretation of Ambient Air, June 22, 2007
Exhibit 13	EPA Model Clearinghouse, Record No. 99-V-03, September 18, 1999
Exhibit 14	EPA Model Clearinghouse, Record No. 99-V-02, August 18, 1999
Exhibit 15	Photograph – Guardrail Northern Property
Exhibit 16	Photograph – Lake Egypt Road; Guardrail; Fencing; Spillway; Northern Property
Exhibit 17	Photograph – Security Camera; Northern Property
Exhibit 18	Photograph – Northern Property; slope
Exhibit 19	Photograph – Northern Property; signage
Exhibit 20	Affidavit of Robert Todd Gallenbach, Vice President of Operations, Marion Station
Exhibit 21	Photograph – New fencing; new signage; Northern Property
Exhibit 22	Photograph – New fencing; new signage; Northern Property
Exhibit 23	Photograph – New fencing; new signage; Northern Property
Exhibit 24	Photograph – New fencing; new signage; Northern Property
Exhibit 25	EPA, *In the Matter of Hibbing Taconite Co.*
Exhibit 26	AECOM Updated Modeling Report for Marion Station, September 2016 (CD of Modeling Data Provided to EPA by hand-delivery)
Exhibit 27	AECOM Modeling Report for Marion Station, March 2016