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**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

AARON B. KEATLEY
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300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

October 23, 2017

Mr. Trey Glenn
Regional Administrator
U.S. EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

RE: Kentucky response to U.S. EPA's intended designation of Henderson County (partial) for the 2010 SO₂ National Ambient Air Quality Standard

Dear Administrator Glenn:

On behalf of the Commonwealth of Kentucky, the Kentucky Energy and Environment Cabinet (Cabinet) respectfully submits to the U.S. Environmental Protection Agency (EPA) a response to the "120-day" letter dated August 22, 2017, regarding EPA's intended area designations for the third round of the 2010 SO₂ National Ambient Air Quality Standards (NAAQS). The Cabinet submitted air quality characterization documentation on January 6, 2017, in compliance with the EPA's Data Requirements Rule (DRR), and requested that all areas be designated as attainment for the 2010 SO₂ NAAQS. EPA's proposed designations agree with the Cabinet's recommendation with the exception of one area located in Henderson County, Kentucky.

As stated in the August 22, 2017 letter and Technical Support Document, EPA intends to designate the partial Henderson County area as "unclassifiable" based on air dispersion modeling conducted by the Sierra Club. The Cabinet disagrees with EPA's intended designation and submits additional information to support our initial recommendation. Enclosed, the Cabinet provides a critical analysis of the Sierra Club's air dispersion modeling and quality-assured ambient air monitoring data collected in the partial Henderson County area. The Cabinet requests that EPA designate the partial Henderson County area as attainment for the 2010 SO₂ NAAQS.

It should be noted that the Sierra Club modeling does not adhere to the requirements and guidance provided in 40 CFR 51, Appendix W, which EPA requires all states to strictly follow. More importantly, the quality-assured ambient air monitoring data in Table 1 clearly



Regional Administrator Glenn

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demonstrates the partial Henderson County area is attaining the 2010 SO₂ NAAQS. Therefore, the Cabinet is requesting that EPA designate the area of Henderson County comprised of census block groups 211010207013, 211010207014, 211010207024, and 211010208004 as attainment for the 2010 SO₂ NAAQS.

If you have any questions or comments concerning this matter, please contact Mrs. Melissa Duff, Assistant Director, Division for Air Quality at (502) 782-6597 or melissa.duff@ky.gov.

Sincerely,



Charles G. Snavely
Secretary

Cc: Beverly Banister, Region 4 US EPA
R. Scott Davis, Region 4 US EPA
Lynorae Benjamin, Region 4 US EPA

Enclosure

Response to EPA's Proposed "Unclassifiable"
Designation for Henderson County (partial) for the 2010
Sulfur Dioxide (SO₂) Third Round Data Requirements
Rule (DRR) Designations



Kentucky Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality

October 2017

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Requirements for the...
Designation for the...
State (DNR) Designators

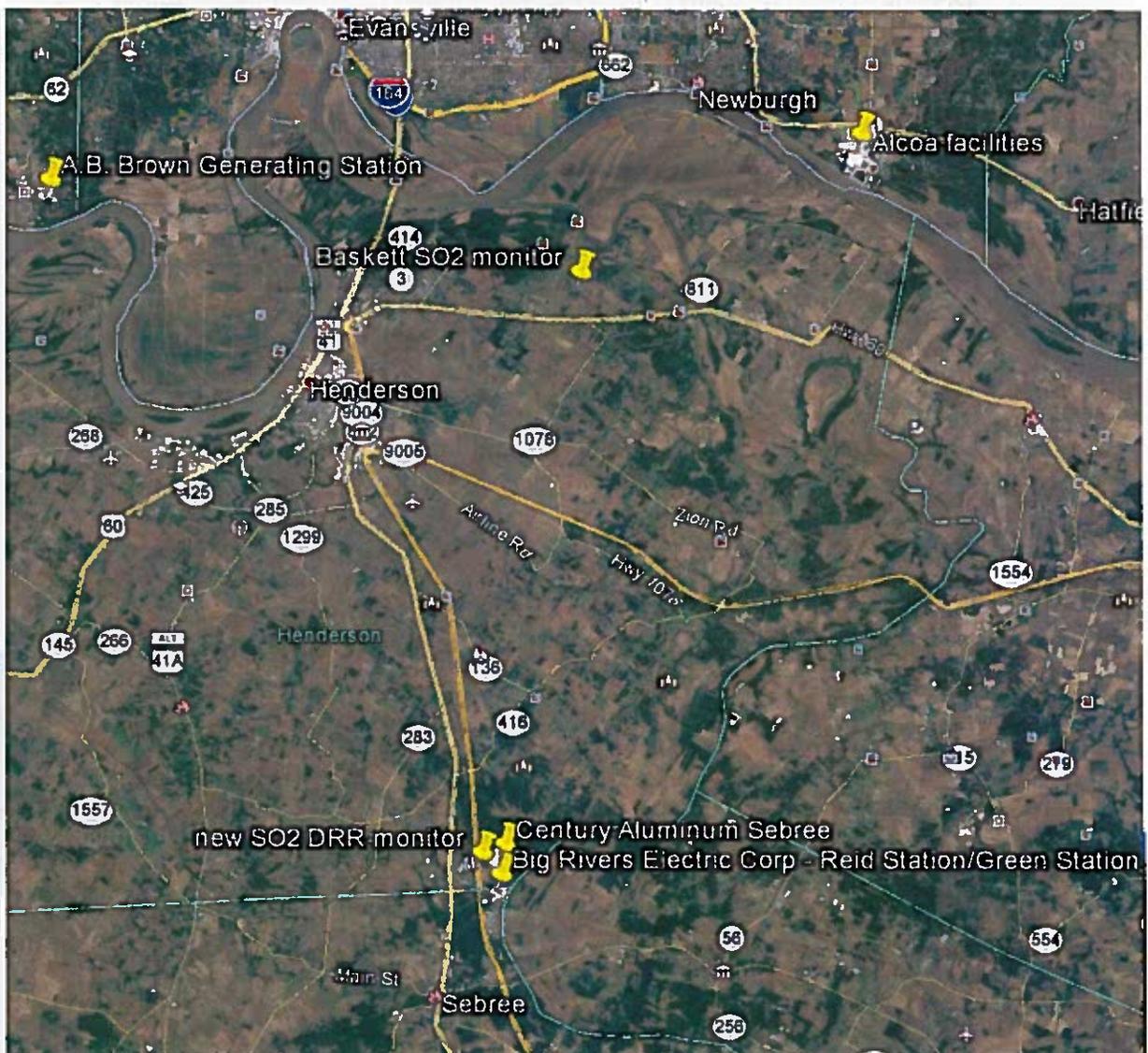


Division of...
Department of...
State of...

Third Party Modeling Assessment

A modeling analysis was submitted to EPA by the Sierra Club as a comment on the intended designation of the area near the A.B. Brown plant in Posey County, Indiana during Round 2 of the 2010 SO₂ NAAQS designations. Sierra Club's modeling focused on the area near the A.B. Brown plant in Posey County, Indiana, but also included emissions data and estimated SO₂ concentrations from the Alcoa facilities in Warrick County, Indiana. Posey County is located two counties to the west of Warrick County. The area of analysis used in Sierra Club's modeling also included a portion of Henderson County, KY that surrounds the Baskett SO₂ monitor, and shows potential impacts to this area. The modeling analysis indicates that the SO₂ NAAQS are being exceeded at multiple receptors around the Alcoa facilities in Warrick County, Indiana and in a small portion of the northeastern part of Henderson County.

Figure 1: Locations of facilities and SO₂ monitors



However, as detailed in the TSD for Kentucky, “The EPA believes that there are aspects of the modeling assessment that cause uncertainty as to the precise nature and location of the portion of the modeled potential violations in Henderson County, Kentucky... a number of conservative, simplifying assumptions were made by Sierra Club for characterizing the Alcoa sources and emissions, potentially leading to uncertainties in the modeled footprint.”¹ More specifically pertaining to Henderson County, EPA also noted that the modeling assessment assumes that the emissions from multiple co-located potline stacks are merged, which could affect the predicted plume rise and modeled output concentrations, leading to an underestimation of downwash near the Alcoa facilities and overestimation of SO₂ concentrations in distances that are further from the stacks.

The Air Dispersion Modeling Section of the Cabinet has evaluated the Sierra Club’s modeling analysis and found the following specific issues with the modeling that was conducted:

- Section 5.4 of the SO₂ NAAQS Designations Modeling Technical Assistance Document (TAD)² states that “if modeling based on allowable emissions does not show attainment, then use of actual emissions should be conducted,” but Sierra Club’s modeling used allowable and actual emissions, which do not realistically reflect the air quality surrounding the modeled sources;
- As stated in Section 5 of the TAD, “designations are intended to address current air quality (i.e. modeling simulates a monitor),” thus modeled receptors near monitoring locations should be compared to modeled concentrations with actual monitored values. As outlined in more detail below, the Baskett SO₂ monitor in Henderson County, located on the edge of the intended unclassifiable area, had an average annual design value of 21 parts per billion for the years 2014 – 2016;
- The Sierra Club did not include building downwash for the modeled sources and stated that “No building dimensions or prior downwash evaluations were available...these downwash effects typically increase predicted concentrations near the facility.”³ This public information could have been obtained through a Freedom of Information Act request, and Appendix W to 40 CFR Part 51 of the Guideline on Air Quality Models states that “For point sources subject to the influence of building downwash, direction specific building dimensions (processed through the BPIPPRM building processor) should be input.”;
- The modeling did not consider the likelihood of double counting, as numerous sources were modeled and no exclusions were made; the use of a background monitor could have satisfied the need to characterize air quality without having to include as many sources as were modeled;

¹ U.S. EPA *Technical Support Document: Chapter 15 – Proposed Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Kentucky* (p. 218)

² U.S. EPA *SO₂ NAAQS Designations Modeling Technical Assistance Document*

³ Wingra Engineering, S.C. *A.B. Brown Generating Station – Mount Vernon, Indiana – Evaluation of Compliance with the 1-hour NAAQS for SO₂* (p. 6 & 14)

- The modeling set flagpole receptor heights to 1.5 meters instead of the default (0.0 m), did not incorporate fence line receptors, and did not properly characterize emission sources (i.e. potlines); and
- The stack parameters were modeled the same for actual and allowable emissions. Neither building parameters or GEP calculations were provided in the modeling demonstration, and it is unclear if GEP stack heights were used or considered according to the GEP stack height policy outlined in section 6.1 of the TAD.

On November 13, 2015, Indiana Department of Environmental Management (IDEM) submitted comments regarding the Sierra Club modeling to EPA. The comments addressed the inadequacies and inconsistencies of the Sierra Club modeling with the 1-hour SO₂ designation modeling guidance. Indiana's letter has been included in Appendix A of this submittal.

The Kentucky TSD also evaluated whether any nearby sources may have contributed to the exceedance of the SO₂ NAAQS in the modeled area. The TSD notes that the criteria for defining "nearby" as written in section 107(d)(1)(A) of the Clean Air Act, varies by pollutant. Since SO₂ concentrations tend to be dominated by impacts from sources within a modest distance, the Alcoa facilities and nearby Sigeco Culley Newburgh power plant appear to have a dominant impact on SO₂ concentrations, and the exceedances of the SO₂ NAAQS are modeled within a few kilometers of these three sources.⁴ The Indiana TSD further analyzes the modeling assessment and stipulates that sources in Warrick County that emit at least 100 tons of SO₂ per year are likely to have the most significant impacts in the area. The TSD explains that "Although Sierra Club also modeled other sources in Posey and Gibson Counties, Indiana, and Henderson County, Kentucky, these sources are somewhat distant from the maximum modeled concentrations, are less determinative of Warrick County air quality..."⁵

The Cabinet strongly disagrees with EPA's use of 3rd party modeling to designate areas. The Clean Air Act (CAA) Section 107(d) allows for the Governor of a state, or the appointed authority, to submit initial recommendations and provides the EPA the authority to determine final designations. There is no allowance for 3rd party input, especially flawed 3rd party input where even the EPA "believes that there are aspects of the modeling assessment that cause uncertainty as to the precise nature and location of the portion of the modeled potential violations in Henderson County, Kentucky...a number of conservative, simplifying assumptions were made by Sierra Club for characterizing the Alcoa sources and emissions, potentially leading to uncertainties in the modeled footprint."

Baskett SO₂ Monitor – Henderson County

The Baskett SO₂ monitor (AQS ID: 21-101-0014) in Henderson County, located on the grounds of the Baskett Fire Department in Baskett, KY is 24 kilometers north northeast of Century Aluminum Sebree, and approximately 12.6 kilometers from the Alcoa Warrick facilities

⁴ U.S. EPA *Technical Support Document: Chapter 15 – Proposed Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Kentucky* (p. 220)

⁵ U.S. EPA *Technical Support Document: Chapter 13 – Intended Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for Indiana* (p. 156)

in Indiana. The Baskett monitor is located on the western edge of the partial Henderson County area that EPA intends to designate as unclassifiable. As can be seen in Table 1, the average of the 99th percentile from the years 2014 – 2016 is well below the standard of 75 parts per billion. This monitoring site was established in 1992 and represents population exposure on a neighborhood scale for SO₂.

Table 1: Baskett SO₂ Monitor - Preliminary Design Values

<i>County</i>	<i>Site ID</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>Annual Design Value</i>
Henderson	21-101-0014	29.0	19.0	14.0	21

As specified in the TSD’s technical analysis for the Henderson County area, EPA must designate the Henderson County area by December 31, 2020. On January 1, 2017, Kentucky established a new SO₂ monitor near the single DRR source located in Henderson County, Century Aluminum Sebree, LLC (Century Aluminum Sebree). This monitor will be used to characterize SO₂ concentrations in the immediate vicinity of the Big Rivers Electric Corporation and Century Aluminum Sebree facilities. The data from this monitor will be utilized by EPA for fourth and final round of SO₂ designations.

Conclusion

The Cabinet determines the proposed unclassifiable designation for the portion of Henderson County is not appropriate and does not adhere to the CAA as it does not depend on reliable data as self-proclaimed by the EPA. The Sierra Club modeling does not adhere to the Appendix W modeling guidance which EPA requires all states to strictly follow. Also, the monitoring data in Table 1 clearly demonstrates that monitoring data in Henderson County is in attainment with the 2010 1-hour SO₂ NAAQS. Therefore, the Cabinet is requesting that EPA designate the area of Henderson County comprised of census block groups 211010207013, 211010207014, 211010207024, and 211010208004 as attainment for the 2010 SO₂ NAAQS.

Appendix A

Indiana Department of Environmental Management (IDEM) Analysis of Sierra Club Modeling



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 461-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

November 13, 2015

Mr. John Mooney
Chief, Air Programs Branch
U. S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Indiana's Review of Sierra Club's
Comments on Indiana's 1-Hour SO₂
Consent Decree Recommendations

Dear Mr. Mooney:

On March 2, 2015, the U.S. District Court for the Northern District of California accepted, as an enforceable order, an agreement between U.S. EPA, the Sierra Club, and the Natural Resources Defense Council to resolve litigation concerning the deadline for completing air quality designations under the 2010 Sulfur Dioxide National Ambient Air Quality Standards (NAAQS) for the remainder of the country. The court's order directed U.S. EPA to complete remaining designations in three additional rounds; the first round by July 2nd, 2016, the second round by December 31, 2017, and the final round by December 31, 2020. Indiana provided recommendations for five Indiana sources identified in the court's order by the September 18th, 2015 deadline for the first round of designations.

In response to your October 20, 2015 letter requesting Indiana's review of Sierra Club's modeling information provided for attainment recommendations under the 2010 Sulfur Dioxide NAAQS, the Indiana Department of Environmental Management – Office of Air Quality (IDEM-OAQ) is providing the following comments. There were four sources (of the five Indiana sources named in the court order) that the Sierra Club provided modeling information. IDEM has reviewed the modeling for all sources and provides comments for each source separately along with summary tables, comparing IDEM and Sierra Club's modeled results of actual emissions for each source:

A.B. Brown:

1. Sierra Club included several additional sources in their inventory modeling located within a 50 kilometer radius. IDEM conducted explicit modeling on nearby sources to determine if those sources' modeled impacts warranted inclusion in the A.B. Brown

- modeling. Modeling results showed no appreciable impacts from several of the sources. IDEM included two of the inventory sources that were found to have potential significant concentration gradients in its modeling.
2. Sierra Club used a background concentration of 47.1 $\mu\text{g}/\text{m}^3$ based on 2011-2013 monitoring data. The 2011-2013 monitoring data does not correspond with the 2012-2014 monitoring data used by IDEM to characterize the air quality in the area as referenced in the "Updated Guidance for Area Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard".
 3. The Sierra Club methodology for determining the background concentrations did not account for double counting of sources through modeling and monitoring.
 4. IDEM used a temporally varying seasonal background dataset for each modeled source instead of an overall 1-hour SO_2 monitored value that Sierra Club used in their analysis.
 5. AERMOD version 14134 was used, not the latest available version of AERMOD (version 15181) that IDEM used to model impacts to characterize air quality in the area.
 6. AERMET version 14134 was used, not the latest available version of AERMET (version 15181) that IDEM used to process the surface and upper air meteorological data.
 7. Sierra Club modeled all flagpole receptor heights at 1.5 meters, IDEM used ground level receptor heights, consistent with U.S. EPA's "SO₂ NAAQS Designations Modeling Technical Assistance Document, Section 4.2"
 8. Sierra Club modeled both allowable and actual emissions; IDEM modeled 2012-2014 Continuous Emissions Monitoring Data (CEM) and a compliance emission limit on Units 1 and 2 to characterize air quality for the area attainment designations.
 9. Sierra Club used the Clean Air Markets Database (CAMD) hourly emissions data which does not include the hourly varying stack temperatures and stack gas flow rates. IDEM used A.B. Brown's CEM data as supplied by the source. The varying stack parameter approach is considered more representative.
 10. Sierra Club did not address building downwash considerations. IDEM included building downwash in its modeling although actual stack heights were modeled. AERMOD no longer turns off downwash above the U.S. EPA formula height. Rather, the AERMOD code allows the Plume Rise Model Enhancement (PRIME) algorithms within the model to determine when and how to apply downwash.
 11. Sierra Club did not use fence line receptors. IDEM did use fence line receptors and also followed Appendix W, Section 7.2.2. Sufficient receptor detail was used for the grid to estimate the highest concentration and identify possible violations of the NAAQS.
 12. Sierra Club processed its own meteorology and made several assumptions concerning seasonal moisture conditions as average with winter months having continuous snow cover that differ from the U.S. EPA Region V approach on pages 7-9 of the document, "Regional Meteorological Data Processing Protocol EPA Region V and States". This approach recommends the AERSURFACE surface characteristics be adjusted based on the number of days with snow cover on the ground during the winter months and the

Bowen ratio adjustment based on soil moisture and precipitation data. This is the methodology IDEM uses to process all meteorological data.

99th Percentile 1-hour Daily Maximum Modeled SO₂ Concentration Comparison for A.B. Brown

	Modeled Concentration with background	1-hour SO₂ NAAQS	Facility Models Attainment?
Sierra Club	1,278.7	196.2	No
IDEM	196.08	196.2	Yes

Clifty Creek:

1. Sierra Club used a background concentration of 47.1 µg/m³ (although listed as 41.7 µg/m³ in the Section 2.2, paragraph 4) based on 2011-2013 monitoring data measured in Vanderburgh County. This monitor is located in southwest Indiana and is not the nearest SO₂ monitor to Clifty Creek, located in Jefferson County. IDEM used the New Albany, Floyd County SO₂ monitoring data from 2012-2014 as more representative data for southeastern Indiana as referenced in the "Updated Guidance for Area Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard".
2. The Sierra Club methodology to determine the background concentrations did not account for double counting of sources through modeling and monitoring.
3. IDEM used a temporally varying seasonal background dataset for each modeled source instead of an overall 1-hour SO₂ monitored value that Sierra Club used in their analysis.
4. AERMOD version 14134 was used, not the latest available version of AERMOD (version 15181) that IDEM used to characterize air quality in the area.
5. AERMET version 14134 was used, not the latest available version of AERMET (version 15181) that IDEM used to process the surface and upper air meteorological data.
6. Sierra Club modeled all flagpole receptor heights at 1.5 meters, IDEM used ground level receptor heights, consistent with U.S. EPA's "SO₂ NAAQS Designations Modeling Technical Assistance Document, Section 4.2"
7. Sierra Club modeled both allowable and actual emissions; U.S. EPA guidance recommended actual emissions to characterize area attainment designations. It appears that Sierra Club used the actual hourly emissions before Clifty Creek installed and began operation of its Flue Gas Desulfurization (FGD) emission control unit in July of 2013. Based on the continuous emissions monitoring (CEM) data, both pre-control and post-control, there was a significant reduction in SO₂ emissions from Clifty Creek. IDEM modeled the post-control CEM data and showed maximum modeled 1-hour SO₂ concentrations were well below the 1-hour SO₂ NAAQS. IDEM considers this emission dataset as representative of the area.
8. Sierra Club used the Clean Air Markets Database (CAMD) hourly emissions data which does not include the hourly varying stack temperatures and stack gas flow rates. IDEM

used Clifty Creek's Continuous Emissions Monitoring Data (CEM) as supplied by the source. The varying stack parameter approach is considered more representative.

9. Sierra Club did not address building downwash considerations. IDEM included building downwash in its modeling although actual stack heights were modeled. AERMOD no longer turns off downwash above the U.S. EPA formula height. Rather, the AERMOD code allows the Plume Rise Model Enhancement (PRIME) algorithms within the model to determine when and how to apply downwash.
10. Sierra Club did not use fence line receptors. IDEM did use fence line receptors and also followed Appendix W, Section 7.2.2. Sufficient receptor detail was used for the grid to estimate the highest concentration and identify possible violations of the NAAQS.
11. Sierra Club processed its own meteorology and made several assumptions concerning seasonal moisture conditions as average with winter months having continuous snow cover that differ from the U.S. EPA Region V approach on pages 7-9 of the document, "Regional Meteorological Data Processing Protocol EPA Region V and States". This approach recommends the AERSURFACE surface characteristics be adjusted based on the number of days with snow cover on the ground during the winter months and the Bowen ratio adjustment based on soil moisture and precipitation data. This is the methodology IDEM uses to process all meteorological data.

**99th Percentile 1-hour Daily Maximum Modeled SO₂ Concentration Comparison
for Clifty Creek**

	Modeled Concentration with background	1-hour SO₂ NAAQS	Facility Models Attainment?
Sierra Club	283.6	196.2	No
IDEM	71.6	196.2	Yes

Rockport:

1. Sierra Club used a background concentration of 47.1 µg/m³ based on 2011-2013 monitoring data. The 2011-2013 monitoring data does not match up with the 2012-2014 monitoring data used by IDEM to characterize the air quality in each of the areas.
2. The Sierra Club methodology for determining the background concentrations did not account for double counting of sources through modeling and monitoring.
3. IDEM used a temporally varying seasonal background dataset for each modeled source instead of an overall 1-hour SO₂ monitored value that Sierra Club used in their analysis.
4. AERMOD version 14134 was used, not the latest available version of AERMOD (version 15181) that IDEM used to characterize air quality in the area.
5. AERMET version 14134 was used, not the latest available version of AERMET (version 15181) that IDEM used to process the surface and upper air meteorological data.

6. Sierra Club modeled all flagpole receptor heights at 1.5 meters, IDEM used ground level receptor heights, consistent with U.S. EPA's "SO₂ NAAQS Designations Modeling Technical Assistance Document, Section 4.2"
7. Sierra Club modeled both allowable and actual emissions; U.S. EPA guidance recommended actual emissions to characterize area attainment designations.
8. Sierra Club used the Clean Air Markets Database (CAMD) hourly emissions data which does not include hourly varying stack temperatures and stack gas flow rates. IDEM used Rockport's Continuous Emissions Monitoring Data (CEM) as supplied by the source. The varying stack parameter approach is considered more representative.
13. Sierra Club did not address downwash considerations. IDEM modeled building downwash as Rockport's actual stack heights were below Good Engineering Practice (GEP) as the cooling towers are the controlling structures.
14. Sierra Club processed its own meteorology and made several assumptions concerning seasonal moisture conditions as average with winter months having continuous snow cover that differ from the U.S. EPA Region V approach on pages 7-9 of the document, "Regional Meteorological Data Processing Protocol EPA Region V and States". This approach recommends the AERSURFACE surface characteristics be adjusted based on the number of days with snow cover on the ground during the winter months and the Bowen ratio adjustment based on soil moisture and precipitation data. This is the methodology IDEM uses to process all meteorological data.

**99th Percentile 1-hour Daily Maximum Modeled SO₂ Concentration Comparison
for Rockport**

	Modeled Concentration with background	1-hour SO₂ NAAQS	Facility Models Attainment?
Sierra Club	283.6	196.2	No
IDEM	152.1	196.2	Yes

Duke - Gibson:

1. IDEM opted to demonstrate attainment of the 1-hour SO₂ NAAQS by monitoring; therefore air dispersion modeling was not used to demonstrate attainment, only to show the maximum modeled impacts from Duke-Gibson occur in close proximity of the two existing SO₂ monitors located north-northeast and northwest of the facility.
2. Sierra Club included several sources in their source inventory that would be captured by the background concentrations measured at the Duke - Gibson SO₂ monitors. Sources were not included in any modeling IDEM conducted for Duke-Gibson.
3. Sierra Club used a background concentration of 47.1 µg/m³ based on 2011-2013 monitoring data taken from Evansville. There are source-specific SO₂ monitors with

more representative monitoring data for 2012-2014 used by IDEM to characterize the air quality in the area.

4. The Sierra Club methodology to determine the background concentrations did not account for double counting of sources through modeling and monitoring.
5. AERMOD version 14134 was used, not the latest available version of AERMOD (version 15181) that IDEM used to characterize air quality in the area.
6. AERMET version 14134 was used, not the latest available version of AERMET (version 15181) used to process the surface and upper air meteorological data for the other consent decree sources.
7. Sierra Club modeled all flagpole receptor heights at 1.5 meters, IDEM used ground level receptor heights, consistent with U.S. EPA's "SO₂ NAAQS Designations Modeling Technical Assistance Document, Section 4.2"
8. Sierra Club modeled both allowable and actual emissions; U.S. EPA guidance recommended modeling actual emissions to characterize area attainment designations and monitoring locations.
9. Sierra Club used the Clean Air Markets Database (CAMD) hourly emissions data which does not include the hourly varying stack temperatures and stack gas flow rates. IDEM used Duke-Gibson's Continuous Emissions Monitoring Data (CEM) as supplied by the source. The varying stack parameter approach is considered more representative.
10. IDEM included building downwash in its modeling. Sierra Club did not address building downwash considerations which affects the location of maximum modeled impacts.
11. Sierra Club processed its own meteorology and made several assumptions concerning seasonal moisture conditions as average with winter months having continuous snow cover that differ from the U.S. EPA Region V approach on pages 7-9 of the document, "Regional Meteorological Data Processing Protocol EPA Region V and States". This approach recommends the AERSURFACE surface characteristics be adjusted based on the number of days with snow cover on the ground during the winter months and the Bowen ratio adjustment based on soil moisture and precipitation data. This is the methodology IDEM uses to process all meteorological data.

In summary, based on the modeling information supplied by Sierra Club, IDEM feels each of the Sierra Club's recommendations for A.B. Brown Generating Station, Clifty Creek Station, Gibson Generating Station and Rockport Plant are based on several factors that are not consistent with U.S. EPA guidance germane to the attainment designation process:

- Sierra Club used overly conservative emission estimates
- Sierra Club used inappropriate background concentrations
- Sierra Club overstated modeled impacts from sources within 50 kilometers
- Sierra Club used outdated versions of U.S. EPA approved models

Therefore, IDEM recommends that the U.S. EPA disregard the modeling evaluations submitted by Sierra Club as misrepresenting the air quality characteristics of each area surrounding the sources mentioned in the consent decree.

This is IDEM's review of the information provided by the Sierra Club for the 1-hour SO₂ modeling for four of the five areas in Indiana mentioned in the U.S. District Court for the Northern District of California's enforceable order agreement. If there are questions or a need for clarification, please contact me at (317) 232-8222 or by e-mail at kbaugues@idem.IN.gov or Mark Derf – Section Chief, Technical Support and Modeling Section, Air Programs Branch at (317) 233-5682 or by e-mail at mderf@idem.IN.gov.

Sincerely,

A handwritten signature in cursive script that reads "Keith Baugues".

Keith Baugues
Assistant Commissioner,
Office of Air Quality