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Rebecca Goodman
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Anthony R. Hatton
COMMISSIONER

December 30, 2025

Mr. Kevin J. McOmber,
Regional Administrator
U.S. EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

RE: Ongoing Reporting Requirements for 2010 1-hour Sulfur Dioxide National Ambient Air Quality Standard

Dear Mr. McOmber:

On behalf of the Commonwealth of Kentucky, the Energy and Environment Cabinet's Division for Air Quality (Division) respectfully submits the following documentation to comply with the United States Environmental Protection Agency (EPA) Data Requirements Rule (DRR) ongoing reporting requirement for the 2010 1-hour Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS).

As required by 40 CFR 51.1205(b), each state must submit an annual report to the EPA Regional Administrator that documents the annual SO_2 emissions of each source designated as unclassifiable/attainment, which utilized modeling as the basis for designation. The report must include a recommendation by the state regarding the need for additional modeling to assure that each area continues to meet the 2010 SO_2 NAAQS.

The attached report details the Division's review of the sources subject to the ongoing reporting requirements under the DRR. The Division recommends that no additional modeling is required at this time.

In accordance with 40 CFR 51.102, the annual report was available for public review and comment from October 28, 2025, to December 4, 2025. No comments were received. A copy of the public notice is included with the report.

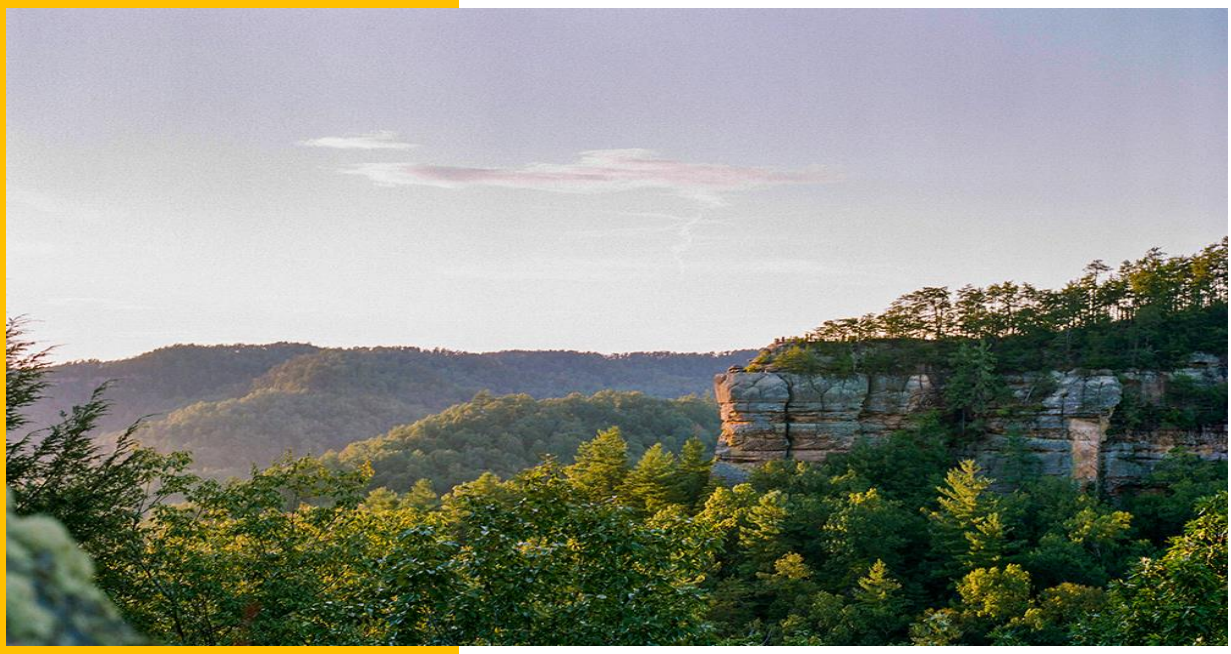
If you have any questions or concerns, please contact Ms. Cassandra Jobe, Program Planning and Administrative Branch Manager, Division for Air Quality at (502) 782-6670 or cassandra.jobe@ky.gov.

Sincerely,

Michael Kennedy, P.E.
Division Director

cc:

Denisse Diaz, U.S. EPA Region 4
Lynorae Benjamin, U.S. EPA Region 4



Commonwealth of Kentucky

Ongoing Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide Primary National Ambient Air Quality Standards

2025 Annual Report for Modeled Sources

Prepared for: U.S. Environmental Protection Agency

Prepared by: Kentucky Energy and Environment Cabinet, Division for Air Quality

December 30, 2025, Final Draft

TEAM KENTUCKY
ENERGY AND ENVIRONMENT CABINET

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[1] https://eec.ky.gov/Environmental-Protection/Air/Pages/Public-Notices.aspx.

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I. Introduction

The Kentucky Division for Air Quality (Division) submits this report to the U.S. Environmental Protection Agency (EPA) for the Annual Ongoing Data Requirement Rule (DRR) for the 2010 1-hour Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS). This report is intended to fulfill the annual reporting requirements of 40 CFR Part 51 Subpart BB.

On August 21, 2015, the EPA promulgated the DRR for the 2010 1-hour SO_2 Primary NAAQS of 75 parts per billion (ppb).[2] The DRR requires areas that are in attainment to characterize ambient air quality for facilities that emit more than 2,000 tons per year (tpy) of SO_2. Characterization of air quality can occur by choosing one of three methods: (1) ambient air monitoring; (2) air dispersion modeling of either actual or allowable emissions; or (3) demonstration of enforceable emissions limitations that are below the 2,000 tpy threshold.

On January 6, 2017, the Division submitted a letter and air dispersion modeling analyses to EPA characterizing nine sources subject to the DRR. The letter also detailed Kentucky sources that chose the monitoring or federally enforceable limitation options, as well as sources that were permanently shut down. Two of the nine sources are not included in this report: Big Rivers Electric Corporation (BREC)–D. B. Wilson and Tennessee Valley Authority (TVA)–Paradise.

EPA's DRR states that ongoing data requirements apply to sources that performed modeling based on actual emissions and where the area has not subsequently received a nonattainment designation. BREC–D. B. Wilson was designated unclassifiable during the second round of designations for the 2010 SO_2 NAAQS. Wilson took a SO_2 emissions limit, which was incorporated into its amended Title V permit on June 20, 2016. The modeling and analysis demonstration showed that, under the new federally enforceable limit, the facility modeled attainment. The model to characterize air quality around the TVA–Paradise facility used Potential to Emit (PTE) instead of actual emissions. The PTE accounted for the Mercury and Air Toxics Standards (MATS) limit for Unit 3 and the shutdown of Units 1 and 2 after April 15, 2017. All three Units have since shut down and were replaced with Units using natural gas. Due to these factors, these two facilities are not subject to the ongoing verification requirements.

In accordance with 40 CFR 51.1205(b), areas designated as attainment/unclassifiable and characterized using air dispersion modeling of actual SO_2 emissions are subject to ongoing data requirements. This report was developed to fulfill the annual emissions data review requirements.

[2] 80 FR 51052.

II. Emissions Data Summary

On January 9, 2018, EPA designated seven Kentucky counties, containing the sources characterized by modeled actual emissions, as attainment/unclassifiable.[3] Table 1 identifies the seven Kentucky counties and their respective DRR sources that are subject to ongoing emissions data verification.

Table 1: Sources Subject to DRR

Source	County
Duke Energy–East Bend	Boone
East Kentucky Power Cooperative (EKPC)–Hugh L. Spurlock	Mason
Kentucky Utilities (KU)–Ghent	Carroll
Louisville Gas and Electric (LG&E)–Trimble County	Trimble
TVA–Shawnee	McCracken
Century Aluminum–Hawesville	Hancock
Owensboro Municipal Utilities (OMU)–Elmer Smith	Daviess

The Division requested OMU–Elmer Smith be removed from future reporting requirements in the 2023 Annual DRR SO_2 Report submitted to EPA on December 15, 2023. The facility has permanently shut down and a demonstration was provided showing the drastic decrease in SO_2 emissions within the area. The EPA approved Kentucky's request on November 18, 2024. The approval letter is provided in Appendix A.

The EPA recommended using a minimum of the most recent three years of actual emissions data and concurrent meteorological data when modeling to characterize the air quality around the facilities. These three years would allow the modeling to simulate what a monitor would observe and serve as a baseline for future analysis. The five electric generating units (EGUs) that chose to model actual SO_2 emissions for the model years 2012-2014 are displayed in Table 2. The 2012-2014 SO_2 emissions used for modeling are compared to the 2022-2024 actual SO_2 emissions. The 2012-2014 emissions data for all sources in this report are summarized in EPA's 2010 SO_2 Round 3 Area Designations Technical Support Document.[4] The 2022-2024 emissions data for Kentucky facilities was obtained from the Division's Emissions Inventory System (KY EIS) and are included in Appendix B. At Duke Energy–East Bend, LG&E–Trimble County, and TVA–Shawnee, SO_2 emissions increased between 2023 and 2024. Section

[3] 83 FR 1098.

[4] TSD: Proposed Round 3 Area Designations for the 2010 1-Hour SO_2 Primary National Ambient Air Quality Standard for Kentucky. https://www.epa.gov/sites/default/files/2017-08/documents/19_ky_so2_rd3-final.pdf.

III looks at these facilities and the surrounding facilities in the modeled area to determine whether additional modeling is required.

Previous versions of the DRR report used the Clean Air Markets Program Data (CAMPD) for current yearly emissions totals for Kentucky EGUs. While compiling the 2025 DRR report, a discrepancy was discovered for KU–Ghent's 2023 SO_2 emissions totals between CAMPD and KY EIS. Through data verification, the Division certified that the KY EIS emissions total was accurate. For consistency reasons, all emissions totals for Kentucky facilities for 2022-2024 for this report come from KY EIS.

Table 2: Annual SO_2 Emissions for Sources Using Model Years 2012-2014 (tpy)

Source	Modeled Emissions 2012	Modeled Emissions 2013	Modeled Emissions 2014	Actual Emissions 2022	Actual Emissions 2023	Actual Emissions 2024
Duke Energy–East Bend	1,495	2,196	2,100	1,823	1,562	1,814
EKPC–H. L. Spurlock	5,131	4,469	4,689	3,856	4,084	3,903
KU–Ghent	10,772	13,422	14,851	10,675	9,361	9,157
LG&E–Trimble County	2,896	3,521	3,056	3,458	2,804	3,491
TVA–Shawnee	27,115	27,211	29,835	14,324	11,660	12,551

Table 3 provides SO_2 emissions data for Century Aluminum–Hawesville, which chose to model actual SO_2 emissions for the model years 2014-2016. Century Aluminum–Hawesville has been idled since 2023.

Table 3: Annual SO_2 Emissions for Sources Using Model Years 2014-2016 (tpy)

Source	Modeled Emissions 2014	Modeled Emissions 2015	Modeled Emissions 2016	Actual Emissions 2022	Actual Emissions 2023	Actual Emissions 2024
Century Aluminum–Hawesville	2,227	1,618	507	820	0	0

For the remaining six facilities, Table 4 compares the averaged actual emissions from the most recent three years of data, the averaged emissions of the modeled years, and the percent change between the two. Only LG&E–Trimble County shows an increase in actual emissions compared to the modeled year's emissions.

Table 4: SO_2 Emissions Comparisons (tpy)

Source	Modeled Emissions Average	Actual Emissions Average 2022-2024	Percent Change
Duke Energy–East Bend	1,930	1733	-10%
EKPC–H. L. Spurlock	4,763	3,948	-17%
KU–Ghent	13,015	9,731	-25%
LG&E–Trimble County	3,158	3,251	3%
TVA–Shawnee	28,054	12,845	-54%
Century Aluminum–Hawesville	1,451	273	-81%

III. Facility Analysis to Determine Updated Modeling Recommendation

As part of the ongoing reporting, Kentucky must perform an annual review of SO_2 emissions for facilities and, if necessary, provide a recommendation for updated modeling due to increases in SO_2 emissions. From 2023 to 2024, emissions increased at Duke Energy–East Bend, LG&E–Trimble County, and TVA–Shawnee by 252 tpy, 687 tpy, and 891 tpy, respectively. However, emissions reductions occurred for these facilities and other sources in the area when compared to 2012–2014 levels. Updated modeling is not needed for this report. The overall emissions reductions for each facility's modeled area are detailed below.

Duke Energy–East Bend

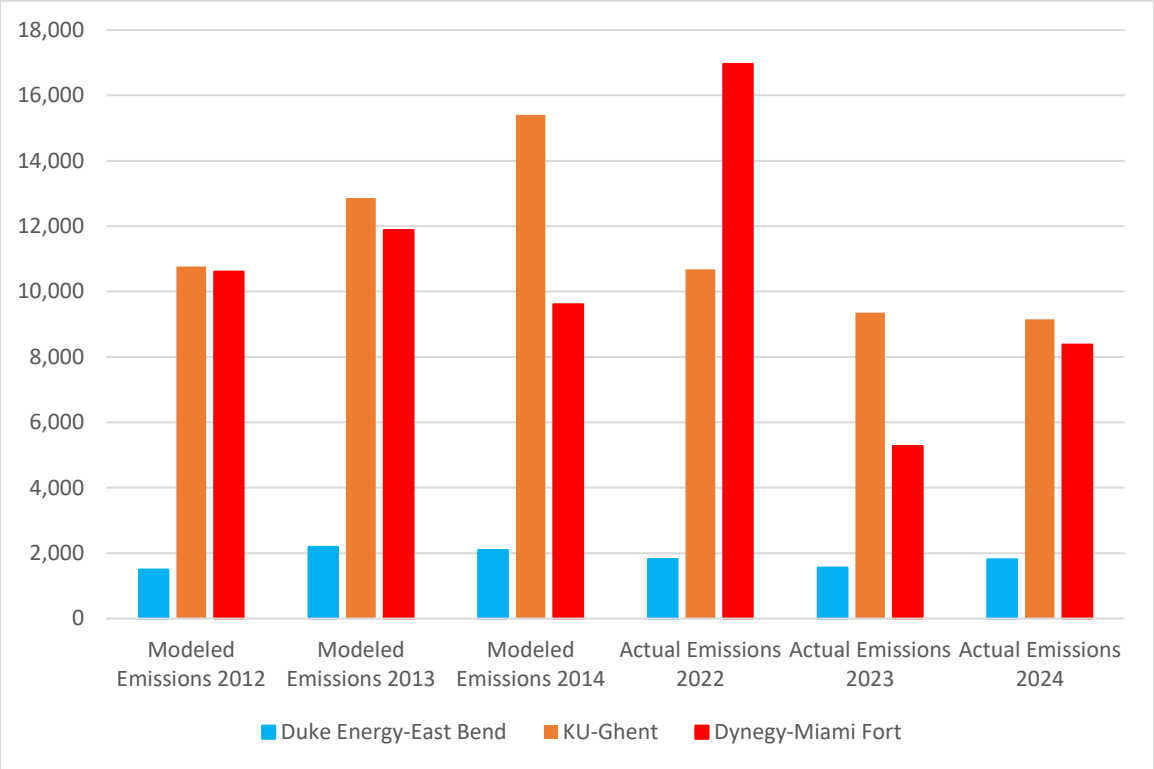
The initial modeling characterization for Duke Energy–East Bend includes KU–Ghent and Dynegy–Miami Fort. The resulting modeled emissions and actual emissions of SO_2 for the three facilities are shown in Table 5 and Figure 1. As seen in Table 5, SO_2 emissions at the Duke Energy–East Bend facility increased between 2023 and 2024. The Division requested that Duke Energy identify the reason for the increase. Duke Energy explained the increase, "is consistent with a 6% increase in the coal sulfur content, 3% increase in load, and the natural variability of unit operation from year to year." Appendix C contains Duke Energy's response, which was submitted to the Division for review.

Table 5: Duke Energy–East Bend, KU–Ghent, Dynegy–Miami Fort Annual SO_2 Emissions (tpy)

Facility	Modeled Emissions 2012	Modeled Emissions 2013	Modeled Emissions 2014	Actual Emissions 2022	Actual Emissions 2023	Actual Emissions 2024
Duke Energy–East Bend	1,495	2,196	2,100	1,823	1,562	1,814
KU–Ghent	10,772	12,863	15,409	10,675	9,361	9,157
Dynegy–Miami Fort*	10,616	11,886	9,613	16,959	5,275	8,380
Area Total	**22,883**	**26,945**	**27,122**	**29,457**	**16,198**	**19,351**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)

Figure 1: Duke Energy–East Bend, KU–Ghent, Dynegy–Miami Fort Annual SO_2 Emissions (tpy)



Despite the annual increase of SO_2 emissions at the Duke Energy–East Bend facility between 2023 and 2024, the average current emissions are lower than the average modeled emissions, as seen in Table 6. Table 6 lists each facility in the modeled area and the percent change between the current emissions and the emissions used during the initial model. The emissions of Dynegy–Miami Fort's Unit 6 were not included in the 2012-2014 modeling analysis as Unit 6 was permanently shut down on June 1, 2015.[5] Overall, SO_2 emissions in the area have decreased by 16%.

[5] Supra Note 4.

Table 6: Duke Energy–East Bend's Modeled Area Percent Change in SO_2 Emissions (tpy)

Facility	Modeled Emissions 2012-2014	Actual Emissions 2022-2024	Percent Change
Duke Energy–East Bend	1,930	1,733	-10%
KU–Ghent	13,015	9,731	-25%
Dynegy–Miami Fort*	10,705	10,205	-5%
Area Total	**25,650**	**21,669**	**-16%**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)

The initial modeled inputs generated by the Division indicated that the highest predicted 99th percentile daily maximum 1-hour concentration within the chosen modeling domain was 170 µg/m3, equivalent to 65 ppb. The modeled concentrations include the actual emissions from the facilities and the background concentrations of SO_2. The model shows that the highest concentrations occurred near the KU–Ghent facility. The concentrations modeled near Duke Energy–East Bend were below the 1-hour SO_2 NAAQS.[6] Table 7 highlights the improvement in air quality due to lower emissions in the modeled area. Data from the NKU monitor (site ID 21-037-3002) was used to calculate background concentrations for East Bend. Current ambient air data from the NKU monitor indicates a 2022-2024 design value of 7 ppb, well below 75 ppb. The latest complete three-year design value (2022-2024) shows a 90% decrease from the 2012-2014 design value. Therefore, the overall decrease in SO_2 emissions in the modeled area has improved air quality.

Table 7: NKU SO_2 Monitor 99th Percentile (ppb)

2012	2013	2014	2012-2014 Design Value	2022	2023	2024	2022-2024 Design Value	Percent Change
85	71	61	72	10	5	8	7	-90%

Monitor and design values are provided in Appendix D

Duke Energy–East Bend SO_2 emissions increased between 2023 and 2024. However, emissions at all three facilities in the modeled area (Duke Energy–East Bend, KU–Ghent, and Dynegy–Miami Fort) have decreased by 16%. Considering current emissions are below the modeled emissions and the area continues to maintain the 1-hour SO_2 NAAQS with a design

[6] Supra Note 4.

value that is well below the 75 ppb 1-hour SO_2 NAAQS, the Division has determined that updated modeling is not needed at this time.

Louisville Gas & Electric–Trimble County

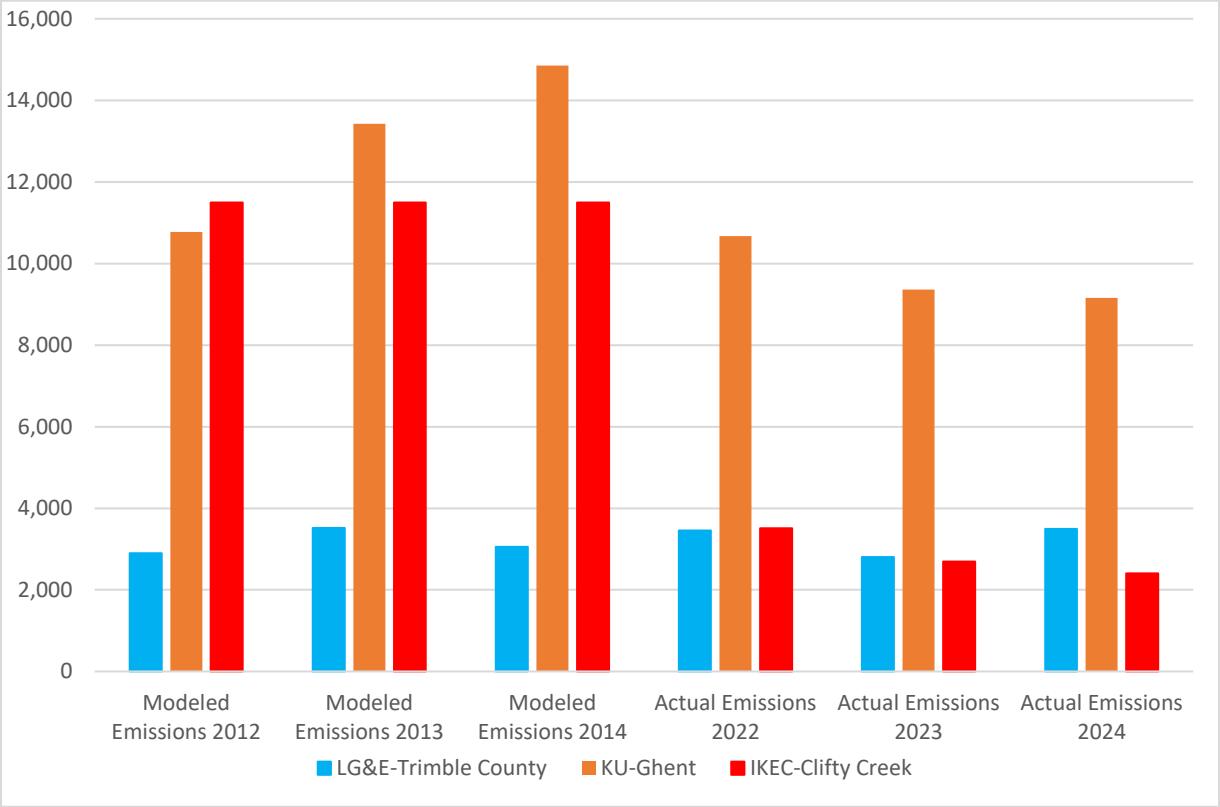
The initial modeling characterization for LG&E–Trimble County includes KU–Ghent and IKEC–Clifty Creek. The resulting modeled emissions and actual emissions of SO_2 for the three facilities are shown in Table 8 and Figure 2. As seen in Table 8, SO_2 emissions at LG&E–Trimble County increased between 2023 and 2024. The Division requested that LG&E identify the reason for the increase. LG&E explained the increase "can be attributed to an increase in utilization. Individual unit utilization varies annually based on electricity usage rates, fuel costs, planned outages, etc." Appendix E contains LG&E's response, which was submitted to the Division for review.

Table 8: LG&E–Trimble County, KU–Ghent, IKEC–Clifty Creek Annual SO_2 Emissions (tpy)

Facility	Modeled Emissions 2012	Modeled Emissions 2013	Modeled Emissions 2014	Actual Emissions 2022	Actual Emissions 2023	Actual Emissions 2024
LG&E–Trimble County	2,896	3,521	3,056	3,458	2,804	3,491
KU–Ghent	10,772	13,422	14,852	10,675	9,361	9,157
IKEC–Clifty Creek*	11,495	11,495	11,495	3,507	2,693	2,400
Area Total	**25,163**	**28,438**	**29,403**	**17,640**	**14,858**	**15,048**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)

Figure 2: LG&E–Trimble County, KU–Ghent, IKEC–Clifty Creek Annual SO_2 Emissions (tpy)



Despite the increase in SO_2 emissions at LG&E–Trimble County between 2023 and 2024 and the 3% increase from the average modeled emissions to the average current emissions, the emissions for the overall area have significantly decreased. Table 8 lists each facility in the modeled area and the percent change between the current emissions and the emissions used during the initial model. The emissions for the total area have decreased by 43%. The 2012-2014 initial modeling for IKEC–Clifty Creek was based on the facility's Potential to Emit (PTE) of 11,495 tpy instead of actual emissions. On February 1, 2016, Indiana issued Commissioner's Order 2016-02 to establish a combined emission limit for the six coal-fired boilers at Clifty Creek, which has resulted in the reduction of SO_2 concentrations in the area. The boilers were limited to a total of "2,624.5 lbs. of SO_2 per hour as a 720 operating hour rolling average when any of Units No.1 through No. 6, or any combination thereof, is operating."[7] As Table 8 shows, the most recent actual emissions at Clifty Creek are significantly lower than the modeled PTE emissions.

[7] 81 FR 27331

Table 9: LG&E–Trimble County's Modeled Area Percent Change in SO_2 Emissions

Facility	Modeled Emissions 2012-2014	Actual Emissions 2022-2024	Percent Change
LG&E–Trimble County	3,158	3,251	3%
KU–Ghent	13,015	9,731	-25%
IKEC–Clifty Creek*	11,495	2,867	-75%
Area Total	**27,668**	**15,849**	**-43%**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)

The initial modeled inputs generated by the Division indicated that the highest predicted 99th percentile daily maximum 1-hour concentration within the chosen modeling domain was 188 µg/m3, equivalent to 72 ppb. The modeled concentrations include the actual emissions from the facilities and the background concentration of SO_2. The model shows that the highest concentrations occurred near the IKEC–Clifty Creek facility. The concentrations modeled near LG&E Trimble County were below the 1-hour SO_2 NAAQS.[8] Data from Indiana's Green Valley Rd/Green Valley Elementary School monitor (site ID 18-043-1004) was used to calculate background concentrations for Trimble County. The Green Valley Elementary School monitor was retired in 2023, and a nearby monitor at the New Albany 4H Rd (site ID 18-043-0008) became operational in 2023.[9] The monitors are not linked and cannot be used to calculate design values, but the New Albany 4H monitor still demonstrates that SO_2 values in the area remain well below the 75 ppb SO_2 NAAQS.

Table 10: Green Valley Elementary SO_2 Monitor 99th Percentile (ppb)

2012	2013	2014	2012-2014 Design Value	2022	2023	2024	2022-2024 Design Value	Percent Change
32	21	44	32	7	-	-	-	-

Monitor and design values are provided in Appendix D

[8] Supra Note 4.
[9] Indiana 2023 Ambient Air Monitoring Network Plan. 2023 Annual Network Plan FINAL.pdf.

Table 11: New Albany 4H SO_2 Monitor 99th Percentile (ppb)

2012	2013	2014	2012-2014 Design Value	2022	2023	2024	2022-2024 Design Value	Percent Change
-	-	-	-	-	5	5	-	-

Monitor and design values are provided in Appendix D

KU–Ghent SO_2 emissions increased between 2023 and 2024. However, emissions in the modeled area have decreased by 43%. Considering current emissions are below the modeled emissions, and the nearby monitor levels remain well below 75 ppb, the Division has determined that updated modeling is not needed at this time.

Tennessee Valley Authority–Shawnee

The initial modeling characterization for TVA–Shawnee included Electric Energy Inc–Joppa Steam, Honeywell International Inc, and Holcim US (formerly Lafarge Midwest Inc–Portland). The Honeywell and Holcim facilities are not on the SO_2 DRR Source list but were included in the modeling analysis to best predict total modeled SO_2 concentrations in the McCracken County area. The resulting modeled emissions and actual emissions of SO_2 for the four facilities are shown in Table 12 and Figure 3. As seen in Table 12, SO_2 emissions at TVA–Shawnee increased between 2023 and 2024. The Division requested that TVA identify the reason for the increase. TVA explained the "increase in SO_2 from 2023 to 2024 can be attributed to an increase in fuel usage (heat input) and resulted in an increase in power generation." Appendix F contains TVA's response, which was submitted to the Division for review.

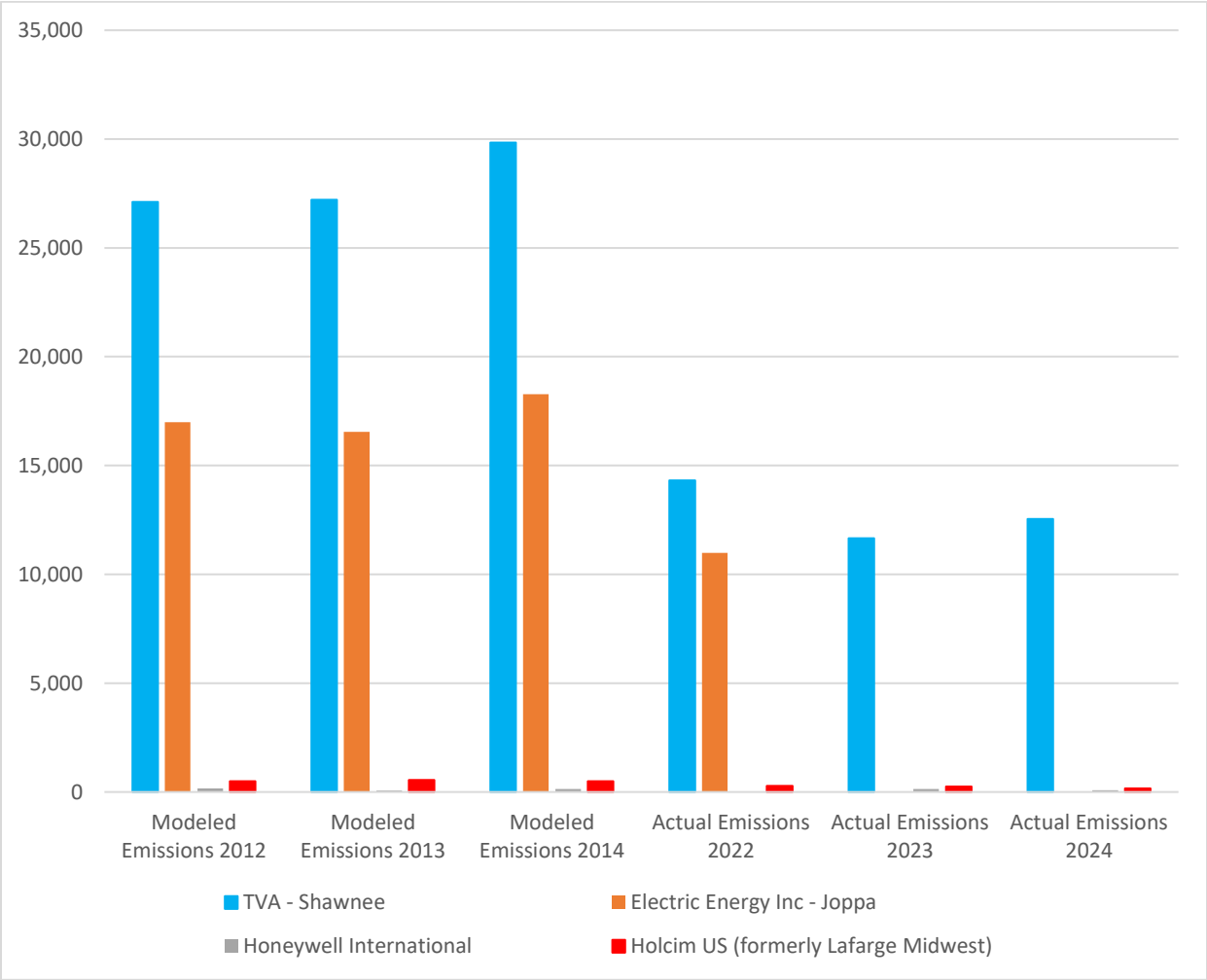
Table 12: TVA–Shawnee, Electric Energy–Joppa, Honeywell International, Holcim US Annual SO_2 Emissions (tpy)

Facility	Modeled Emissions 2012	Modeled Emissions 2013	Modeled Emissions 2014	Actual Emissions 2022	Actual Emissions 2023	Actual Emissions 2024
TVA–Shawnee	27,115	27,211	29,835	14,324	11,660	12,551
Electric Energy Inc–Joppa*	16,991	16,543	18,281	10,982	0	0
Honeywell International**	163	59	144	0	143	80
Holcim US (formerly Lafarge Midwest)**	494	551	490	283	257	160
Area Total	**44,763**	**44,364**	**48,750**	**25,589**	**12,061**	**12,791**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)

**2022-2024 emissions data: Illinois' Emissions Inventory database, please note that at the time of the report, 2024 data had been reviewed but was not certified

Figure 3: TVA–Shawnee, Electric Energy–Joppa, Honeywell International, Holcim US Annual SO_2 Emissions (tpy)



Despite the increase in SO_2 emissions at TVA–Shawnee between 2023 and 2024, the average current emissions are lower than the average modeled emissions, as seen in Table 13. Table 13 lists each facility in the modeled area and the percent change between the current emissions and the emissions used during the initial model. SO_2 emissions in the area have decreased by 63%. Significant reductions have occurred at TVA–Shawnee when compared to 2012 to 2014 modeled emissions. Further emissions controls are expected for TVA–Shawnee to meet its updated permit limit of 8,208 tpy by January 1, 2028. Additionally, the Electric Energy–Joppa plant was permanently shut down in 2024. Proof of the shutdown is provided in Appendix G.

Table 13: TVA–Shawnee's Modeled Area Percent Change in SO_2 Emissions

Facility	Modeled Emissions 2012-2014	Actual Emissions 2022-2024	Percent Change
TVA–Shawnee	28,054	12,845	-54%
Electric Energy Inc–Joppa*	17,272	3,661	-79%
Honeywell International**	122	74	-39%
Holcim US (formerly Lafarge Midwest)**	512	234	-54%
Area Total	**45,959**	**16,814**	**-63%**

*2022-2024 emissions data: Clean Air Markets Program Data (https://campd.epa.gov/)
**2022-2024 emissions data: Illinois' Emissions Inventory database, please note that at the time of the report, data was not certified

The initial modeled inputs generated by the Division indicated that the highest predicted 99th percentile daily maximum 1-hour concentration within the chosen modeling domain was 180.5 µg/m3, equivalent to 68.9 ppb. The modeled concentrations include the actual emissions from the facilities and the background concentration of SO_2. The model shows that the highest predicted concentration occurred 12.66 km from the Shawnee Plant. The concentration modeled near TVA–Shawnee was below the 1-hour SO_2 NAAQS.[10] The original modeling characterization used the Jackson Purchase monitor (21-145-1024) located in McCracken County, Kentucky. The Jackson Purchase monitor was retired in 2023, and a nearby monitor at the Paducah Transit site (site ID 21-145-1027) became operational in 2023.[11] The monitors are

[10] Supra Note 4.
[11] Kentucky Annual Ambient Air Monitoring Network Plan 2023. https://eec.ky.gov/Environmental-Protection/Air/Division%20Reports/2023%20Kentucky%20Annual%20Ambient%20Air%20Monitoring%20Network%20Plan.pdf.

not linked and cannot be used to calculate design values, but the Paducah Transit monitor still demonstrates that SO_2 values in the area remain well below the 75 ppb SO_2 NAAQS.

Table 14: Jackson Purchase SO_2 Monitor 99th Percentile (ppb)

2012	2013	2014	2012-2014 Design Value	2022	2023	2024	2022-2024 Design Value	Percent Change
24	18	20	21	11	-	-	-	-

Monitor and design values are provided in Appendix D

Table 15: Paducah Transit SO_2 Monitor 99th Percentile (ppb)

2012	2013	2014	2012-2014 Design Value	2022	2023	2024	2022-2024 Design Value	Percent Change
-	-	-	-	-	10	10	-	-

Monitor and design values are provided in Appendix D

Although SO_2 emissions at TVA–Shawnee increased between 2023 and 2024 due to an increase in energy output, SO_2 emissions from 2022-2024 are 63% less for the modeled area than the 2012-2014 modeled emissions. Considering current emissions are below the modeled emissions, the Division has determined that updated modeling is not needed at this time.

IV. Conclusion

The Division has thoroughly reviewed SO_2 emissions trends and air monitoring data for the DRR sources that chose modeling to characterize ambient air quality. Although SO_2 emissions at Duke Energy–East Bend, LG&E–Trimble County, and TVA–Shawnee increased between 2023 and 2024, those increases are offset by the significant SO_2 emissions reductions in the area compared to the original modeled years. Therefore, the Division has determined that updated modeling is not necessary at this time for any of Kentucky's sources subject to the DRR.

V. Public Notice

In accordance with 40 CFR 51.102, the report was made available for public inspection and comment from October 28, 2025, through December 4, 2025. A copy of the public notice is available in Appendix H. No comments were received.

Appendix A: EPA Approval to Terminate DRR Requirements for OMU–Elmer Smith

REGION 4 ADMINISTRATOR

ATLANTA, GA 30303

November 18, 2024

Rebecca Goodman
Secretary
Energy and Environment Cabinet
300 Sower Boulevard
Frankfort, Kentucky 40601

Dear Secretary Goodman:

This letter approves the Kentucky Energy and Environment Cabinet's request to terminate requirements under the Data Requirements Rule (DRR)[1] for the 2010 1-hour sulfur dioxide (SO_2) primary national ambient air quality standards (NAAQS) for ongoing verification that applies to the Owensboro Municipal Utilities – Elmer Smith Power Plant (Elmer Smith Plant) in Daviess County, Kentucky. The request to terminate was transmitted to the Environmental Protection Agency by the Kentucky Energy and Environment Cabinet, Division for Air Quality (DAQ), on December 15, 2023. The reason for approval is set forth below.

On December 21, 2017, effective, April 9, 2018, the EPA designated the entire Daviess County attainment/unclassifiable.[2] The DRR provides that "[f]or any area where modeling of actual SO_2 emissions serve[s] as the basis for designating such area as attainment for the 2010 SO_2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator" providing specified types of information, including a recommendation as to the need for further modeling to assess whether the area is continuing to attain the NAAQS. *See* 40 CFR 51.1205(b). However, "[a]n air agency will no longer be subject to [these requirements] if it provides air quality modeling demonstrating that air quality values at all receptors in the analysis are no greater than 50 percent of the 1-hour SO_2 NAAQS, and such demonstration is approved by the EPA Regional Administrator." *See* 40 CFR 51.1205(b)(2).

Kentucky's December 15, 2023, termination request for Elmer Smith is based on a qualitative characterization of air quality in the vicinity of the source due to the permanent retirement of the two-remaining coal-fired units and the shutdown of the facility that have significantly reduced SO_2 emissions in the area.

[1] 40 CFR part 51, subpart BB.
[2] *See* 83 FR 1098.

The EPA's consideration of Kentucky's termination request for the Elmer Smith facility is based upon the Agency's qualitative assessment of available SO_2 emissions data, including information provided by DAQ summarized in the enclosed technical support document. The EPA believes that the initial DRR modeled characterization in 2017 is still representative of air quality in the area and, in fact, air quality has improved with the operational changes at the Elmer Smith facility. Therefore, the EPA has determined DAQ's request supports the termination of the annual SO_2 emission reporting requirements pursuant to 40 CFR 51.1205 for the Elmer Smith Power Plant in Daviess County. Consequently, the Commonwealth is no longer required to submit annual emission reports for the Elmer Smith facility Plant pursuant to 40 CFR 51.1205(b) and (c).

Thank you all for the work your agency does to support improved air quality. If you have any questions, please contact Denisse Diaz, Director of the Air and Radiation Division, at diaz.denisse@epa.gov.

Sincerely,

JEANEANNE GETTLE

Digitally signed by JEANEANNE GETTLE
Date: 2024.11.19 08:59:28 -05'00'

Jeaneanne M. Gettle
Acting Regional Administrator

Appendix B: Emissions Data

Emissions data is available in a separate electronic Excel spreadsheet.

Appendix C: Duke Energy's 2025 DRR Report Correspondence

Outlook

RE: [EXTERNAL] Duke Energy - East Bend 1-Hour SO2 Ongoing Data Requirements

From Coughlin, Patrick W <Patrick.Coughlin@duke-energy.com>
Date Wed 3/19/2025 7:37 AM
To Moreo, Emma (EEC) <emma.moreo@ky.gov>
Cc Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>

Emma Moreo

Here is the explanation for the increase in the SO_2 lbs/MMBtu rate from 2023 to 2024.

> The increase in the average SO_2 lbs/MMBtu rate between 2023 to 2024 is consistent with a 6% increase in the coal sulfur content, 3% increase in load and the natural variability unit operation from year to year.

Let me know if you have any questions.

Thanks,

Patrick Coughlin
Duke Energy
Email: patrick.coughlin@duke-engery
Office Phone (317)-838-2108

From: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Sent: Wednesday, March 12, 2025 11:56 AM
To: Coughlin, Patrick W <Patrick.Coughlin@duke-energy.com>
Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: Re: [EXTERNAL] Duke Energy - East Bend 1-Hour SO2 Ongoing Data Requirements

Thank you for your response. I do have one follow-up. Can you provide further explanation of why the SO2 lbs./MMBtu increased by 10% from 2023 to 2024?

Emma Moreo

Environmental Scientist Advisor

Kentucky Division for Air Quality

300 Sower Blvd

Frankfort, KY 40601

(502) 782-6717

From: Coughlin, Patrick W <Patrick.Coughlin@duke-energy.com>
Sent: Thursday, March 6, 2025 3:21 PM
To: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: RE: [EXTERNAL] Duke Energy - East Bend 1-Hour SO2 Ongoing Data Requirements

---

Hi Emma

The increase in the SO_2 tons between 2024 and 2023 is attributed to the following.

- 2.5% increase in load
- 10% increase in the annual average SO_2 lbs./MMBtu.

Year	Load MW	SO_2 tons/yr	Avg. SO_2 lbs/MM	Oper Time hr/yr	Heat Input MMBtu/yr
2023	2,456,363	1562	0.115	5,949	26,581,378
2024	2,519,814	1814	0.128	6,100	27,077,036
Diff	63,451	251	0.013	151	495,658
% Change	2.5%	13.9%	10%	2.5%	1.8%

A comparison of the SO_2 ton/yr and annual average SO2 lbs/MMBtu between 2024 and the model years 2012-2014 shows the following.

- The 2024 SO_2 tons/yr is 384 tons lower than the maximum annual SO_2 tons emitted during the 2012-2014 model year.

- The 2024 SO_2 lbs/MMBtu is 0.001 lbs/MMBtu higher than the maximum annual average rate during the 2012-2014 model year.

Year	Load MW/yr	SO_2 tons/yr	Avg. SO_2 lbs/MM	Oper Time hr/yr	Heat Input MMBtu/yr
2012	3,514,676	1497	0.092	6,540	32,436,811
2013	4,086,971	2198	0.116	7,355	37,767,156
2014	3,205,757	2103	0.127	5,798	32,985,031
Max Annual	4,086,971	2,198	0.127	7,355	37,767,156
2024	2,519,814	1814	0.128	6,100	27,077,036
Diff	-1567157	-384	0.001	-1254	-10690120
% Change	-62.2%	-21.2%	1.0%	-20.6%	-39.5%

Let me know if you have any questions or need additional information.

Thanks

Patrick Coughlin

Email Patrick.Coughlin@duke-energy.com

Office Phone 317-838-2108

From: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Sent: Friday, February 14, 2025 11:26 AM
To: Coughlin, Patrick W <Patrick.Coughlin@duke-energy.com>

Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: [EXTERNAL] Duke Energy - East Bend 1-Hour SO2 Ongoing Data Requirements

Dear Patrick Coughlin,

In 2016, Duke Energy - East Bend delivered an air dispersion modeling demonstration that revealed modeled SO2 concentrations below the 1-Hour National Ambient Air Quality Standard (NAAQS) of 75 ppb. This was in response to the EPA's SO2 Data Requirements Rule (DRR) that was promulgated on August 21, 2015.

Duke Energy modeled their SO2 emissions using 2012-2014 actual emissions. A comparison of the average SO2 emissions in tons per year (tpy) from 2012-2014 to 2022-2024 reveals that SO2 emissions at East Bend have decreased by 10%. However, there was an increase in SO2 emissions between 2023 and 2024.

Source	Modeled Years (tpy)			Subsequent Years (tpy)		
	2012	2013	2014	2022	2023	2024
East Bend	1,496.63	2,197.72	2,102.71	1,823.71	1,562.31	1,813.62

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

Source	Average 2012-2014 (tpy)	Average 2022-2024 (tpy)	Average Percent Change
East Bend	1,932.35	1,733.21	-10%

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

The SO2 Data Requirements Rule Section 51.1205 states that there are ongoing data requirements for sources demonstrating compliance with the NAAQS through modeling. Section (b) states:

"For any area where modeling of actual SO2 emissions serve as the basis for designating such area as attainment for the 2010 SO2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR 58.10), that documents the annual SO2 emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year. The first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation."

Since an increase in SO2 emissions was recorded between 2023 and 2024, the Kentucky Division for Air Quality is requesting Duke Energy provide an assessment of the cause of the increase at East Bend so that we may submit the assessment with the annual report required by the SO2 DRR.

Please provide the assessment/explanation for the emissions increase by **Friday, March 7th, 2025**.

If you have any questions or want to discuss this further, please contact me.

Emma Moreo

Environmental Scientist Advisor

Kentucky Division for Air Quality

300 Sower Blvd

Frankfort, KY 40601

(502) 782-6717

Appendix D: Monitoring and Design Value Report

User ID: JNALL

DESIGN VALUE REPORT

Report Request ID: 2338840

Report Code: AMP480

Dec. 11, 2025

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	21	145	1024								

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
DESIGN VALUE	42401		

SELECTED OPTIONS

Option Type	Option Value
SINGLE EVENT PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO
USER SITE METADATA	STREET ADDRESS
QUARTERLY DATA IN WORKFILE	NO
WORKFILE DELIMITER	,
USE LINKED SITES	YES

DATE CRITERIA

Start Date	End Date
2012	2014

APPLICABLE STANDARDS

Standard Description
SO2 1-hour 2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: Dec. 11, 2025

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2012

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2012			2011			2010			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	24.0	Y	4	27.0	U	4	25.0	U	25	Y

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2012
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2012			2011			2010			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	.8	Y	4	1.5	U	4	1.5	U	1	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2013

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2013			2012			2011			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	18.0	Y	4	24.0	Y	4	27.0	U	23	Y

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2013
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.
State Name: Kentucky

		2013			2012			2011			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	.3	Y	4	.8	Y	4	1.5	U	1	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2014

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	20.0	Y	4	18.0	Y	4	24.0	Y	21	Y

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2014
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.
State Name: Kentucky

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1024	JACKSON PURCHASE RECC, 2901	4	.4	Y	4	.3	Y	4	.8	Y	1	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

FLAG	MEANING
M	The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no Regional assessment regarding data quality per se. This flag will remain until the Region provides an "N" or "Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: JNALL

DESIGN VALUE REPORT

Report Request ID: 2338842

Report Code: AMP480

Dec. 11, 2025

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	21	145	1027								

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
DESIGN VALUE	42401		

SELECTED OPTIONS

Option Type	Option Value
SINGLE EVENT PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO
USER SITE METADATA	STREET ADDRESS
QUARTERLY DATA IN WORKFILE	NO
WORKFILE DELIMITER	,
USE LINKED SITES	YES

DATE CRITERIA

Start Date	End Date
2023	2024

APPLICABLE STANDARDS

Standard Description
SO2 1-hour 2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: Dec. 11, 2025

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2023

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2023			2022			2021			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1027	920 Harrison Street	4	9.5	Y							10	N

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2023
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2023			2022			2021			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1027	920 Harrison Street	4	.8	Y							1	N

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2024

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1027	920 Harrison Street	4	9.7	Y	4	9.5	Y				10	N

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2024
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.
State Name: Kentucky

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-145-1027	920 Harrison Street	4	1.1	Y	4	.8	Y				1	N

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

FLAG	MEANING
M	The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no Regional assessment regarding data quality per se. This flag will remain until the Region provides an "N" or "Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: JNALL

DESIGN VALUE REPORT

Report Request ID: 2317383 Report Code: AMP480 Sep. 5, 2025

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	21	037	3002								
	21	061	0501								
	18	043	1004								
	18	043	0008								

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
DESIGN VALUE	42401		

SELECTED OPTIONS

Option Type	Option Value
SINGLE EVENT PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO
USER SITE METADATA	STREET ADDRESS
QUARTERLY DATA IN WORKFILE	NO
WORKFILE DELIMITER	,
USE LINKED SITES	YES

DATE CRITERIA

Start Date	End Date
2014	2014

APPLICABLE STANDARDS

Standard Description
SO2 1-hour 2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: Sep. 5, 2025

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2014

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Indiana

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
18-043-1004	2230 GREEN VALLEY ROAD/GREE	4	43.8	Y	4	20.5	Y	4	32.0	Y	32	Y

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2014
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Indiana

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
18-043-1004	2230 GREEN VALLEY ROAD/GREE	4	1.6	Y	4	1.0	Y	4	1.4	Y	1	Y

Notes:
1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2014

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-061-0501	MAMMOTH CAVE NP - ALFRED CO	4	11.1	M	4	11.1	M	4	8.7	M	10	Y
21-037-3002	524A JOHN'S HILL ROAD	4	61.0	Y	4	71.0	Y	4	85.0	Y	72	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2014
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2014			2013			2012			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-037-3002	524A JOHN'S HILL ROAD	4	1.5	Y	4	1.0	Y	4	1.2	Y	1	Y
21-061-0501	MAMMOTH CAVE NP - ALFRED CO	4	.7	M	4	.7	M	4	.7	M	1	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

FLAG	MEANING
M	The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no Regional assessment regarding data quality per se. This flag will remain until the Region provides an "N" or "Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: JNALL

DESIGN VALUE REPORT

Report Request ID: 2317384 Report Code: AMP480 Sep. 5, 2025

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	21	037	3002								
	21	061	0501								
	18	043	1004								
	18	043	0008								

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
DESIGN VALUE	42401		

SELECTED OPTIONS

Option Type	Option Value
SINGLE EVENT PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO
USER SITE METADATA	STREET ADDRESS
QUARTERLY DATA IN WORKFILE	NO
WORKFILE DELIMITER	,
USE LINKED SITES	YES

DATE CRITERIA

Start Date	End Date
2024	2024

APPLICABLE STANDARDS

Standard Description
SO2 1-hour 2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
PRELIMINARY DESIGN VALUE REPORT

Report Date: Sep. 5, 2025

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2024

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Indiana

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
18-043-0008	New Albany- 4H Road (site o	3	5.0 *	Y	4	4.6	Y				5	N
18-043-1004	2230 GREEN VALLEY ROAD/GREE							4	6.5	Y	7	N

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2024
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.
State Name: Indiana

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
18-043-1004	2230 GREEN VALLEY ROAD/GREE							4	.8	Y	1	N
18-043-0008	New Albany- 4H Road (site o	3	1.1 *	Y	4	.7	Y				1	N

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile **Level:** 75

Design Value Year: 2024

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

State Name: Kentucky

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-061-0501	MAMMOTH CAVE NP - ALFRED CO				2	1.7 *		4	1.9		2	N
21-037-3002	524A JOHN'S HILL ROAD	4	7.7	Y	4	4.8	Y	4	9.9	Y	7	Y

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Pollutant: Sulfur dioxide(SO2 1-hour 2010)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual Mean **Level:** 75

Design Value Year: 2024
REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.
State Name: Kentucky

		2024			2023			2022			3-Year	
Site ID	STREET ADDRESS	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Comp. Qrtrs	99th Percentile	Cert& Eval	Design Value	Valid Ind.
21-037-3002	524A JOHN'S HILL ROAD	4	.2	Y	4	.7	Y	4	.6	Y	1	Y
21-061-0501	MAMMOTH CAVE NP - ALFRED CO				2	.1 *		4	.2			N

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

FLAG	MEANING
M	The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no Regional assessment regarding data quality per se. This flag will remain until the Region provides an "N" or "Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).

Notes: 1. Computed design values are a snapshot of the data at the time the report was run (may not be all data for year).
2. Some PM2.5 24-hour DVs for incomplete data that are marked invalid here may be marked valid in the Official report due to additional analysis.
3. Annual Values not meeting completeness criteria are marked with an asterisk ('*').

Appendix E: LG&E's 2025 DRR Report Correspondence

Outlook

RE: LG&E - Trimble County 1-Hour SO2 Ongoing Data Requirements

From Burfict, Brandan <brandan.burfict@lge-ku.com>
Date Mon 8/11/2025 8:44 AM
To Moreo, Emma (EEC) <emma.moreo@ky.gov>
Cc Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>; Baker, Kristin <Kristin.Baker@lge-ku.com>; Mohn, Laura Shuffett <Laura.Mohn@lge-ku.com>; Feider, Ryan A <Ryan.Feider@lge-ku.com>; Imber, Philip <PImber@pplweb.com>

Ms. Moreo,

Louisville Gas & Electric (LG&E) Trimble County Generating Station's variation in SO_2 emissions can be attributed to an increase in utilization. Individual unit utilization varies annually based on electricity usage rates, fuel costs, planned outages, etc. Trimble County Unit 1 saw the increase in utilization between 2023 and 2024 since Trimble County Unit 2 is historically a base load unit with a higher utilization rate and is ahead of Trimble County Unit 1 in the dispatch order.

In addition, the submitted modeling results also included contributions from the Kentucky Utilities (KU) Ghent Generating Station. In the time periods specified below, the Ghent SO_2 emissions decreased by 25.23%. Combining emissions from both LG&E and KU sources, data shows there is a 19.31% decrease in SO_2 emissions from the LG&E and KU sources when comparing the 2012-2014 modeled period to the 2022-2024 period. Thus, further validating the modeled results in demonstrating attainment with the 1 hr SO_2 NAAQS.

Source	Modeled Years (tpy)			Subsequent Years (tpy)		
	2012	2013	2014	2022	2023	2024
KU - Ghent	10,772.4	13,421.9	14,851.2	10,674.815	9,360.717	9,157

Source	Average 2012-2014 (tpy)	Average 2022-2024 (tpy)	Average Percent Change
KU – Ghent	13,015.17	9,730.84	-25.23%

Source	Modeled Years (tpy)			Subsequent Years (tpy)		
	2012	2013	2014	2022	2023	2024

Ghent & Trimble	13,668.23	16,943.29	17,907.4	14,132.64	12,164.40	12,852.20

Source	Average 2012-2014 (tpy)	Average 2022-2024 (tpy)	Average Percent Change
Ghent & Trimble	16,172.97	13,049.74	-19.31%

Brandan A. Burfict
Sr. Manager, Environmental Generation and Gas Operations
Environmental Compliance | PPL / LG&E and KU / RIE

Business Use

From: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Sent: Friday, August 1, 2025 1:47 PM
To: Burfict, Brandan A <Brandan.Burfict@lge-ku.com>; Baker, Mary Kristin <Kristin.Baker@lge-ku.com>
Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: Fw: LG&E - Trimble County 1-Hour SO2 Ongoing Data Requirements

I have checked our internal emissions inventory database, which shows the emissions for LG&E - Trimble County in 2023 as 2,803.68 tpy and in 2024 as 3,491.48 tpy. Please provide an assessment of the cause of the increase at Trimble County so that we may submit the reason with the annual report required by the SO2 DRR. Please provide the assessment by **8/15/25**.

Emma Moreo

Environmental Scientist Advisor

Kentucky Division for Air Quality

300 Sower Blvd

Frankfort, KY 40601

(502) 782-6717

Business Use

From: Baker, Kristin <Kristin.Baker@lge-ku.com>
Sent: Wednesday, March 12, 2025 1:18 PM
To: Moreo, Emma (EEC) <emma.moreo@ky.gov>; Burfict, Brandan A <Brandan.Burfict@lge-ku.com>
Subject: FW: LG&E - Trimble County 1-Hour SO2 Ongoing Data Requirements

Emma, I have copied Brandan Burfict. I see you tried to reach him but had an incorrect spelling of his first name.

Thanks,

Kristin

Kristin Baker

Environmental Engineer | LG&E and KU

820 W. Broadway, Louisville, KY 40202

M: 502-780-8948 | **O**: 502-627-4156

Business Use

From: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Sent: Wednesday, March 12, 2025 9:26 AM
To: Baker, Mary Kristin <Kristin.Baker@lge-ku.com>
Subject: Fw: LG&E - Trimble County 1-Hour SO2 Ongoing Data Requirements

I emailed Brandon Burfict about our SO2 data requirements rule submittal but I did not receive a response. Would you be a better contact for this or is there someone else that could help with this? Your help would be greatly appreciated.

From: Moreo, Emma (EEC)
Sent: Friday, February 14, 2025 11:51 AM
To: Brandon.Burfict@lge-ku.com <Brandon.Burfict@lge-ku.com>
Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: LG&E - Trimble County 1-Hour SO2 Ongoing Data Requirements

Dear Brandon Burfict,

In 2016, LG&E -Trimble County delivered an air dispersion modeling demonstration that revealed modeled SO2 concentrations below the 1-Hour National Ambient Air Quality Standard (NAAQS) of 75 ppb. This was in response to the EPA's SO2 Data Requirements Rule (DRR) that was promulgated on August 21, 2015.

LG&E - Trimble County modeled their SO2 emissions using 2012-2014 actual emissions. A comparison of the average SO2 emissions in tons per year (tpy) from 2012-2014 to that of 2022-2024 reveals SO2 emissions at Trimble County have increased by 5%. Additionally, there was an increase in SO2 emissions between 2023 and 2024.

Source	Modeled Years (tpy)			Subsequent Years (tpy)		
	2012	2013	2014	2022	2023	2024
Trimble County	2,895.83	3,521.39	3,056.20	3,511.55	2,832.43	3,558.67

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

Source	Average 2012-2014 (tpy)	Average 2022-2024 (tpy)	Average Percent Change
Trimble County	3,157.81	3,300.88	5%

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

The SO2 Data Requirements Rule Section 51.1205 states that there are ongoing data requirements for sources demonstrating compliance with the NAAQS through modeling. Section (b) states:

"For any area where modeling of actual SO2 emissions serve as the basis for designating such area as attainment for the 2010 SO2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR 58.10), that documents the annual SO2 emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year. The first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation."

Since an increase in SO2 emissions was recorded between 2023 and 2024, the Kentucky Division for Air Quality is requesting LG&E provide an assessment of the cause of the increase at Trimble County so that we may submit the assessment with the annual report required by the SO2 DRR.

Please provide the assessment/explanation for the emissions increase by **Friday, March 7th, 2025**.

If you have any questions or want to discuss this further, please contact me.

Emma Moreo

Environmental Scientist Advisor

Kentucky Division for Air Quality

300 Sower Blvd

Frankfort, KY 40601

(502) 782-6717

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Appendix F: TVA's 2025 DRR Report Correspondence

Outlook

RE: TVA - Shawnee 1-Hour SO2 Ongoing Data Requirements

From Benton, Shannon E <sebenton@tva.gov>
Date Tue 2/18/2025 4:50 PM
To Moreo, Emma (EEC) <emma.moreo@ky.gov>
Cc Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>

Dear Ms. Moreo,

The increase in SO2 from 2023 to 2024 can be attributed to an increase in fuel usage (heat input) and resulted in an increase in power generation (gross generation [MWh]).

Shawnee CY24 to CY23 relative increases are shown below.
HeatInput: 16%
GrossGeneration: 18%
SO2: 8%

The relative increase for SO2 was less than it was for HeatInput and GrossGeneration:

CEMS / EPA Clean Air Markets Program Data				
Year	**Facility Name**	**HeatInput (mmBtu)**	**GrossGeneration (MWh)**	**SO2 (ton)**
2024	Shawnee	70,353,715	6,374,365	12,551
2023	Shawnee	60,781,178	5,385,903	11,660
2024/2023		1.16	1.18	1.08

If you have any questions, please let me know or contact Jack Byars at 423-400-1403 or jgbyars@tva.gov.

Thank you,
Shannon Benton
SHF Plant Manager

From: Moreo, Emma (EEC) <emma.moreo@ky.gov>
Sent: Friday, February 14, 2025 11:00 AM
To: Benton, Shannon E <sebenton@tva.gov>
Cc: Jobe, Cassandra L (EEC) <Cassandra.Jobe@ky.gov>
Subject: TVA - Shawnee 1-Hour SO2 Ongoing Data Requirements

Dear Shannon Benton,

In 2016, TVA - Shawnee delivered an air dispersion modeling demonstration that revealed modeled SO2 concentrations below the 1-Hour National Ambient Air Quality Standard (NAAQS) of 75 ppb. This was in response to the EPA's SO2 Data Requirements Rule (DRR) that was promulgated on August 21, 2015.

TVA - Shawnee modeled their SO2 emissions using 2012-2014 actual emissions. A comparison of the average SO2 emissions in tons per year (tpy) from 2012-2014 to that of 2022-2024 reveals SO2 emissions at Shawnee have decreased by 54%. However, there was an increase in SO2 emissions between 2023 and 2024.

Source	Modeled Years (tpy)			Subsequent Years (tpy)		
	2012	2013	2014	2022	2023	2024
Shawnee	27,114,87	27,210.73	29,834.54	14,325.61	11,660.23	12,550.80

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

Source	Average 2012-2014 (tpy)	Average 2022-2024 (tpy)	Average Percent Change
Shawnee	28,053.38	12,845.55	-54%

Emissions data acquired from Clean Air Markets Program Data (CAMD) database - https://campd.epa.gov/

The SO2 Data Requirements Rule Section 51.1205 states that there are ongoing data requirements for sources demonstrating compliance with the NAAQS through modeling. Section (b) states:

"For any area where modeling of actual SO2 emissions serve as the basis for designating such area as attainment for the 2010 SO2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR 58.10), that documents the annual SO2 emissions of each applicable source in each such area and provides an assessment of the cause of any

emissions increase from the previous year. The first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation."

Since an increase in SO2 emissions was recorded between 2023 and 2024, the Kentucky Division for Air Quality is requesting TVA provide an assessment of the cause of the increase at Shawnee so that we may submit the assessment with the annual report required by the SO2 DRR.

Please provide the assessment/explanation for the emissions increase by **Friday, March 7th, 2025**.

If you have any questions or want to discuss this further, please contact me.

Emma Moreo

Environmental Scientist Advisor

Kentucky Division for Air Quality

300 Sower Blvd

Frankfort, KY 40601

(502) 782-6717

Appendix G: Electric Energy–Joppa Closure Documentation

Source Name: Joppa Refined Coal LLC

Source ID: 127 015 ABE

Permit No.: Entire Source

02

PERMIT WITHDRAWN

Type of Source: ROSS

Withdraw Request Received: 10-17-2022

Fees Owed: 0

Ceased Operations Date Entered in Iceman: 10-17-2022

Acknowledgement Letter Sent: 10-28-2022

Comments:

IEPA
Division of Records Management
Rec...

NOV 16 2022

Initials: tan

Reviewe...

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397

JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

October 28, 2022

Joppa Refined Coal LLC
Attn: Rich Cary
2850 Golf Road
Rolling Meadows, IL 60008

I.D. No.: 127015ABE
Permit No.: 20050027
Letter Received: October 17, 2022

The Illinois EPA hereby acknowledges the receipt of your above-referenced correspondence and confirms the withdrawal of your entire source and all associated permits in accordance with your request.

If you have any questions concerning this matter, please contact Trent Nation at 217/524-1661.

William D. Marr
Manager, Permit Section
Bureau of Air

WDM:tan

RECEIVED
STATE OF ILLINOIS

OCT 17 2022

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL - PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: ____ / ____ / ____
Page _____ of _____
Source Designation: _____

WITHDRAWAL OF PERMIT OR PERMIT APPLICATION

FOR AGENCY USE ONLY	
ID NO.:	127 015 ABE
PERMIT NO.:	Entire Source
DATE:	10-17-2022

SECTION ONE — SOURCE INFORMATION

1) SOURCE NAME: Joppa Refined Coal, LLC	2) SOURCE ID NO.: 127015ABE
3) SOURCE ADDRESS: 2100 Portland Road, Joppa, Illinois 62953	
4) CONTACT NAME: Fran Taglia	5) CONTACT PHONE NO.: 630-968-5405

SECTION TWO — INSTRUCTIONS IN BRIEF

1) COMPLETE THIS FORM IF THE APPLICANT REQUESTS TO WITHDRAW ISSUED PERMITS AND THEIR ASSOCIATED APPLICATIONS OR PENDING PERMIT APPLICATIONS.
2) SECTION THREE, NO. 1 IS USED TO WITHDRAW THE ENTIRE SOURCE, NO. 2 -7 ARE FOR SPECIFIC PERMITS.
3) A WITHDRAWAL AND SUBSEQUENT DELETION FROM THE SYSTEM IS **PERMANENT**.
4) A SHUTDOWN OR TERMINATION OF THE OPERATION IS NOT SUFFICIENT TO WITHDRAW A PERMIT. THE PERMITTEE MUST SPECIFICALLY INSTRUCT THE ILLINOIS EPA, IN WRITING, TO WITHDRAW THE UNDERLYING AUTHORIZING PERMIT(S). SUBMISSION OF THIS FORM CONSTITUTES THAT WRITTEN INSTRUCTION.
5) THE ILLINOIS EPA BILLS ANNUALLY FOR HOLDING AN PERMIT WHETHER OR NOT THE SOURCE IS IN OPERATION. TO STOP BILLING, A PERMIT MUST BE WITHDRAWN BEFORE THE FEE DUE DATE.
6) DATA AND INFORMATION REQUIRED FOR ANNUAL EMISSION REPORTS WILL STILL BE REQUIRED TO BE SUBMITTED FOR THE PORTION OF THE YEAR THAT THE SOURCE HELD A VALID PERMIT.

SECTION THREE — PERMIT(S) TO WITHDRAW

1) DO YOU REQUEST TO WITHDRAW THE ENTIRE SOURCE AND ALL ASSOCIATED PERMITS?
WITHDRAW THE **ENTIRE** SOURCE: [X] YES [ ] NO, IF "NO" COMPLETE THE FOLLOWING TABLE.

2) APPLICATION NO.:	5) APPLICATION NO.:
3) APPLICATION NO.:	6) APPLICATION NO.:
4) APPLICATION NO.:	7) APPLICATION NO.:

SECTION FOUR — SIGNATURE BLOCK

AS AUTHORIZED BY THE BELOW SIGNATORY, THE ABOVE LISTED SOURCE REQUESTS THE WITHDRAWAL OF THE ABOVE LISTED PERMITS AND THEIR ASSOSCIATED APPLICATIONS OR ANY PENDING PERMIT APPLICATIONS.

THE SIGNATORY RECOGNIZES A WITHDRAWAL FROM THE SYSTEM IS PERMANENT.

AUTHORIZED SIGNATURE:

BY: _____ (AUTHORIZED SIGNATURE)

Manager (TITLE OF SIGNATORY)

Rich Cary (TYPED OR PRINTED NAME OF SIGNATORY)

10 / 13 / 2022 (DATE)

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER 39.5 OF THE ILLINOIS ENVIRONMENTAL PROTECTION ACT, 415 ILCS 5/39.5. FURTHER DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION, MOREOVER AS ALSO PROVIDED IN THAT SECTION, FAILURE TO PROVIDE THIS INFORMATION MAY PREVENT THIS APPLICATION FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED.

FOR APPLICANT'S USE
_____

APPLICATION PAGE _____

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285-CAAPP

ROUX

October 13, 2022

Acting Manager
Division of Air Pollution Control
Bureau of Air, Illinois EPA
1021 North Grand Avenue East
Springfield, Illinois 62702

Re: Withdrawal of ROSS Registration
Joppa Refined Coal, LLC (Source ID: 127015ABE)
Refined Coal Facility at the Joppa Generating Station

Dear Acting Manager:

On behalf of Joppa Refined Coal, LLC (Joppa Refined Coal), Roux Associates, Inc. (Roux Associates) is submitting the enclosed 285 CAAPP form to your office for purposes of facilitating the withdraw the facility's existing Registration of Smaller Sources (ROSS) Registration.

Until the recent closure of Electric Energy Inc.'s (EEI's) Joppa Generating Station (Station), Joppa Refined Coal had operated a refined coal facility (RCF) which treated coal that was fed into the utility boilers at the Station. Given the closure of the Station, the RCF is no longer in operation.

If you have any questions regarding this submission, please do not hesitate to contact me at (856) 423-8800, or via email at jhickey@rouxinc.com.

Sincerely,

ROUX ASSOCIATES, INC.

Jason Hickey
Senior Scientist

enclosures

ecc: Rich Cary, Joppa Refined Coal, LLC
Fran Taglia, Weir International, Inc.

2221.0003.I003.2021.LET

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ORIGIN ID:DYLA (856) 423-8800
JOANNE KRAUSS
ROUX ASSOCIATES, INC.
402 HERON DR

LOGAN TOWNSHIP, NJ 08085
UNITED STATES US

SHIP DATE: 14OCT22
ACTWGT: 1.00 LB
CAD: 1364892/INET4530

BILL SENDER

TO DIVISION OF AIR POLLUTION CONTROL
BUREAU OF AIR, ILLINOIS EPA
1021 NORTH GRAND AVENUE EAST

SPRINGFIELD IL 62702

(000) 000-0000
INV.
PO: WITHDRAWAL OF ROSS REGISTRAT
REF: 2221.0003I003
DEPT:

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Appendix H: Public Notice

KENTUCKY DIVISION FOR AIR QUALITY
PUBLIC NOTICE FOR THE SULFUR DIOXIDE DATA REQUIREMENTS RULE
2025 ANNUAL REPORT

The Kentucky Energy and Environment Cabinet (Cabinet) is proposing this annual report for the Sulfur Dioxide (SO_2) Data Requirements Rule (DRR) for the 2010 1-Hour SO_2 National Ambient Air Quality Standards (NAAQS). The United States Environmental Protection Agency (EPA) established this rule for air agencies to annually characterize current air quality in areas with large sources of SO_2 emissions.

In accordance with 40 CFR 51.102, the Cabinet is making this proposed plan available for public inspection and provides the opportunity for public comment. The proposed plan can be found at **https://eec.ky.gov/Environmental-Protection/Air/Pages/Public-Notices.aspx.** The public comment period will be open from October 28, 2025 through December 4, 2025. Comments should be submitted in writing to the contact person by either mail or email.

The Cabinet will conduct a virtual public hearing on November 21, 2025, at 10:00 a.m. (Eastern Time). This hearing will be held to receive comments on the proposed SIP revision. This hearing is open to the public and all interested persons will be given the opportunity to present testimony. To assure that all comments are accurately recorded, the Division requests that oral comments presented at the hearing are also provided in written form, if possible. It is not necessary that the hearing be held or attended in order for persons to comment on the proposed submittal to EPA. If no request for a public hearing is received by November 14, 2025, the hearing will be cancelled, and notice of the cancellation will be posted at **https://eec.ky.gov/Environmental-Protection/Air/Pages/Public-Notices.aspx**. Written comments should be sent to the contact person and must be received by close of business on November 28, 2025, to be considered part of the public record.

Please note that registration is required to participate in this hearing. You must either email your name and mailing address to emma.moreo@ky.gov or mail this information to Emma Moreo, Division for Air Quality, 300 Sower Building, 2nd Floor, Frankfort, KY 40601. Please put "Registration for SO2 DRR Annual Report Hearing" as the subject line, and state in the body of the message if you plan to speak during the hearing.

CONTACT PERSON: Emma Moreo, Environmental Scientist Advisor, Evaluation Section, Program Planning & Administrative Branch, Division for Air Quality, 300 Sower Boulevard, Frankfort, Kentucky 40601. Phone: (502) 782-6717; Email: emma.moreo@ky.gov

The Energy and Environment Cabinet does not discriminate on the basis of race, color, national origin, sex, age, religion, or disability and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs, and activities.