

AN 18 2015 RAS Office

**ENERGY AND ENVIRONMENT CABINET OFFICE OF THE SECRETARY 500 MERO STREET** 12<sup>TH</sup> FLOOR, CAPITAL PLAZA TOWER FRANKFORT, KY 40601 **TELEPHONE: 502-564-3350** FACSIMILE: 502-564-3354

January 15, 2013

Ms. Gwendolyn Keyes Fleming **Regional Administrator** U.S. EPA, Region 4 Sam Nunn Atlanta Federal Center 61 Forsyth Street, SW Atlanta, Georgia 30303

AIR PLANNING BEDNEN RΡ/ ATLANTA GA

RE: Updated boundary recommendation for the SO<sub>2</sub> nonattainment area in Jefferson County, Kentucky

Dear Ms. Fleming:

This letter is written to provide an update to the SO<sub>2</sub> nonattainment boundary recommendation letter dated December 20, 2011. After review of the 2012 quality assured monitoring data for SO<sub>2</sub>, Kentucky recommends that the roughly triangular portion of Jefferson County that is bounded to the east by Dixie Highway (US60 and US31W), to the west by the Ohio River, to the north by extending Ethan Allen Way to Dixie Highway and the Ohio River, and to the south at the adjacent property lines of Louisville Gas and Electric - Mill Creek Electric Generating Station and Kosmos Cement, be designated nonattainment for the 1-hour sulfur dioxide (SO<sub>2</sub>) standard. Supporting documentation is enclosed.

Your prompt attention to this letter is appreciated. If you have any questions or comments concerning this matter, please contact Andrea Smith at the Division for Air Quality at (502) 564-3999.

Sincerely yours,

Leonard K. Peters Secretary

Beverly Banister/R. Scott Davis c:

KentuckyUnbridledSpirit.com



## Louisville/Jefferson County, Kentucky 1-Hour SO<sub>2</sub> Nonattainment Boundary Recommendation

#### **Recommendation:**

The Louisville Metro Air Pollution Control District (APCD) recommends that the roughly triangular portion of Jefferson County that is bounded to the east by Dixie Highway (US60 and US31W), to the west by the Ohio River, to the north by extending Ethan Allen Way to Dixie Highway and the Ohio River, and to the south at the adjacent property lines of Louisville Gas and Electric - Mill Creek Electric Generating Station and Kosmos Cement, be designated nonattainment for the 1-hour sulfur dioxide (SO<sub>2</sub>) standard.

#### **Discussion:**

The SO<sub>2</sub> monitor at Watson Lane Elementary has a three year design value, based on 2010-2012 data, of 123 parts per billion (ppb). The monitor is located at 7201 Watson Lane, Louisville, Kentucky. It was established in 1992 as a population-exposure-based ambient air monitoring site. It is generally upwind of a majority of the stationary sources in the county that emit SO<sub>2</sub>. For purposes of determining the nonattainment boundary, SO<sub>2</sub> is presumed to arise from direct emissions with concentrations highest relatively close to the source(s) and much lower at greater distances due to dispersion. See March 23, 2011 Memo from U.S. EPA, "Area Designations for the 2010 Revised Primary Sulfur Dioxide National Ambient Air Quality Standards" (Guidance). Because of this, and based on the five factor analysis in the Guidance, Kentucky has determined that less than the full county should be designated nonattainment. These factors, which are discussed below, are: 1) air quality data; 2) emissions-related data; 3) meteorology; 4) geography/topography; and 5) jurisdictional boundaries.

#### I. Air Quality Data

Currently, APCD operates three SO<sub>2</sub> monitors in Jefferson County, Kentucky: Firearms Training at Algonquin Parkway (21-111-1041), Cannons Lane (21-111-0067), and Watson Lane (21-111-051). The Indiana Department of Environmental Management (IDEM) operates one in Floyd County, Indiana on Green Valley Road (18-043-1004).

Attainment of the  $SO_2$  standard is achieved when the 3-year average of the 99<sup>th</sup> percentile annual distribution of the daily maxima is less than or equal to 75 ppb. Table 1 below provides those values and design values based on 2008-2012 data. The data for these monitors can be found in the Appendix.

Of the four monitors listed in the table below, only Watson Lane has a design value greater than 75 ppb for 2010-2012. Firearms Training, Cannons Lane, and Green Valley Road stations do not have a violating  $SO_2$  monitor and are not included in this discussion.

APCD sent a certification letter to EPA for Cannons Lane, Firearms Training, and Watson Lane SO<sub>2</sub> data on January 8, 2013. IDEM anticipates the Green Valley Road SO<sub>2</sub> data to be certified by January 31, 2013. Once IDEM's data are certified and reviewed, this document will be revised to reflect any necessary changes.

	Ann	ual 99th	Percer	ntiles (p	pb)	Annua	l Design Value	es (ppb)
Site name	2008	2009	2010	2011	2012	2008-2010	2009-2011	2010-2012
Watson Lane	113	116	107	114	147	112	112	123
Firearms Training	122	96	100	35	35	106	77	57
Cannons Lane <sup>1</sup>	-	-	45	51	31	45	48	42
Green Valley Road <sup>2</sup>	138	125	123	38	34	128	95	65

Table 1. SO<sub>2</sub> Annual 99<sup>th</sup> Percentiles and Annual Design Values

<sup>1</sup> Sampling began 05-26-2010

<sup>2</sup> 2012 data not yet certified

#### II. SO<sub>2</sub> Emissions Data

The table below lists the seven Jefferson County, Kentucky stationary sources reporting over ten tons per year (tpy) of sulfur dioxide, plus Duke Energy's Gallagher Electric Generating Station in New Albany, Indiana.

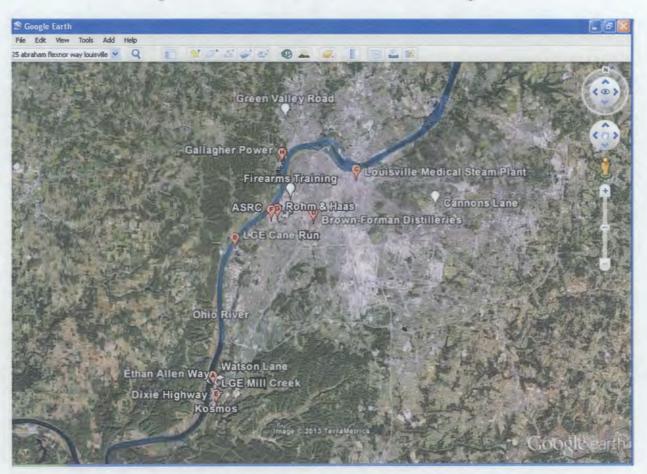
	Table 2. 502 Emissions		
Pin <sup>1</sup>	Plant / Facility Site Name	EIS Site ID	SO <sub>2</sub> tons per year
A	Louisville Gas & Electric - Mill Creek	7353711	29,944.72
В	Louisville Gas & Electric - Cane Run	5702411	7823.72
С	Louisville Medical Center Steam Plant	9613611	475.90
D	Brown Forman/Early Times	9612011	257.81
Е	Kosmos Cement	7353311	187.47
F	American Synthetic Rubber Company	7367811	136.87
G	Rohm and Haas Company	7350211	28.44
Н	Duke Energy, Gallagher	7742411	3009.9

Table 2. SO<sub>2</sub> Emissions Data (2011)

<sup>1</sup>See Map A.

Map A depicts the locations of Jefferson County, KY and Floyd County, IN SO<sub>2</sub> monitoring sites and stationary sources listed in Tables 1 and 2. A discussion of monitoring and stationary source data follows.

Of the SO<sub>2</sub> sources listed in Table 2, five (Louisville Gas & Electric - Cane Run, Louisville Medical Center Steam Plant, Brown Forman/Early Times, American Synthetic Rubber Company, and Rohm and Haas Company) are located in the northern portion of Jefferson County and account for 8,722.74 tpy, or 22.4 percent of the 38,871.32 total tpy generated by Kentucky sources. These sources are closest to the Firearms Training monitoring site, which is **not** a violating monitor.



Map A. Location of SO<sub>2</sub> Emitters and Monitoring Sites

In May 2009, a federal jury found that Duke<sup>1</sup> had made illegal modifications to Gallagher Units 1 and 3 without first complying with pre-construction obligations, including obtaining preconstruction permits and installing and operating state-of-the-art pollution control technology, in violation of the Clean Air Act (CAA) Nonattainment New Source Review and Prevention of Significant Deterioration provisions, 42 U.S.C. §§ 7470-7492, 7501-7515, and the Indiana State Implementation Plan.

The consent decree secured injunctive relief at all four units at the Gallagher Plant even though only Units 1 and 3 were found to be in violation of the CAA. The settlement was anticipated to reduce SO<sub>2</sub> emissions at the Gallagher Plant by about 35,000 tons per year, an 86.6 percent reduction when compared to 2008 emissions. That goal has been surpassed. In 2008 Gallagher's SO<sub>2</sub> emissions were more than 40,433 tons (slightly less than the 41,644 tons from **all** source sectors in Jefferson County combined); in 2010, 23,000; in 2011, the plant emitted just over 3000 tons. These dramatic reductions were accomplished by shutting down Units 1 and 3. Additional reductions were achieved when Units 2 and 4 were equipped with baghouses and dry sorbent

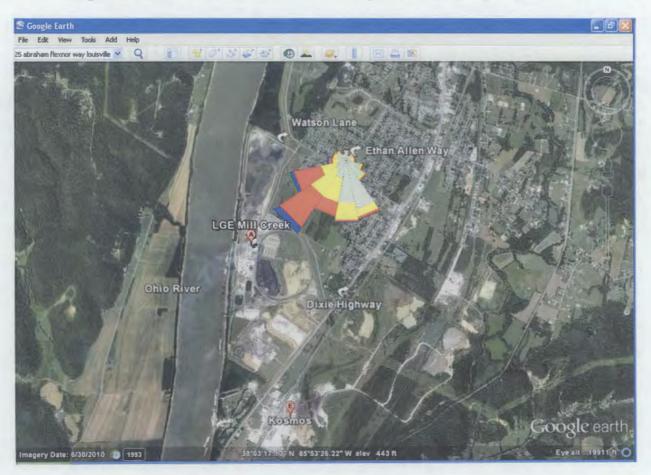
<sup>&</sup>lt;sup>1</sup> Suit was initially filed against Cinergy, Gallagher's prior owner.

pollution-control equipment. Both units continue to operate and are burning low-sulfur coal for further emission reductions (768.2 tons were reported for the first three quarters in 2012.)

#### III. Meteorology

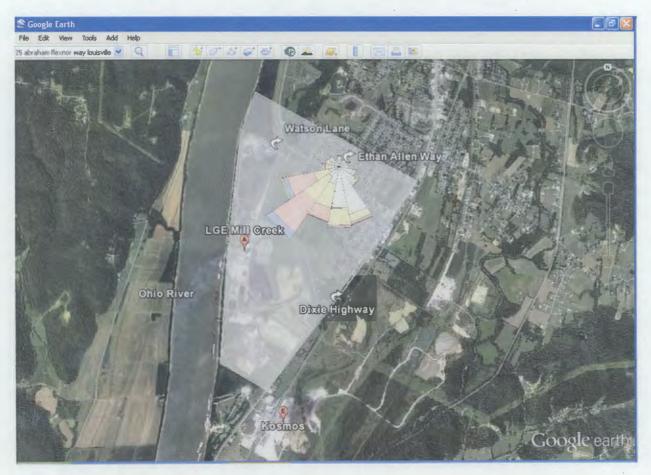
We reviewed 1-hour SO<sub>2</sub> 2010-2012 exceedances for the Watson Lane monitoring site. For each exceedance, wind data for the corresponding 24-hour period was obtained and mapped. (Source: 2008-2012 processed meteorological data for Louisville using Wilmington, OH upper air and 1-minute ASOS data.)

Map B illustrates the daily average wind rose plot for the Watson Lane SO<sub>2</sub> monitor's exceedances. This plot indicates two sources (Louisville Gas & Electric, Mill Creek and Kosmos Cement) upwind of the monitor that could contribute to the exceedances of the SO<sub>2</sub> standard. After further analysis of those emissions sources and a comparison to a similar emissions source (Brown Forman/Early Times) near the Firearms Training monitoring site, we determined that Kosmos Cement contributes a negligible amount, <1 percent, of Jefferson County's SO<sub>2</sub> emissions. Firearms Training had no SO<sub>2</sub> exceedances in 2011 or 2012. Similarly, we believe that Kosmos Cement is not a significant contributor to the Watson Lane monitor exceedances and violation.



Map B. Location of Watson Lane Monitoring Site with Nearby SO<sub>2</sub> Emitters

The recommended nonattainment area in Map C includes the largest sulfur dioxide source in Jefferson County, Louisville Gas and Electric Company's Mill Creek Electric Generating Station. This one source produces slightly over 77 percent of all stationary source SO<sub>2</sub> emissions in Jefferson County, Kentucky, and is less than one mile upwind of the Watson Lane monitoring site. The wind rose plot clearly indicates that the Watson Lane exceedances of the SO<sub>2</sub> standard result from emissions from this stationary source.



#### Map C. Location of Proposed SO<sub>2</sub> Nonattainment Boundary

#### IV. Geography/Topography

As shown on Maps B and C, neither topography nor geography plays a role in the violations at the Watson Lane monitoring site.

The boundary of the recommended nonattainment area is influenced by the Louisville Gas and Electric, Mill Creek Electric Generating Station, which produces 77.04 percent of all stationary source SO<sub>2</sub> emissions in Jefferson County, Kentucky.

#### V. Jurisdictional Boundary

The USEPA guidance requested clearly defined legal boundaries for carrying out air quality planning and enforcement functions for the nonattainment area. Where boundaries are not adequate to describe the nonattainment area, other clearly defined and permanent landmarks or

geographic coordinates may be used. In this case we are using jurisdictional, legal, and permanent landmarks which create a nonattainment area roughly triangular in shape. Two roads will be used as boundaries: Dixie Highway (US60 and US31W) to the east and Ethan Allen Way which runs at a northwesterly angle from Dixie Highway. One jurisdictional boundary will be used: to the west, the Ohio River. The last boundary will be the adjacent property lines of Louisville Gas and Electric - Mill Creek Electric Generating Station and Kosmos Cement to the south. The shaded area in Map C illustrates the proposed nonattainment boundary.

#### **Conclusion:**

After analyzing the five factors outlined in the Guidance, we recommend that the roughly triangular portion of Jefferson County that is bounded to the east by Dixie Highway (US60 and US31W), to the west by the Ohio River, to the north by extending Ethan Allen Way to Dixie Highway and the Ohio River, and to the south at the adjacent property lines of Louisville Gas and Electric - Mill Creek Electric Generating Station and Kosmos Cement, be designated nonattainment for the 1-hour sulfur dioxide (SO<sub>2</sub>) standard.



#### AIR POLLUTION CONTROL DISTRICT

#### LOUISVILLE, KENTUCKY

GREG FISCHER MAYOR LAUREN ANDERSON, DIRECTOR

January 8, 2013

Mr. Todd Rinck Air, Pesticides and Toxics Management Division U.S. Environmental Protection Agency Region 4 Atlanta Federal Center 61 Forsyth Street SW Atlanta, GA 30303-8909

Dear Mr. Rinck:

The Louisville Metro Air Pollution Control District is informing you that ambient air monitoring data for sulfur dioxide acquired during 2012 is ready for certification. The ambient concentration data and the quality assurance data have been reviewed and completely submitted to AQS. Taking into consideration the quality assurance findings, the ambient data are accurate to the best of my knowledge. Enclosed is AQS report AMP450 that list the data to be certified. Also enclosed is an AMP255 report that contains the quality assurance data used during the data review.

If you have any questions, please feel free to contact me at 502-574-6009. Please direct technical questions to Ms. Cynthia Lee at 502-574-7217.

Sincerely,

Lauren Anderson Executive Director

cc: John Lyons, Kentucky DAQ Darren Palmer, USEPA, Region IV

#### www.louisvilleky.gov

WWW.LOUISVILLEKY.GOV/APCD 850 BARRET AVENUE, ROOM 205 LOUISVILLE, KENTUCKY 40204-1745 502.574.6000 FAX: 502.574.5306

Report Date: Jan. 9, 2013

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 ('\*').

Page 1 of 7

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

						Report C		AMP48	0					Jan. 9, 20
								GEOGR	APHIC SE	LECTIONS				
										EPA				
State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	Region	Method	Duration	Begin Date	End Date
21	111		42401											
18	043		42401											
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2010 2012

SO2 1-hour 2010

Report Date: Jan. 9, 2013

# Pollutant: Sulfur dioxide(42401) Standard Units: Parts per billion(008) NAAQS Standard: SO2 1-hour 2010 Statistic: Annual 99th Percentile

Design Value Year: 2010

State Name:

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

Indiana

Statistic: Annual 99th Percentile Level: 75

2010 2009 2008 3-Year Comp. 99th Cert. Comp. 99th Cert Comp. 99th Cert. Design Valid Site ID Qrtrs Qrtrs Percentile Qrtrs STREET ADDRESS Percentile Ind. Ind. Percentile Ind. Value Ind. 18-043-0004 0.2 MILE N OF BALD KNOB RD 4 72 87 4 4 117 92 Y 18-043-0007 FALLING RUN 75 Y 4 68 4 192 112 4 18-043-1004 2230 GREEN VALLEY ROAD/GREE 123 125 4 4 4 138 128 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).

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Page 2 of 7

Report Date: Jan. 9, 2013

# Pollutant: Sulfur dioxide(42401) Design Value Year: 2010 Standard Units: Parts per billion(008) REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS. NAAQS Standard: SO2 1-hour 2010 Level: 75 Statistic: Annual 99th Percentile Level: 75

		2010			1	2009			2008		3-Year		
		Comp.	Comp. 99th Cert.			Comp. 99th		Comp.	99th	Cert.	Design	Valid	
Site ID	STREET ADDRESS	Qrtrs	Percentile	Ind.	Qrtrs	Percentile	Ind.	Qrtrs	Percentile	Ind.	Value	Ind.	
21-111-0051	7201 WATSON LN, WATSON LN E	4	107		4	116	Y	4	113	Y	112	Y	
21-111-0067	2730 CANNONS LANE, BOWMAN F	2	45 *								45	N	
21-111-1041	4201 ALGONQUIN PKWY	4	100		4	96	Y	4	122	Y	106	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).

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Report Date: Jan. 9, 2013

Pollutant: Sulfur dioxide(42401)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile

Design Value Year: 2011

State Name: Indiana

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

		2011		2010			1	2009		3-Year		
		Comp. 99th Cert.		Comp.	99th	Cert	Comp.	99th	Cert.	Design	Valid	
Site ID	STREET ADDRESS	<u>Qrtrs</u>	Percentile	Ind.	Qrtrs	Percentile	Ind.	Ortrs	Percentile	Ind.	Value	Ind.
18-043-0004	0.2 MILE N OF BALD KNOB RD	4	36		4	72		4	87		65	Y
18-043-0007	FALLING RUN				4	75		4	68		72	N
18-043-1004	2230 GREEN VALLEY ROAD/GREE	4	3.8		4	123		4	125		95	Y

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Level: 75

Page 4 of 7

Report Date: Jan. 9, 2013

# Pollutant: Sulfur dioxide(42401) Design Value Year: 2011 Standard Units: Parts per billion(008) REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS. NAAQS Standard: SO2 1-hour 2010 Level: 75 Statistic: Annual 99th Percentile Level: 75 State Name: Kentucky

	ł	2011			2010				2009		3-Year		
		Comp.	99th	Cert.	Comp.	99th	Cert	Comp.	99th	Cert.	Design	Valid	
Site ID	STREET ADDRESS	<u>Qrtrs</u>	Percentile	Ind.	Qrtra	Percentile	Ind.	Ortrs	Percentile	Ind.	Value	Ind.	
21-111-0051	7201 WATSON LN, WATSON LN E	4	114	Y	4	107		4	116	Y	112	Y	
21-111-0067	2730 CANNONS LANE, BOWMAN F	4	51	Y	2	45 *					48	N	
21-111-1041	4201 ALGONQUIN PKWY	4	35	Y	4	100		4	96	Y	77	Y	

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Report Date: Jan. 9, 2013

Pollutant: Sulfur dioxide(42401)
Standard Units: Parts per billion(008)
NAAQS Standard: SO2 1-hour 2010
Statistic: Annual 99th Percentile

Design Value Year: 2012

REPORT EXCLUDES MEASUREMENTS WITH REGIONALLY CONCURRED EVENT FLAGS.

Statistic: Annual 99th Percentile Level: 75

State Name: Indiana

		2012		2011			1 6 8	2010	3-Year				
		Comp.	99th	Cert.	Comp.	99th	Cert	Comp.	99th	Cert.	Design	Valid	1
Site ID	STREET ADDRESS	Qrtrs	Percentile	Ind.	Qrtrs	Percentile	Ind.	Qrtrs	Percentile	Ind.	Value	Ind.	i
18-043-0004	0.2 MILE N OF BALD KNOB RD	2	39 *		4	36		4	72		49	Ν	
18-043-0007	FALLING RUN							4	75		75	N	
18-043-1004	2230 GREEN VALLEY ROAD/GREE	3	34 *		4	38		4	123		65	N	

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Page 6 of 7

Report Date: Jan. 9, 2013

Pollutant: Sulfur dioxide(42401)		Design Value Year:	2012	
Standard Units: Parts per billion(008) NAAQS Standard: SO2 1-hour 2010		REPORT EXCLUDES ME.	ASUREMENTS WITH REGI	CONALLY CONCURRED EVENT FLAGS.
Statistic: Annual 99th Percentile	<b>Level:</b> 75	State Name:	Kentucky	
!	2012	2011	2010	3-Year

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Site ID	STREET ADDRESS	<u>Qrtrs</u>	Percentile	Ind.	<u>Qrtrs</u>	Percentile	Ind.	grtrs	Percentile	Ind.	Value	Ind.	
21-111-0051	7201 WATSON LN, WATSON LN E	4	147		4	114	Y	4	107		123	Y	
21-111-0067	2730 CANNONS LANE, BOWMAN F	4	31		4	51	Υ	2	45 *		42	N	
21-111-1041	4201 ALGONQUIN PKWY	3	35 *		4	35	Y	4	100		57	N	

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#### Selection Criteria Page 1

# INCOMENTAL INCOMPACT AND INCOMPACT

## Notes About this Report.

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Code Listing

		GEOGR	APHIC SE	ELECTIONS			
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21 111							
PROTOCOL SELECTIONS Parameter Classification Parameter Method Duration							
PP_A_PARAMETERS 42401	1						
SELECTED OPTIONS							
Option Type	Option Value						
INCLUDE ONLY APPENDIX A	NO		-				
MONITORS							
RESTRICT TO MONITORING SEASONS	YES						
MERGE PDF FILES	YES						
GLOBAL DATES							
Start Date End Date							
2012 01 01 Q1 2012 12 31 Q4							

#### User ID: TJA

DATA QUALITY INDICATOR REPORT

Jan. 10, 2013

End Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SYSTEM DATA QUALITY INDICATOR REPORT Notes About this Report

Jan. 10, 2013

For specific information about the fields appearing within this report, please refer to the README.txt file that is included with the WORKFILE output for this report.

### Μ

If you see this value for a column in a summarized row, this means that more than one occurence exist in the summary. For example, if you have a PQAO summary that spans multiple States, you would see this value in the States column.

# **Code Listing**

The following codes may be seen in the "MT" column throughout this report. Please be advised that not all of the codes may appear in the report. They are provided for completeness.

- Code Description
- NR NON-REGULATORY
- P PAMS
- SP SPECIAL PURPOSE
- NC NCORE
- ID INDUSTRIAL
- NA NATTS
- F NON-EPA FEDERAL
- PN PROPOSED NCORE
- VS VOL SCHOOL AT
- X SECURED
- SU SUPLMNTL SPECIATION
- TS TRENDS SPECIATION
- UP UNOFFICIAL PAMS
- M WMO

- Code Description
  - S SLAMS
  - T TRIBAL MONITORS
  - I IMPROVE
  - IX INDEX SITE
- N NAMS
- CN CASTNET
- O OTHER
- ST SCHOOL AIR TOXICS
- QA QA COLLOCATED
- SS SLAMS SPECIATION
- SU SUPPLMNTL SPECIATION
- U UNKNOWN
- W WHO

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SYSTEM DATA QUALITY INDICATOR REPORT

# 1-Point Quality Control

Pollutant:	SO2		P	QAO:	0584 (Kei	ntucky Division	For Air Quali	ty)				
						Begin	End			%		
Year	Region	State	Site ID	POC	MT	Date	Date	# Req	# Obs	Complete	CV	Bias
2012	04	KY	21-111-0051	1	S	01-JAN-12	31-DEC-12	26	30	100	2.67	- 2.81
2012	04	KY	21-111-0067	1	S	01-JAN-12	31-DEC-12	26	29	100	3.56	+/- 2.93
2012	04	KY	21-111-1041	1	S	01-JAN-12	31-DEC-12	26	25	96	5.92	+/- 4.66
2012	04	KY	SUMMARY					78	84	99	3.80	+/- 3.18
SUMMARY	04	KY						78	84	99	3.80	+/- 3.18

Page 2 of 3

INTELED FIA THE ENVIRONMENTAL RESOLUCIAL NUMBER AND

Jan. 10, 2013

App A?: Yes

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AIR QUALITY SYSTEM DATA QUALITY INDICATOR REPORT

**Annual Performance Evaluations** 

Pollutant:	SO2		P	QAO: (	)584 (k	Kentucky Di	vision For Air Qu	uality)											App A	?: Yes
Year	Region	n <u>State</u>	Site ID	POC	MT	Begin <u>Date</u>	End <u>Date</u>	<u>L1/6</u>	Avg % L2/7	D / Le <u>L3/8</u>	evel <u>L4/9</u>	<u>L5/10</u>	<u>Q1</u>		0s / C Q3			1-P a Conf. Lower		% Btwn Conf. Limits
2012	04	KY 2	21-111-0051	1	S	01-JAN-1	2 31-DEC-12					8.13	3	6	3	3	Y		•	
							(Levels 6 thru 10)	-4.00		-2.16	-3.33									
2012	04	KY 2	21-111-0067	1	S	01-JAN-1	2 31-DEC-12				-2.33	-1.94	3	3	3	3	Y			
							(Levels 6 thru 10)	3.85												
2012	04	KY 2	21-111-1041	1	S	01-JAN-1	2 31-DEC-12					-5.13	3	3	3	3	Y			
							(Levels 6 thru 10)			-5.27	-5.00						•			
2012	04	KY	SUMMARY								-2.33	0.35	9	12	9	9	100	-7.41	5.97	72
							(Levels 6 thru 10)	-0.08		-3.72	-4.17									
SUMMAR	Y 04	KY									-2.33	0.35	9	12	9	9	100	-7.41	5.97	72
1 and a series							(Levels 6 thru 10)	-0.08		-3.72	-4.17									- Pur and

Page 3 of 3

Jan. 10, 2013

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### User ID: DWU

#### QUICKLOOK CRITERIA PARAMETERS

	GEOGRAI	PHIC SELECTIONS		
ribal Code State County Site Para	meter POC City AQCR UAR CBSA	EPA CSA Region	Method Duration Begin Date	End Date
21 111 42	401			
SELECTED OPTIONS	ana ayar ayar ayar ayar ayar ayar ayar a		SORT ORDER	
Option Type	Option Value	Order	Column	
MERGE PDF FILES	YES	1	PARAMETER_CODE	
WORKFILE DELIMITER	,	2	STATE_CODE	
EVENTS PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS	3	COUNTY_CODE	
		4	SITE_ID	
		5	POC	
		6	DATES	
		7	EDT_ID	
GLOBAL DATES			APPLICABLE STANDARDS	·
Start Date End Date			Standard Description	
2012 2012		L	SO2 1-hour 2010	
			SO2 24-hour 1971	
			SO2 3-hour 1971	

SO2 Annual 1971

Jan. 8, 2013

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION	 	
0	NO EVENTS	 	_ 1
l	EVENTS EXCLUDED		

2 EVENTS INCLUDED

5 EVENTS WITH CONCURRENCE EXCLUDED

Note: The \* indicates that the mean does not satisfy summary criteria.

Page 1 of 4

Jan. 8, 2013

Sulfur dioxide (42401)				Kentucky					Parts per billion (008								
SITE ID	P O C PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	OBS	COMP	1ST MAX 1-HR	2ND MAX 1-HR	99TH PCTL 1-HR	1ST MAX 24-HR	2ND MAX 24-HR	Days >24HR STD	ARITH MEAN AN-STD	CERT EDT	
21-111-0051	1 0584	Louisville	Jefferson	7201 WATSON LN, WATSON LN ELEMENTARY SCH	2012	060	8720	4	221.7	163.9	147.1	40.1	27.6	0	3.67	0	
1-111-0067	1 0584	Not in a city	Jefferson	2730 CANNONS LANE, BOWMAN FIELD	2012	560	8620	4	47.6	38.2	30.6	10.4	7.7	0	1.53	0	
1-111-1041	1 0584	Louisville	Jefferson	4201 ALGONQUIN PKWY	2012	060	7322	3	52.6	36.3	34.7	10.1	7.8	0	2.49*	0	

Note: The \* indicates that the mean does not satisfy summary criteria.

Jan. 8, 2013

#### METHODS USED IN THIS REPORT

	METHOD		
PARAMETER	CODE	COLLECTION METHOD	ANALYSIS METHOD
42401	060	INSTRUMENTAL	PULSED FLUORESCENT
42401	560	INSTRUMENTAL	Pulsed Fluorescent 43C-TLE/43i-TLE

#### Jan. 8, 2013

#### PQAOS USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION	
0584	Kentucky Division For Air Quality	

Note: The \* indicates that the mean does not satisfy summary criteria.

Page 4 of 4