



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Eric J. Holcomb**  
*Governor*

**Bruno L. Pigott**  
*Commissioner*

September 18, 2019

Ms. Cathy Stepp  
Regional Administrator  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604-3950

Re: State Implementation Plan Submittal for Indiana  
Regarding 1-Hour SO<sub>2</sub> Attainment; Indianapolis  
Power and Light, Petersburg Generating Station  
in Pike County, Indiana Commissioner's Order  
#2019-02 (Concerning New 30-Day Rolling  
Average Limits) Documentation of the Public  
Participation Process; Withdrawal of October 2,  
2015 30-Day Rolling Average Limits

Dear Ms. Stepp:

Pursuant to Section 110 of the Clean Air Act (CAA) and Title 13 of the Indiana Code (IC), the Indiana Department of Environmental Management (IDEM) submits an amendment to the Indiana state implementation plan (SIP) for Indianapolis Power and Light, Petersburg Generating Station (IPL – Petersburg) in Commissioner's Order 2019-02 concerning new 30-day rolling average limits. The Commissioner's Order is necessary to address SO<sub>2</sub> emissions within the Southwest, IN nonattainment area and to ensure continued attainment of the 2010 primary 1-hour SO<sub>2</sub> standard. IDEM provided opportunity for a public hearing concerning the proposed SIP revision. The public comment period began on August 14, 2019, and concluded on September 13, 2019. No comments were received during the public comment period. Additionally, there was no request for a public hearing during the comment period, thus a hearing was not held.

The attached enclosure consists of the following:

- Commissioner's Order #2019-02 issued on July 31, 2019, imposes revised permanent and enforceable sulfur dioxide (SO<sub>2</sub>) emission limits for IPL - Petersburg, located in Pike County, Indiana, in order to ensure continued attainment of the SO<sub>2</sub> standard in the area surrounding the facility. The Commissioner's Order imposes new 30-day rolling average SO<sub>2</sub> emission limits in lb/MMBtu on the facility's coal-fired electric generating units (Nos. 1-4) and shall not exceed the unit specific emission limits (i.e. 0.10, 0.10, 0.25, and 0.24 lb/MMBtu for Units 1-4, respectively), as well as reporting and recordkeeping

requirements and method for compliance. The emission limits will take effect 30 days after the effective date of the Commissioner's Order. The Commissioner's Order contains and meets the requirements set forth in 42 U.S.C.

§7407(d)(3)(E)(iii) and the conditions will become applicable requirements as defined in 326 Indiana Administrative Code (IAC) 2-7-1(6). Compliance to meet the 30-day rolling average limits shall meet the methods as defined in 326 IAC 7-4-15(d) (see Appendix B for letter to IPL – Petersburg dated September 18, 2019).

- Administrative checklist, documentation of the public participation process, and supplemental information concerning the 30-day average limits.

On October 2, 2015, IDEM submitted revisions to Indiana's SO<sub>2</sub> rules at 326 IAC 7-4-15 as an amendment to Indiana's SIP. The submittal included rule revisions in support of the 1-Hour SO<sub>2</sub> Attainment Demonstration and Technical Support Document for the Southwest Indiana Nonattainment Area. These revisions included both 1-hour average and 30-day rolling average SO<sub>2</sub> emission limits for IPL – Petersburg. U.S. EPA has proposed approval but has yet to take final action on IDEM's request to approve these limits into Indiana's SIP.

Due to U.S. EPA receiving comments on the proposed approval specific to the calculation methodology, revised 30-day rolling average SO<sub>2</sub> emission limits have been established for IPL – Petersburg consistent with U.S. EPA guidance. As such, IDEM is withdrawing the request for federal approval of the 30-day rolling average emission limits from the October 2015 attainment plan as they are no longer applicable and IDEM is replacing them with new more stringent emission limits contained in Commissioner's Order 2019-02. IDEM requests that U.S. EPA proceed with review and approval of the new more stringent 30-day rolling average SO<sub>2</sub> emission limits contained in Commissioner's Order 2019-02 and the 1-hour average SO<sub>2</sub> emission limits submitted with the October 2015 attainment plan as revisions to Indiana's SIP. Additionally, please note that while modeling of the 1-hour average limits contained in the October 2015 attainment plan was required, that modeling was exclusive to the 1-hour limits, which have remained unchanged. Modeling of the 30-day rolling average limits is not required and, as such, is not included as part of this submittal.

This submittal consists of one (1) hard copy of the required documentation. An electronic version of the submittal in PDF format that is identical to the hard copy, as well as a Microsoft Excel file containing information on the development of the 30-day average limits, has been sent to Doug Aburano, Chief of U.S. EPA Region 5's Attainment Planning and Maintenance Section and Chris Panos of U.S. EPA Region 5.

If you have any questions or need additional information, please contact Brian Callahan, Chief, Air Quality Standards and Implementation Section, Office of Air Quality at (317) 232-8244 or [bcallaha@idem.IN.gov](mailto:bcallaha@idem.IN.gov).

Sincerely,

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

Keith Baugues  
Assistant Commissioner  
Office of Air Quality

KB/sad/mad/bec/gf

Attachments: Supporting Documents

cc: Doug Aburano, U.S. EPA Region 5 (no enclosures)  
Chris Panos, U.S. EPA Region 5 (no enclosures)  
John Mooney, U.S. EPA Region 5 (no enclosures)  
Steve Rosenthal, U.S. EPA Region 5 (no enclosures)  
John Summerhays, U.S. EPA Region 5 (no enclosures)  
Keith Baugues, IDEM-OAQ (no enclosures)  
Scott Deloney, IDEM-OAQ (no enclosures)  
Mark Derf, IDEM-OAQ (w/ enclosures)  
Christine Pedersen, IDEM-OAQ (no enclosures)  
Betsy Zlatos, IDEM-OAQ (no enclosures)  
Brian Callahan, IDEM-OAQ (w/ enclosure)  
Gale Ferris, IDEM-OAQ (w/ enclosure)  
File Copy



# **Attachment A**

## **Administrative Checklist**

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## **ADMINISTRATIVE CHECKLIST (40 CFR 51, Appendix V)**

- |   |                              |
|---|------------------------------|
| 1. The submittal is accompanied by a formal letter of submittal from the governor or his designee.  | Enclosed                     |
| 2. Evidence that the State has adopted the plan in the State code or body of regulations; or issued the permit, order, consent  | Attachment B                 |
| a. Date of adoption or final issuance:  | July 31, 2019                |
| b. The effective date of the plan, if different from the adoption/issuance date.  | 18 days after issuance       |
| 3. Evidence that the State has the necessary legal authority under state law to adopt and implement the plan.   | IC 13-14-1-9<br>IC 13-14-2-1 |
| 4. A copy of the actual regulation or document submitted for approval and incorporation by reference into the plan, including the following:  | Attachment B                 |
| a. Indication of the changes made to the existing approved plan, where applicable.  |                              |
| b. The submittal shall be a copy of the official State regulation or document signed, stamped, dated by the appropriate state official indicating that it is fully enforceable by the State. Effective date shall be stated in the document itself. |                              |
| 5. Evidence that the State followed all of the procedural requirements of the State's laws and constitution in conducting and completing the adoption/issuance of the plan.   | Attachment B                 |
| 6. Evidence that public notice was given, including date of proof of publication.   | Attachment C                 |
| 7. Certification that public hearings were held in accordance with information provided in public hearing notice.   | Attachment C                 |
| 8. Compilation of public comments and State's response.   | Attachment C                 |
| 9. Supplemental information concerning the 30-day average limits.   | Attachment D                 |

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# **Attachment B**

**Commissioner's Order for the Indianapolis  
Power and Light, Petersburg Generating Station  
Addressing the 2010 1-hour Primary SO<sub>2</sub> NAAQS**

**and**

**Letter to IPL – Petersburg Concerning Submittal  
of the Commissioner's Order to U.S. EPA**

**Pike County**

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Eric J. Holcomb  
Governor

Bruno L. Pigott  
Commissioner

STATE OF INDIANA )  
COUNTY OF MARION ) SS: BEFORE THE INDIANA DEPARTMENT  
OF ENVIRONMENTAL MANAGEMENT

ORDER OF THE COMMISSIONER )  
FOR INDIANAPOLIS POWER & LIGHT ) No. 2019-02  
COMPANY, PETERSBURG GENERATING )  
STATION )

### NOTICE AND ORDER OF THE COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

This Notice and Order of the Commissioner of the Indiana Department of Environmental Management ("IDEM") is issued pursuant to Indiana Code ("IC") 13-14-1-9, IC 13-14-2-1, and IC 13-14-2-7 in order to secure compliance with 326 Indiana Administrative Code ("IAC") 7-3. During the Commissioner's review, it was determined that the Petition should be granted according to the terms specified below:

#### PETITION

Petitioner is the Indianapolis Power and Light, Petersburg Generating Station ("IPL-Petersburg"), a stationary electric power generating plant with Source I.D. Number 125-00002, located at 6925 North State Road 57 in Petersburg, Pike County, Indiana, and permitted under Indiana's Part 70 air operating permit program.

On July 25, 2013, United States Environmental Protection Agency (U.S. EPA) completed an initial round (i.e. Round 1) of nonattainment designations in areas where existing ambient air quality monitors showed violations of the standard. U.S. EPA's list included the area surrounding the Petersburg Generating Station.

On September 30, 2015 the Indiana Department of Environmental Management ("IDEM") published revisions to 326 Indiana Administrative Code (IAC) to address the 2010 primary 1-hour Sulfur Dioxide National Ambient Air Quality Standard (NAAQS). Specific to IPL-Petersburg, 326 IAC 7-4-15 established new and more stringent emission limits for IPL-Petersburg's coal-fired power generating units (Nos. 1-4). On August 15, 2018, U.S. EPA proposed to approve Indiana's State Implementation Plan ("SIP"), including 326 IAC 7-4-15, addressing attainment of the SO<sub>2</sub> NAAQS for certain locations, including Pike County (Washington Township) and Daviess County (Veale Township).

On May 21, 2019, as the result of an updated evaluation, the Petitioner submitted a request to the Commissioner to implement revised permanent and enforceable SO<sub>2</sub>

emissions limitations and emission rates on the Petitioner in order to ensure continued attainment of the SO<sub>2</sub> NAAQS in the area surrounding the Petersburg Generating Station.

The Petitioner proposed SO<sub>2</sub> emission limitations, expressed in SO<sub>2</sub> lb/MMBtu, as a 30-day rolling average, applicable to Unit Nos. 1 through 4, as follows:

- a. Unit 1, 0.10 lb/MMBtu
- b. Unit 2, 0.10 lb/MMBtu
- c. Unit 3, 0.25 lb/MMBtu
- d. Unit 4, 0.24 lb/MMBtu

### **FINDINGS**

Pursuant to IC 13-14-2-1(b) and IC 13-14-2-7(1), the Commissioner may issue Orders to secure compliance with Indiana's environmental statutes and rules, including the ambient air quality standard for Sulfur Dioxide (SO<sub>2</sub>) at 326 IAC 1-3-4(b)(1)(A).

Based on the foregoing information, IDEM finds the following:

1. Permanent and enforceable 30-day rolling average emission limits in lb/MMBtu for the Petersburg Generating Station is required in order to model continued attainment of the one (1) hour SO<sub>2</sub> NAAQS in the area surrounding the Petitioner.
2. Issuance of a Commissioner's Order will ensure the 30-day SO<sub>2</sub> rolling average emission limits remain permanent and enforceable, as required by 42 U.S.C. § 7407(d)(3)(E)(iii). Whereas revising a Part 70 Operating Permit would not create an adequately "permanent" requirement.
3. Approval by U.S. EPA of the Commissioner's Order as part of the Indiana SIP will make the Order requirements federally enforceable. Upon approval as part of the Indiana SIP, the Order requirements become applicable requirements as defined in 326 IAC 2-7-1.
4. Based on modeling conducted by IDEM, the 30-day SO<sub>2</sub> rolling average emission limits proposed by the Petitioner are adequate to assure continued attainment of the 2010 1-hour primary SO<sub>2</sub> NAAQS.

### **ORDER**

1. This Order approves the Petition submitted by the Petitioner according to the terms specified below. This Order imposes on the Petitioner the new 30-day SO<sub>2</sub> rolling average emission limits on Unit Nos. 1 through 4 described below, and which limitations will take effect 30 days after the effective date of this Order.

Emission Unit Description	30-day Rolling Average SO <sub>2</sub> Emission Limit lb/MMBtu
(1) Unit 1	0.10
(2) Unit 2	0.10
(3) Unit 3	0.25
(4) Unit 4	0.24



2. As required by 326 IAC 7-4-15(c)(1-4), when any of Unit No. 1 through Unit No. 4 is operating, the 30-day SO<sub>2</sub> rolling average emission limit shall not exceed the unit specific emission limit listed above and meet associated monitoring methods. Approval by U.S. EPA of the Commissioner's Order as part of the Indiana State Implementation Plan (SIP) will make the Order requirements federally enforceable. Upon approval as part of the Indiana SIP, the Order requirements become applicable requirements as defined in 326 IAC 2-7-1.
3. As required by 326 IAC 2-7-2(d)(I) and 326 IAC 2-7-5, the Petitioner shall apply to incorporate these Order requirements, including reporting and recordkeeping requirements and methods to determine compliance, into its Part 70 Operating Permit within ninety (90) days of U.S. EPA's approval of the Commissioner's Order as part of the Indiana SIP.
4. This Order shall apply to and be binding upon the Petitioner, its successors and assigns. No change in ownership, corporate, or partnership status of the Petitioner shall in any way alter its status or responsibilities under this Order.
5. The requirements of this Order are in addition to any less stringent requirements applicable to the Petitioner pursuant to 326 IAC 7-4-15.

#### **EFFECTIVE DATE OF ORDER**

Pursuant to IC 13-14-2-1(d), IC 4-21.5-3-1, IC 4-21.5-3-5(a)(6), and 40 CFR 51.102, IDEM will give notice of this Order to each entity to whom the Order is directed and affected neighbors by mailing and to the general public by web publication.

Pursuant to IC 4-21.5-3-7(a)(3), IC 4-21.5-3-2(e), and IC 4-21.5-3-5, this Order may be appealed by filing a Petition for review within eighteen (18) days after the date affected persons were given notice of the Order by U.S. mail. Information on petitions for review of this Order can be found at IC 4-21.5-3-7.

Pursuant to IC 4-21.5-3-5(1) and IC 4-21.5-3-2(e), the Order is effective eighteen (18) days from mailing of notice unless a Petition for review has been filed before or on the eighteenth (18<sup>th</sup>) day. However, for purposes of federal enforceability, the compliance date for the 30-day rolling average SO<sub>2</sub> emission limits in this Order is the date of final effectiveness of U.S. EPA's approval of the Commissioner's Order as part of the Indiana SIP.

Pursuant to 40 CFR 51.103, IDEM will submit this Order to U.S. EPA as a revision to the Indiana SIP. Upon approval by the U.S. EPA, this Order will be part of the Indiana SIP.

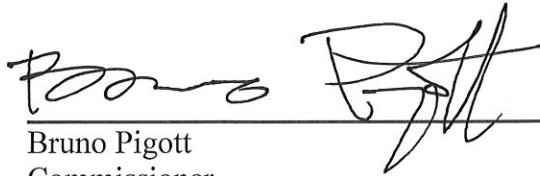
Persons seeking judicial review of this Order may do so in accordance with IC 4-21.5-5.

If you have any procedural or scheduling questions regarding your request for review, you may contact the Office of Environmental Adjudication at (317) 232-8591. If you have any questions regarding this Order, please contact Mark Derf, Chief, Technical Support and Modeling Section, Office of Air Quality, by telephone at (317) 233-5682 or email at mderf@idem.IN.gov.

**Commissioner's Order 2019-02**

Page 4 of 4

Dated at Indianapolis, Indiana this 31<sup>st</sup> day of July 2019.

A handwritten signature in black ink, appearing to read 'Bruno Pigott', written over a horizontal line.

Bruno Pigott  
Commissioner

Indiana Department of Environmental Management



## Indiana Department of Environmental Management

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Michael R. Pence  
Governor

Carol S. Comer  
Commissioner

September 18, 2019

Mr. Jeffery A. Harter  
IPL – Petersburg Generating Station  
6925 N. State Road 57  
Petersburg, IN 47567

Re: Commissioner's Order #2019-02 Indianapolis  
Power and Light - Petersburg Generating  
Station in Pike County, Indiana – Clarification  
for 1-Hour SO<sub>2</sub> Attainment


Dear Mr. Harter:

Enclosed is the Commissioner's Order #2019-02 for the Indianapolis Power and Light (IPL) - Petersburg Generating Station, signed by Commissioner Pigott on July 31, 2019. The Indiana Department of Environmental Management (IDEM) conducted the public comment period for the Commissioner's Order, which commenced on August 14, 2019 and was concluded on September 13, 2019. No comments or requests to conduct a public hearing were received during this 30 day comment period.

IPL - Petersburg Generating Station Commissioner's order is effective eighteen days (18) from mailing of notice and shall demonstrate compliance by the methods as directed in 326 Indiana Administrative Code (IAC) 7-4-15(d) to ensure the 30-day rolling average SO<sub>2</sub> emission limits would be met. The Commissioner's Order states in order paragraph 5 the compliance methodology to determine the emission limits applies to 326 IAC 7-4-15 in its entirety. This methodology is documented in IPL – Petersburg's assessment protocol for 30-day rolling average for IPL facilities using FGD for SO<sub>2</sub> Control, which follows methodologies recommended in U.S. EPA's Mercury and Air Toxics Standard (MATS) rule guidance and the U.S. EPA memorandum "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions". IDEM has determined that IPL's assessment protocol meets the requirements of 326 IAC 7-4-15(d).

IDEM will be submitting the IPL - Petersburg Generating Station Commissioner's Order #2019-02 to U.S. EPA for their review and approval of this amendment to Indiana's SIP. If you have any questions or need additional information, please contact Mark Derf, Chief, Technical Support and Modeling Section, Office of Air Quality at (317) 233-5682 or [mderf@idem.IN.gov](mailto:mderf@idem.IN.gov).

Sincerely,

  
Keith Baugues  
Assistant Commissioner  
Office of Air Quality

KB/sd/mad

Attachments: Supporting Documents

cc: Angelique Collier, AES, Global Operations Support (enclosures)  
Keith Baugues, IDEM-OAQ (no enclosures)  
Scott Deloney, IDEM-OAQ (no enclosures)  
Mark Derf, IDEM-OAQ (enclosures)  
Brian Callahan, IDEM-OAQ (no enclosures)  
Betsy Zlatos, IDEM-OAQ (enclosures)  
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# **Attachment C**

## **Public Participation Documentation**

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Eric J. Holcomb  
Governor

Bruno L. Pigott  
Commissioner

### **LEGAL NOTICE**

#### **PUBLIC COMMENT PERIOD AND OPPORTUNITY FOR PUBLIC HEARING**

##### **State Implementation Plan (SIP) Submittal**

##### **Indianapolis Power and Light, Petersburg Generating Station Commissioner's Order No. 2019-02**

**Note: Legal notices for public hearings are no longer published in newspapers, but can be found on the Indiana Department of Environmental Management's web site at:**

**<https://www.in.gov/idem/5474.htm>**

Notice is hereby given under 40 Code of Federal Regulations (CFR) 51.102 that the Indiana Department of Environmental Management (IDEM) is accepting written comment and providing an opportunity for a public hearing regarding a revision to the Indiana State Implementation Plan (SIP) for the Indianapolis Power and Light, Petersburg Generating Station, Source I.D. Number 125-00002, located at 6925 North State Road 57 in Petersburg, Pike County, Indiana. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed revision to the SIP.

The purpose of this notice is to solicit public comment on a proposed revision to the SIP that is accomplished by Commissioner's Order No. 2019-02 for the Indianapolis Power and Light, Petersburg Generating Station. The Commissioner's Order imposes revised permanent and enforceable sulfur dioxide (SO<sub>2</sub>) emission limitations and emission rates upon the Petersburg Generating Station in order to ensure continued attainment of the 2010 primary 1-hour SO<sub>2</sub> standard. The Commissioner's Order will be submitted to United States Environmental Protection Agency (U.S. EPA) for approval as a revision to Indiana's SIP.

Copies of the Redesignation Petition and Maintenance Plan will be available on or before August 14, 2019 to any person upon request at the following locations:

- Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, 100 North Senate Avenue, Room N1003, Indianapolis, Indiana 46204
- Indiana Department of Environmental Management, Southwest Regional Office, 114 South 7<sup>th</sup> Street., Petersburg, Indiana 47567
- Pike County Public Library, 1008 East Maple Street, Petersburg, Indiana 47567

The draft documents will also be available on the following web page:

<https://www.in.gov/idem/airquality/2443.htm>

<https://www.in.gov/idem/airquality/2723.htm>

Any person may submit written comments on the *Indianapolis Power and Light, Petersburg Generating Station Commissioner's Order No. 2019-02*. Written comments should be directed to: Mark Derf, Indiana Department of Environmental Management, Office of Air Quality, Room 1003, 100 North Senate Avenue, Indianapolis, Indiana 46204. Comments can also be submitted via fax (317) 233-5967 or e-mail at [mdarf@idem.IN.gov](mailto:mdarf@idem.IN.gov). Comments must be submitted by September 13, 2019. Interested parties may also present oral or written comments at the public hearing, if held. Oral statements will be heard, but for the accuracy of the record, statements should be submitted in writing. Written statements may be submitted to the attendant designated to receive written comments at the public hearing.

A public hearing on the *Indianapolis Power and Light, Petersburg Generating Station Commissioner's Order No. 2019-02* will be held if a request is received by September 13, 2019. If a hearing is requested, the hearing will be held on September 19, 2019, and the comment period will be extended to September 26, 2019. The hearing will convene at 5:30 p.m. local time at the Pike County Public Library, 1008 East Maple Street, Petersburg, IN 47567. If a request for a public hearing is not received by September 13, 2019, the hearing will be cancelled. Interested parties can check the online IDEM calendar at <https://calendar.in.gov/site/idem/> or contact Mark Derf at (317) 233-5682 or [mdarf@idem.in.gov](mailto:mdarf@idem.in.gov), after September 13, 2019, to see if the hearing has been cancelled or will convene.

If a hearing is held, a transcript of the hearing and all written submissions provided at the public hearing shall be open to public inspection at IDEM and copies may be made available to any person upon payment of reproduction costs. Any person heard or represented at the hearing or requesting notice shall be given written notice of actions resulting from the hearing.

For additional information contact Mark Derf, at the Indiana Department of Environmental Management, Office of Air Quality, Room N1003, Indiana Government Center North, 100 North Senate Avenue, Indianapolis, IN 46204, or call (317) 233-5682 or (800) 451-6027 ext. 3-5682 (in Indiana).

.....

*Speech and hearing impaired callers may contact the agency via the Indiana Relay Service at 1-800-743-3333. Individuals requiring reasonable accommodations for participation in this hearing should contact the IDEM Americans with Disabilities Act (ADA) coordinator at: Attn: ADA Coordinator, Indiana Department of Environmental Management – Mail Code 50-10, 100 North Senate Avenue, Indianapolis, IN 46204-2251, or call (317) 233-1785 (voice) or (317) 233-6565 (TDD). Please provide a minimum of 72 hours notification.*



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**Eric J. Holcomb**  
Governor

**Bruno L. Pigott**  
Commissioner

August 8, 2019

### CERTIFICATE OF PUBLICATION

This is to certify that the Indiana Department of Environmental Management (IDEM) Notice of the opportunity for a Public Hearing regarding the following:

- State Implementation Plan (SIP) Submittal, Indianapolis Power and Light, Petersburg Generating Station, Commissioner's Order No. 2019-02, (July 31, 2019)

was published on IDEM's web site on August 8, 2019. It is expected that it will remain posted on the site until at least September 13, 2019.

The notice in full was available online at the following web address, under "Southwest/Multi-County Notices":

<http://www.in.gov/idem/5474.htm>

The draft document was also posted online August 8, 2019 at the following web address:

<https://www.in.gov/idem/airquality/2443.htm>

Web publication of the notice was at the request of Scott Deloney, Branch Chief, Programs Branch, Office of Air Quality, IDEM.

By:

Mike Finklestein  
IDEM Webmaster

Attachments:

Copy of web page as published.

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Browser address bar: <https://www.in.gov/iden/airquality/2443.htm>

Navigation bar: IN.gov | Indiana Department of Environmental Management | Air Toxics | Asbestos | Open Burning | Contact | Search

Sub-navigation: Online Services | I Want To | FAQs | Find an Agency | Gov. Eric J. Holcomb

# Sulfur Dioxide

Breadcrumbs: Air Quality in Indiana > Information About > Redesignations and Maintenance Plans > Redesignations and Maintenance Plans: Sulfur Dioxide

## Daviess and Pike Counties

### 2010 Primary 1-Hour Standard

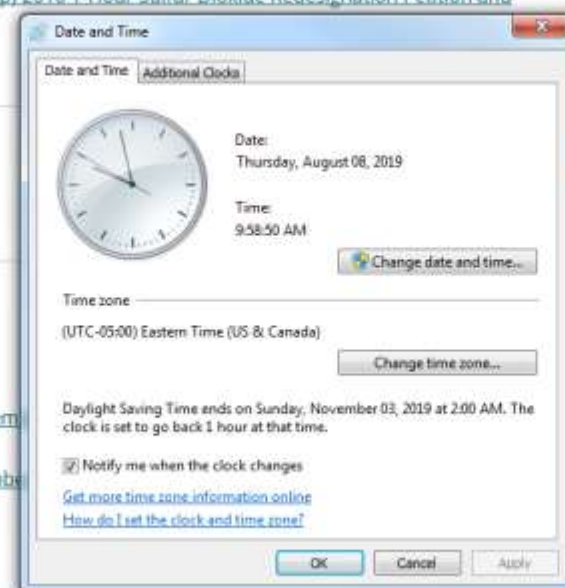
- [Commissioner's Order for Petersburg Generating Station \(July 31, 2019\) \[PDF\]](#)
- [Southwest, Indiana, IN Partial Daviess County \(Veale Township\) and Partial Pike County \(Washington Township\) 2010 1-Hour Sulfur Dioxide Redesignation Petition and Maintenance Plan \(October 24, 2018\) \[PDF\]](#)

## Lake County

## Gary and Hammond Nonattainment Area

### 1971 Sulfur Dioxide (SO<sub>2</sub>) Standard

- [Approval and Promulgation of the Lake County Sulfur Dioxide \(SO<sub>2</sub>\) Limited Maintenance Plan effective November 1, 2019 \[PDF\]](#)
- [Sulfur Dioxide \(SO<sub>2</sub>\) Maintenance Plan Update for Lake County, Indiana \(March 28, 2013\) \[PDF\]](#)
- [Approval and Promulgation of the Lake County Sulfur Dioxide \(SO<sub>2</sub>\) State Implementation Plan effective October 1, 2018 \[PDF\]](#)
- [Cover Letter to U.S. EPA \(August 11, 2005\) \[PDF\]](#)
- [Final Lake County Sulfur Dioxide \(SO<sub>2</sub>\) Redesignation Request and Maintenance Plan \[PDF\]](#)
- [Appendix A \[XLS\]](#)





This is the IDEM Public Notice Site for the Southwest Region covering the counties of [Crawford](#), [Davless](#), [Dubois](#), [Gibson](#), [Greene](#), [Knox](#), [Lawrence](#), [Martin](#), [Orange](#), [Perry](#), [Pike](#), [Posey](#), [Spencer](#), [Vanderburgh](#), and [Warrick](#). This page is designed to provide public access to all agency public notices for this region as required by statute or rule including: permitting, rulemaking, meeting and hearing notices. Click highlighted links to view additional information related to the notice. Unless otherwise noted, contact information is included on the notices.

The [IN.gov News and Events Calendar](#) provides information on public meetings that do not require public notice.

Subscriptions: Want to know about new notices as soon as they're posted? You can now [subscribe](#) to this regional public notice by e-mail or text message to your phone every time IDEM adds information to this regional page. This allows you to stay current. To subscribe, click on the subscription link in the left hand column.

## Southwest Indiana

### Public Notices: Southwestern Region

#### Name or Facility

#### Type of Notice/Event

#### Publication Dates

#### Public Comment?

#### Additional Information

### Multi-County Notices

State Implementation Plan (SIP) Submittal, Indianapolis Power and Light, Petersburg Generating Station, Commissioner's Order No. 2019-02

Legal Notice and Opportunity for Public Hearing [PDF]

08/14/2017 - 09/13/2017

Yes

Counties: Davless and Pike

Project Manager: Gale Ferris

Additional information is available on the IDEM Air Quality in Indiana: Redesignations and Maintenance Plans, Sulfur Dioxide page under 2010 Primary 1-Hour Standard as "Commissioner's Order for Petersburg Generating Station"

Sun Energy Group LLC, Hillsmeier Mine

Final General NPDES Permit Modification under 327 IAC 15-7 [PDF]

06/18/2019 - 07/08/2019

No

Counties: Dubois and Pike

Project Manager: C. Anne Burget

Permit Number: ING040220

Loogootee Wastewater Treatment Plant

Notice of Land Application Permit Renewal [PDF]

06/20/2019 - 07/05/2019

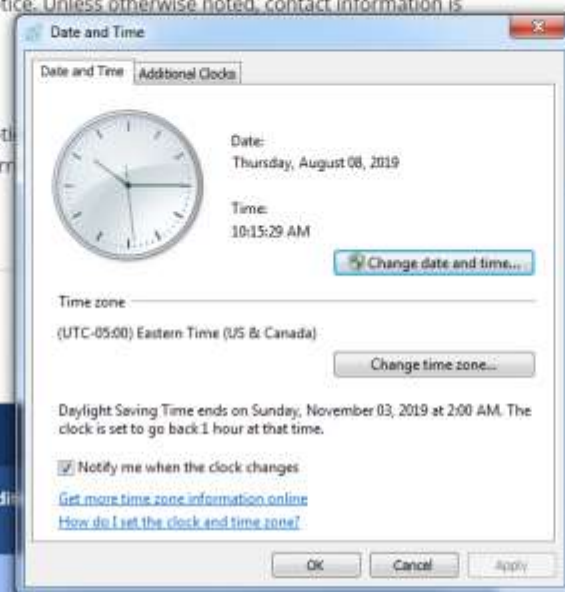
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Counties: Davless and Martin

Project Manager: Kate Garvey

Applicant Company: Loogootee Wastewater Treatment Plant

Permit Number: IN LA 000319





# **APPENDIX D**

## **Supplemental Information Concerning the 30-Day Average Limits**

A Microsoft Excel file containing information on the development of the 30-day average limits has been transmitted electronically to U.S. EPA.

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## Responses to U.S. EPA Comments Regarding Adjustment Factors For 30-Day Average Limits for IP&L-Petersburg

1. The adjustment factor used to derive 30-day average limits at IP&L-Petersburg is based on emissions data from the “FGD stack” at Unit 2. By comparison, IP&L’s emission reports to CAMD reflect two emissions monitoring sites, labeled MS2S and MS2B, which appear to correspond to emissions exiting the main stack and the bypass stack, respectively. However, emissions from the “FGD stack” on average are about 6 percent lower than emissions reported for MS2S. (Heat inputs are nearly identical, and data substitution is too rare to be relevant.) The data reported to CAMD for MS2S also show somewhat more variability than the emissions indicated for the “FGD stack.” This leads to two questions:

- What is the “FGD stack”?

**Emission exhausted from the FGD stack have been treated by the flue Gas desulfurization controls. The FGD stack, MS2S, and Unit 2 main stack are all references to the same stack.**

- Why do the emissions reported for the “FGD stack” differ from the emissions reported for the main stack for this unit?

**Emissions are measured by the continuous emission monitor. The data set is the same, how it is reported however, can differ depending on the reporting requirements. For example, CAMD data is reported to the tenth place after the decimal while the data used to determine the ratio included additional digits that trailed the decimal point. Following the removal of hours with no heat input that were treated as having zero pounds of emissions per million BTU, the largest difference is likely the difference in reporting for allowances under Part 75. To determine the amount of allowances to be held the data is bias-adjusted and includes data substitutions required by the rule in order that required allowances are not underestimated as a result of missing or invalid data. For the data used to establish the adjustment factor ratio and to comply with state emission limits, the CEMS data is not bias-adjusted and no data substitutions are made for missing or invalid data. Please note for compliance purposes, emissions from both stacks are combined to determine compliance with state and federal limits. The main stack and bypass stack emissions are combined in Indiana’s EMITS emission reporting. Certified data is to be used to demonstrate compliance with 326 IAC 7-4-15 and is taken from Unit 2 main stack and bypass stack.**

2. It would appear that IP&L’s rationale for estimating an adjustment factor based on emissions data from the main stack for Unit 2 is that this stack reflects emissions that have been controlled by the Unit 2 FGD, and that emissions from the bypass stack should not be counted because these are relatively

uncontrolled emissions that will be virtually nonexistent upon compliance with SIP limits. (In fact, emissions reported for MS2B are quite low in 2017 and 2018.) Evidently IP&L believes that the control system at Unit 2 (when operating successfully) is most representative of prospective control, or at least that the emissions profile of historic controlled Unit 2 emissions is most predictive of the emissions profile to be anticipated for all four units. This leads to two questions:

- Why, in more detail, is the historic control system at Unit 2 most similar to the control system anticipated upon compliance with SIP limits for all four units?

**IPL Petersburg is a baseload electric generation plant with four coal-fired boilers using the same fuel source with, each controlled by wet flue gas desulfurization (FGD) with SO<sub>2</sub> emissions monitored by CEMS. Of the four units, only Unit 1 and Unit 2 measure bypass stack emissions and FGD (controlled) stack emissions separately. FGD (controlled) stack emissions are representative of operation upon compliance with SIP limits because bypass of the FGD will be very infrequent in order to comply with the SIP limits. Unit 2's data was appropriate for the analysis because it provided a more robust data set than that of Unit 1 due to Unit 1 historically bypassing more frequently than Unit 2, and therefore, having a smaller scrubbed (main) stack dataset. The Unit 2 2006-2010 scrubbed (main) stack dataset is the appropriate dataset for the analysis based on US EPA's guidance. In addition to providing a dataset representative of emissions with the emissions limits in place, it also provides a robust dataset consistent with the Guidance (p. 30) which indicates that EPA anticipates that at least 3-5 years of hourly data "would be needed to obtain a suitably reliable analysis."**

**Using the CEMS measured emission from one of these four emission units is in line with the "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP submissions", dated April 23, 2014. In fact, the guidance allows for uncontrolled sources and sources that are not continuously monitored to obtain an adjustment factor and comply with the SIP using data associated with a single controlled emission unit at a representative source. The previously uncontrolled source may use the adjustment factor as long as that source maintains the characteristics of the representative controlled source. The characteristics that should be maintained post SIP implementation are the type and origin of the fuel and operation of the facility such as base load or peak load generator.**

- In particular, given that IPL also separately measures main stack and bypass stack emissions at Unit 1, why is the Unit 2 main stack emissions profile a better representation of the prospective emissions profile at all four units than the Unit 1 main stack emissions profile (or than some sort of composite result)?

**Unit #2 hourly emissions variability is viewed as the most representative of what the expected emissions variability from operations would be under the SIP limits. IPL feels the robust dataset from Unit #2 is appropriate and consistently follows U.S. EPA's "2014 Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions" (Guidance) as Unit #2 data is viewed as unbiased with no data substitutions. The FGD control on Unit #2 is similar to the FGD controls used on all 4 units, therefore the robust dataset from Unit #2 provided the best data representation for establishing the adjustment factor ratio.**

**Unit 2's data was appropriate for the analysis because it provided a more robust data set than that of Unit 1 due to Unit 1 historically bypassing more frequently than Unit 2, and therefore, having a smaller scrubbed (main) stack dataset.**

3. Sierra Club comments on the calculation of an adjustment factor based on 720-hour average emission factors rolled hourly, whereas the rule provides for compliance to be determined on the basis of averages of the same duration but rolled daily. Investigation of this comment leads to identification of other additional concerns about the data handling in IP&L's calculations: a) Numerous hours with no heat input are treated as having zero pounds of emissions per million BTU rather than having no calculable value, thereby skewing the determination of a 99<sup>th</sup> percentile among these hourly values. b) IPL includes all days in its calculations, whereas Indiana's rule states that compliance is to be determined on the basis of emissions only during operating days. While we would ordinarily expect these differences to produce relatively minor differences in recommended adjustment factors, in this case these various factors appear to result in approximately a 10 percent difference in the recommended adjustment factor. Specifically, using 2006 to 2010 emissions data as reported to CAMD for the main stack (MS2S), with blanks during non-operating hours, deleting non-operating days, and calculating 30-day averages on a daily rolling basis, the ratio of the 99<sup>th</sup> percentile 30-day average #/MMBTU value versus the 99<sup>th</sup> percentile hourly #/MMBTU value appears to suggest a ratio arising from these data of 68.3%, as contrasted with the 79.7% value that IP&L calculated. We will provide a spreadsheet with the underlying calculations later. The resulting question is:
  - Have we overlooked any relevant considerations in this review of IP&L's data and calculations?

**IPL has revised the 2006-2010 Unit #2 CEM data and calculated revised adjustment factors based on U.S. EPA's "2014 Guidance for the 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions". When applied to the modeled emission rates, the 30-day rolling average boiler operating day limits were lower than originally calculated. The lower emission limits**

**will be included in a Commissioner's Order request to incorporate these new limits into the Pike County SO<sub>2</sub> SIP.**

4. Sierra Club objected that while the pound per hour limits were determined using the same adjustment factor as the pound per million BTU limits, EPA guidance calls for separate adjustment factors, determined on the basis of emissions data calculated in accordance with the pertinent limit. Sierra Club is correct in its reading of EPA guidance, that adjustment factors for pound per hour limits are to be calculated on the basis of pounds per hour statistics, whereas adjustment factors for pound per million BTU limits are to be calculated on the basis of pounds per million BTU statistics. Using data reported to CAMD for 2006 to 2010 for the main stack at Unit 2 (MS2S), the appropriate adjustment factor for determining a presumptively comparably stringent pound per hour limit appears to be 60.2%. The fact that Indiana imposes both types of limits creates a potential rationale for one of these limits to be improperly adjusted, but if Indiana makes any modifications of its limits, it would be preferable to assure that both limits are properly adjusted to reflect attainment levels. As before, the resulting question is:

- Have we overlooked any relevant considerations in this review of IP&L's data and calculations?

**IPL used the lb/MMBtu values derived from the CEMS data and reported to U.S. EPA's CAMD since those reported values are consistent with the U.S. EPA's "Guidance for the 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions" and with demonstrating compliance with 326 IAC 7-4-15. Emission limitations will be expressed in lb/MMBtu only.**

5. Our interpretation of Indiana's regulation is that the limits for each unit at IP&L-Petersburg governs all emissions at the unit, which for Units 1 and 2 would include the sum of emissions from the respective main stack and bypass stack. Sierra Club implies the opposite, questioning whether the rule limits the frequency and magnitude of emissions from the bypass stacks. Therefore:

- Can Indiana confirm that its limits govern total emissions from each unit, i.e. the sum of emissions from the main stack and the bypass stack where applicable?

**That is correct. Applicable limits apply to the emission unit, which for Units 1 and 2 includes both main and bypass stacks. This means that all emissions from the unit whether exhausted from the main or bypass stack are measured and counted toward compliance with the limits in 326 IAC 7.**

**Since the January 1, 2017 effective date of the rule, CEM data from the main and bypass stacks from each unit have shown dramatic reductions. Hours where emissions passed through bypass stacks MS1B and MS2B have decreased as well, based on emissions data taken from 2017 and 2018. This better represents how compliance with the emission limits in 326 IAC 7-4-15 is achieved as bypass emissions must remain low in order to meet the SO<sub>2</sub> emission limits.**

6. As an additional consideration, we have also reviewed more recent emissions data from the four units at IP&L Petersburg. As a general statement, these data suggest that the data from the main stack at Unit 2, properly calculated, provide a perhaps surprisingly good prediction of variability upon compliance with SIP limits. Specifically, using the data starting in January 2017 (presently available through September 2018), and averaging the adjustment factors computed for each unit, the computed adjustment factors were 67.1% for the pound per million BTU limits (versus 68.3% using MS2S data from 2006 to 2010) and 61.4% for the pound per hour limits (versus 60.2% using MS2S data from 2006 to 2010). These estimates have the disadvantage of being based on a relatively short data base, but these estimates have the advantage of addressing several of Sierra Club's concerns about the suitability of IP&L's 2006 to 2010 data in predicting variability upon compliance with the limits. We have no questions about this at this point, but this information may be relevant as we discuss next steps.

**Review of the 2006-2010 and 2017-2018 CEM data from IPL – Petersburg shows similar adjustment factor ratios for each time period. Unit #1 has historically bypassed emissions more frequently than Unit #2, making use of Unit #1 data less likely to “obtain a suitable reliable analysis”, as stated on page 30 of the Guidance. The appropriateness of using Unit 2 2006-2010 emissions for the adjustment factor is emphasized as to demonstrating compliance with the SO<sub>2</sub> emission limits for each unit. In addition, while 2017-2018 data does not represent a robust dataset to provide a suitable and reliable analysis from only two years' worth of data does emphasize the effectiveness of the emission limits on both emissions and air quality in the area. The amount of emissions exhausted through the bypass stacks has dropped dramatically and design values calculated from the ambient air SO<sub>2</sub> monitoring data are well below the 1-hour SO<sub>2</sub> standard. This more recent evidence clearly demonstrates the emission limits are reducing SO<sub>2</sub> concentrations in the area and will continue to attain the 1-hour SO<sub>2</sub> standard.**

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