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## **TITLE 326 AIR POLLUTION CONTROL BOARD**

### **SECOND NOTICE OF COMMENT PERIOD #05-118(APCB)**

#### **DEVELOPMENT OF AMENDMENTS TO 326 IAC 7-4-2 CONCERNING SULFUR DIOXIDE EMISSION LIMITATIONS AT CITIZENS GAS & COKE UTILITY, INDIANAPOLIS, INDIANA**

##### **PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments to 326 IAC 7-4-2 concerning sulfur dioxide (SO<sub>2</sub>) emission limitations for two coke oven battery underfire combustion stacks serving three coke oven batteries E, H, and No. 1. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

##### **HISTORY**

First Notice of Comment Period: June 1, 2005, Indiana Register (28 IR 2819).

**CITATIONS AFFECTED:** 326 IAC 7-4-2.

**AUTHORITY:** IC 13-14-8; IC 13-17-3-4.

##### **SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

###### **Basic Purpose and Background**

Citizens Gas & Coke Utility (CG & CU) in Indianapolis, Indiana, has requested that IDEM combine into one limit the sulfur dioxide (SO<sub>2</sub>) emission limitations in 326 IAC 7-4-2 for each of the three coke batteries (E, H, and No. 1). CG & CU has requested a combined limit for the pounds per hour limit and the pounds per ton of coal charged limit. These limits govern the emissions from the coke oven battery underfire combustion stacks. Coke oven gas is the fuel used for underfire, which heats the batteries. All of the coke oven gas used for the underfire at the facility is desulfurized, i.e., hydrogen sulfide (H<sub>2</sub>S) is removed, in the iron oxide boxes. The sulfur content of the coke oven gas combusted at E, H, and No. 1 battery underfire is the same, since all coke oven gas is desulfurized to the same concentration. The current pound per ton of coal charged emission limitations in 326 IAC 7-4-2 for batteries E, H, and No. 1 are seventy-nine hundredths pounds of sulfur dioxide per ton of coal charged (0.79 lb SO<sub>2</sub>/ ton coal), seventy-nine hundredths pounds of sulfur dioxide per ton of coal charged (0.79 lb SO<sub>2</sub>/ ton coal), and twenty-three hundredths pounds of sulfur dioxide per ton of coal charged (0.23 lb SO<sub>2</sub>/ ton coal), respectively. The current pounds per hour emission limitations for batteries E, H, and No. 1 are thirty-one and sixteen hundredths pounds of sulfur dioxide per hour (31.16 lbs SO<sub>2</sub>/hr), thirty-one and sixteen hundredths pounds of sulfur dioxide per hour (31.16 lbs SO<sub>2</sub>/hr), and fifteen and six-tenths pounds of sulfur dioxide per hour (15.7 lbs SO<sub>2</sub>/hr), respectively. CG & CU is proposing a combined pounds per hour limit as the sum of the three limits for each coke battery. The three limits for pounds of SO<sub>2</sub> per ton of coal are combined into one limit based on the coal charging capacity of each battery. CG & CU is also proposing that the combined limit be dependent upon the number of batteries in operation. The combined limit would tier down depending on which batteries were in operation. A combined limit would be calculated for each battery operating scenario.

CG & CU uses iron oxide boxes to desulfurize the coke oven gas from all three coke batteries. Iron oxide boxes remove H<sub>2</sub>S from the coke oven gas stream, which is the predominant sulfur compound found in coke oven gas. The construction permit for battery No. 1 has a limit of twenty grains of hydrogen sulfide per hundred standard cubic feet (20 grains H<sub>2</sub>S/100 scf). However, there are a number of organic sulfur compounds present in trace quantities in coke oven gas, such as carbon disulfide, carbonyl sulfide, and thiophenes. If H<sub>2</sub>S was the only sulfur compound in the coke oven gas the H<sub>2</sub>S limit of 20 grains H<sub>2</sub>S/100 scf would be equivalent to the current SO<sub>2</sub> limit for battery No. 1 of fifteen and seven-tenths pounds per hour (15.7 lbs/hr). CG & CU is not able to consistently meet the SO<sub>2</sub> limit for battery No. 1 and the only way to address this would be to reduce the amount of sulfur compounds in the coke oven gas. Currently technology is not available to remove the organic sulfur compounds in the gas stream and it would be cost prohibitive to reduce the H<sub>2</sub>S levels in the coke oven gas by installing additional iron oxide boxes. For these reasons CG & CU is requesting a combined SO<sub>2</sub> limit for the battery combustion stacks, while retaining the twenty grains of hydrogen sulfide limit

of 20 grains H<sub>2</sub>S/100 scf. Modeling, reviewed by IDEM, demonstrates that the proposed limits will not cause an exceedance of the National Ambient Air Quality Standards (NAAQS) in the vicinity of the plant.

**IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed under Federal Law**

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law.

**Potential Fiscal Impact**

There should be no negative fiscal impact associated with the proposed amendments.

**Public Participation and Workgroup Information**

No workgroup is planned for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact Susan Bem, Rules Development Section, Office of Air Quality at (317) 233-5697 or (800) 451-6021 (in Indiana).

**SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from June 1, 2005, through July 5, 2005, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received no comments in response to the first notice of public comment period.

**REQUEST FOR PUBLIC COMMENTS**

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#05-118(APCB)CG & CU SO<sub>2</sub> SIP  
Susan Bem Mail Code 61-50  
c/o Administrative Assistant  
Rules Development Section  
Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue  
Indianapolis, Indiana 46204.

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor reception desk, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Section at (317) 233-0426.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand delivered by October 3, 2005.

Additional information regarding this action may be obtained from Susan Bem, Rules Development Section, Office of Air Quality, (317) 233-5697 or (800) 451-6027 (in Indiana).

**DRAFT RULE**

SECTION 1. 326 IAC 7-4-2 IS AMENDED TO READ AS FOLLOWS:

**326 IAC 7-4-2 Marion County sulfur dioxide emission limitations**

**Authority:** IC 13-14-8; IC 13-17-3-4

**Affected:** IC 13-12; IC 13-14-4-3; IC 13-16-1

Sec. 2. The following sources and facilities located in Marion County shall comply with the sulfur dioxide emission limitations in pounds per million Btu (lbs/MMBtu) and pounds per hour (lbs/hr), unless otherwise specified, and other requirements:

<u>Source</u>	<u>Facility Description</u>	<u>Emission Limitations</u>	
		<u>lbs./MMBtu</u>	<u>lbs./hr.</u>
(1) Acustar	Boiler 1	2.82	109.98
	Boiler 2	2.82	109.98
	Boiler 3	2.82	109.98
(2) Allison Gas Turbine—Plant 5	Boiler 1	3.99	299.4

	Boiler 2	3.99	299.4
	Boiler 3	3.99	299.4
	Boiler 4	3.99	299.4
(3) Amtrak	Boilers 61 and 62	3.30	208.15
(4) Bridgeport Brass	Boiler 1	3.55	135.8
	Boiler 2	3.55	135.8
	Boiler 3	3.55	135.8
(5) Central Soya	Boiler	4.32	272.0
(6) Central State	Boiler 3	3.39	111.8
	Boiler 7	3.39	169.5
	Boiler 8	3.39	169.5
(7) Citizens Gas	<del>Batteries E &amp; H (each)</del>	<del>0.79 pounds per ton</del>	<del>31.16</del>
	Battery 1 ***	0.23 pounds per ton	15.70
	<b>1,E,H ***</b>	<b>0.67 pounds per ton</b>	<b>78.02</b>
	<b>1,E ***</b>	<b>0.49 pounds per ton</b>	<b>46.86</b>
	<b>1,H ***</b>	<b>0.50 pounds per ton</b>	<b>46.86</b>
	<b>E,H ***</b>	<b>0.79 pounds per ton</b>	<b>62.32</b>
	<b>E ***</b>	<b>0.79 pounds per ton</b>	<b>31.16</b>
	<b>H ***</b>	<b>0.79 pounds per ton</b>	<b>31.16</b>
(8) Detroit Diesel Allison-Plant 3	Boiler 1	1.88	67.6
	Boiler 2	1.88	67.6
	Boiler 3	1.88	90.2
	Boiler 4	1.88	135.2
	Boiler 5	1.88	180.3
(9) Diamond Bathurst	#2 Furnace	1.40 pounds per ton	20.22
(10) Ford	Boiler 1	2.43	177.38
	Boiler 2	2.43	354.77
	Boiler 3	2.43	354.77
(11) Fort Harrison	Boiler 1	2.92	151.84
	Boiler 2	2.92	151.84
	Boiler 3	2.92	151.84
	Boiler 4	2.92	151.84
(12) G.M. Truck & Bus Group	Boiler 1	2.31	187.1
	Boiler 2	2.31	187.1
	Boiler 3	2.31	106.3
(13) Indiana Girls School	Boiler	6.00	46.9
(14) IPL-Perry W	Boiler 17	6.0	1,320.0
	Boiler 18	6.0	1,320.0
(15) Indianapolis Sludge Incinerator	Incinerator 1	2.0 pounds per ton	14.19
	Incinerator 2	2.0 pounds per ton	14.19
	Incinerator 3	2.0 pounds per ton	14.19
	Incinerator 4	2.0 pounds per ton	14.19
	Incinerator 5	2.0 pounds per ton	14.19
	Incinerator 6	2.0 pounds per ton	14.19
	Incinerator 7	2.0 pounds per ton	14.19
	Incinerator 8	2.0 pounds per ton	14.19
(16) Marathon Petroleum–Indiana Refining Division	H-H1	1.92	36.46
	H-H2	1.92	36.46
	H-H3	1.92	38.38
	P-H1	1.92	89.03
	P-H2	1.92	82.12

	P-H3	1.92	30.32
	P-H4	1.92	33.19
	P-H5	1.92	9.98
	Alky Reboiler	1.92	53.15
	Crude Heater	1.92	268.05
	Vacuum Heater	1.92	99.20
	Sulfur Recovery	189.0 pounds per ton sulfur	88.17
	FCC (Proc)	3.92 pounds per ton	506.37
	CO Boiler	1.92	228.72
	FCC Chg. Htr.	1.92	88.26
	GH-1	1.92	81.36
(17) Navistar	Boiler 1	2.98	193.72
	Boiler 2	2.98	193.72
	Boiler 3	2.98	193.72
(18) Quaker Oats	Boiler 1	2.79	195.3
	Boiler 2	2.79	195.3
	Murray Boiler	0.50	50.1
(19) Quemetco	Reverberatory Furnace	24.6 pounds per ton	617.0
(20) Refined Metals	Blast Furnace	10.8 pounds per ton	64.8
(21) Reilly Industries	2722 W	1.25	114.75
	2726 S	1.25	49.1
	186 N	1.25	46.0
	2707 V	1.25	20.0
	112 E	0.0**	0.0**
	2710 P	0.0**	0.0**
	Riley	1.25	64.75
	B & W	1.25	49.1
	2724 W	1.25	26.3
	2714 V	1.25	18.8
	2729 Q	1.25	3.8
	2740 Q	1.25	7.5
	732714	1.25	45.0
	2728 S	1.25	7.5
	Still	0.0**	0.0**
	Kettle	0.0**	0.0**
	2607 T	0.0**	0.0**
	702611	0.0**	0.0**
	722804	0.0**	0.0**
	2706 Q	0.0**	0.0**
	2713 W	0.0**	0.0**
	2714 W	0.0**	0.0**
	2720 W	0.0**	0.0**
(22) Rexnord-Link Belt Bearing	Boiler A	3.28	101.7
	Boiler B	3.28	101.7
	Boiler C	0.0*	0.0*
(23) Rexnord-Link Belt Chain	Boiler 1	3.68	117.8
	Boiler 2	3.68	117.8
	Boiler 3	3.68	117.8
(24) Thomson Consumer Electronics	Boiler 1	1.95	39.0
	Boiler 2	1.95	39.0

	Boiler 3	1.95	146.3
	Boiler 4	1.95	146.3
(25) Union Carbide	Boiler 1	3.85	92.4
	Boiler 2	3.85	106.6
	Boiler 3	3.85	148.2
(26) Western Select Properties	Boiler 2	2.52	189.06
	Boiler 3	2.52	189.06
	Boiler 4	2.52	189.06
	Boiler 5	2.52	252.07
(27) Wishard	Boiler 1	4.04	105.0
	Boiler 2	4.04	105.0
	Boiler 3	4.04	105.0

\*\*Less than 0.05

\*\*\***Batteries in operation**

(28) Allison Gas Turbine Operations Plant 8 shall comply with the sulfur dioxide emission limitations provided in clause (A) or (B) and other requirements as follows:

(A) Boilers 2 through 11 may burn natural gas at any time.

(B) Babcock and Wilcox Boilers 2 through 6 and Combustion Engineering Boilers 7 through 11 may burn fuel oil with a sulfur dioxide emission limitation of two and one-tenth (2.1) lbs/MMBtu each during periods when one (1) of the following conditions is met:

(i) Fuel oil is burned in no more than three (3) Babcock and Wilcox boilers, and fuel oil is not burned in any combustion engineering boiler.

(ii) Fuel oil is burned in no more than two (2) Babcock and Wilcox boilers and no more than two (2) combustion engineering boilers.

(iii) Fuel oil is burned in no more than one (1) Babcock and Wilcox boiler and no more than three (3) combustion engineering boilers.

(C) A log of hourly operational status and fuel type for each boiler shall be maintained at the plant and made available to the department upon request. A daily summary of operating status and fuel type for each boiler for each day of a calendar quarter shall be submitted to the department on a quarterly basis.

(D) Allison Gas Turbine Operations Plant 8 shall erect a twenty (20) foot stack extension with a diameter at the extension outlet of four (4) feet for each stack serving Boilers 2 through 6 in accordance with the following schedule:

(i) Complete design, specifications, and construction drawings and award contracts by August 2, 1988.

(ii) Complete installation of stack extensions by December 2, 1988.

(29) Indianapolis Power and Light Perry K shall comply with the sulfur dioxide emission limitations in lbs/MMBtu and other requirements as follows:

<u>Boiler Number</u>	<u>Emission Limitations</u>
(A) 17 and 18	0.3
(B) 11, 12, 13, 14, 15, and 16	2.1
(C) As an alternative to the emission limitations in clause (B), sulfur dioxide emissions from Boilers 11, 12, 13, 14, 15, and 16 may comply with any one (1) of the sets of emission limitations in lbs/MMBtu as follows:	

<u>Boiler Number</u>	<u>Emission Limitations</u>
(i) 13, 14, 15, and 16	0.0
11 and 12	4.4
(ii) 11, 12, 15, and 16	0.0
13 and 14	4.4
(iii) 11, 12, 13, and 14	0.0
15 and 16	4.4
(iv) 11, 12, 15, and 16	3.0
13 and 14	0.3
(v) 11 and 12	0.3
13, 14, 15, and 16	3.0

(D) The department or the Indianapolis Air Pollution Control Division shall be notified prior to the reliance by Indianapolis Power and Light on any one (1) of the sets of alternative emission limitations specified in clause (C).

(E) A log of hourly operating status for each boiler shall be maintained and made available to the department upon request. A

daily summary indicating which boilers were in service during the day shall be submitted to the department quarterly. In addition, records of the daily average sulfur content, heat content, and sulfur dioxide emission rate for each day in which an alternative set of emission limitations specified in clause (C) is used shall be submitted to the department quarterly.

(F) For the purposes of 326 IAC 7-2-1(c)(1), during thirty (30) day periods in which Indianapolis Power and Light relies on more than one (1) set of emission limitations specified in clauses (B) through (C), a separate thirty (30) day rolling weighted average for each set of limitations shall be determined. Each thirty (30) day rolling weighted average shall be based on data from the previous thirty (30) operational days within the last ninety (90) days for that set of limitations. If Indianapolis Power and Light does not operate thirty (30) days under any one (1) set of limitations within the last ninety (90) days, the rolling weighted average shall be based on all operational days within the last ninety (90) days for that set of limitations.

(G) Boilers 11 through 16 shall be limited to six and zero-tenths (6.0) lbs/MMBtu each until Boilers 11 through 16 achieve compliance with the sulfur dioxide emission limitations specified in clauses (B) through (C). Compliance with the emission limitations specified in clauses (B) through (C) shall be achieved according to the following schedule:

- (i) Complete engineering analysis of modifications by April 2, 1988.
- (ii) Complete testing and design of modifications and place orders for necessary equipment by May 2, 1989.
- (iii) Complete installation of necessary equipment and achieve compliance with emission limitations specified in clauses (B) through (C) by June 2, 1990.

(30) Indianapolis Power and Light Stout shall comply with the sulfur dioxide emission limitations in lbs/MMBtu and other requirements as follows:

<u>Boiler/Turbine Number</u>	<u>Emission Limitations</u>
(A) Boiler 70	5.3
(B) Boilers 50 and 60	4.7
Boilers 1 through 8	0.0
Boilers 9 and 10 and Gas Turbines 1, 2, and 3	0.35

(C) As an alternative to the emission limitations in clause (B), sulfur dioxide emissions from Boilers 50, 60, and 1 through 10 and Gas Turbines 1, 2, and 3 may comply with any one (1) of the sets of emission limitations in lbs/MMBtu as follows:

<u>Boiler/Turbine Number</u>	<u>Emission Limitations</u>
(i) Boilers 50 and 60	5.2
Boilers 1 through 10 and Gas Turbines 1, 2, and 3	0.0
(ii) Boilers 50 and 60	5.0
Boilers 1 through 10	0.0
Gas Turbines 1, 2, and 3	0.4
(iii) Boilers 50 and 60	4.1
Boilers 1 through 8	0.26
Boilers 9 and 10	0.35
Gas Turbines 1, 2, and 3	0.3
(iv) Boilers 50 and 60	3.9
Boilers 1 through 8	0.34
Boilers 9 and 10 and Gas Turbines 1, 2, and 3	0.35

(D) The department or the Indianapolis Air Pollution Control Division shall be notified prior to the reliance by Indianapolis Power and Light on any one (1) of the sets of alternative emission limitations specified in clause (C).

(E) A log of hourly operating status for each boiler shall be maintained and made available to the department upon request. A daily summary indicating which boilers were in service during the day shall be submitted to the department quarterly. In addition, records of the daily average sulfur content, heat content, and sulfur dioxide emission rate for each day in which an alternative set of emission limitations specified in clause (C) is used shall be submitted to the department quarterly.

(F) For the purposes of 326 IAC 7-2-1(c)(1), during thirty (30) day periods in which Indianapolis Power and Light relies on more than one (1) set of emission limitations specified in clauses (B) through (C), a separate thirty (30) day rolling weighted average for each set of limitations shall be determined. Each thirty (30) day rolling weighted average shall be based on data from the previous thirty (30) operational days within the last ninety (90) days for that set of limitations. If Indianapolis Power and Light does not operate thirty (30) days under any one (1) set of limitations within the last ninety (90) days, the rolling weighted average shall be based on all operational days within the last ninety (90) days for that set of limitations.

(G) Indianapolis Power and Light shall install a stack diameter restriction for the stack serving Boilers 50 and 60. The stack diameter restriction shall reduce the diameter to six and one-half (6½) feet at the tip of the stack. The installation of the stack diameter restriction shall be in accordance with the following schedule:

- (i) Complete preliminary design of modifications by December 2, 1988.
- (ii) Place orders for necessary modification by July 2, 1989.

(iii) Complete installation by February 2, 1990.  
(Air Pollution Control Board; 326 IAC 7-4-2; filed Aug 28, 1990, 4:50 p.m.: 14 IR 65; filed Feb 9, 1999, 4:22 p.m.: 22 IR 1959; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

**Notice of First Meeting/Hearing**

Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on December 7, 2005, at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room A, Indianapolis, Indiana, the Air Pollution Control Board will hold a public hearing on amendments to 326 IAC 7-4-2.

The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed amendment. Oral statements will be heard, but, for the accuracy of the record, all comments should be submitted in writing.

Additional information regarding this action may be obtained from Susan Bem, Rules Development Section, Office of Air Quality, (317) 233-5697 or (800) 451-6027 (in Indiana).

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: ADA Coordinator

Indiana Department of Environmental Management

100 North Senate Avenue

Indianapolis, Indiana 46204

or call (317) 233-0855 or (317) 232-6565 (TDD). Speech and hearing impaired callers may contact IDEM via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Office of Air Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor East and Legislative Services Agency, One North Capitol, Suite 325, Indianapolis, Indiana and are open for public inspection.

Kathryn A. Watson, Chief  
Air Programs Branch  
Office of Air Quality