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TITLE 326 AIR POLLUTION CONTROL BOARD

FIRST 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) is soliciting public comment on amendments to rule 326 IAC 7-4-2 to revise the sulfur dioxide (SO₂) emission limitations for three coke oven battery underfire combustion stacks. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

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 (SO₂) 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 (H₂S) 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 SO₂/ ton coal), seventy-nine hundredths pounds of sulfur dioxide per ton of coal charged (0.79 lb SO₂/ ton coal), and twenty-three hundredths pounds of sulfur dioxide per ton of coal charged (0.23 lb SO₂/ 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 SO₂/hr), thirty-one and sixteen hundredths pounds of sulfur dioxide per hour (31.16 lbs SO₂/hr), and fifteen and six-tenths pounds of sulfur dioxide per hour (15.7 lbs SO₂/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 SO₂ 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 dependent 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 H₂S 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 H₂S/100 scf). However, there are number of organic sulfur compounds present in trace quantities in coke oven gas, such as carbon disulfide, carbonyl sulfide, and thiophenes. If H₂S was the only sulfur compound in the coke oven gas the H₂S limit of 20 grains H₂S/100 scf would be equivalent to the current SO₂ 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 SO₂ 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 H₂S levels in the coke oven gas by installing additional iron oxide boxes. So CG & CU is requesting a combined SO₂ limit for the battery combustion stacks, while retaining the twenty grains of hydrogen sulfide limit of 20 grains H₂S/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.

Alternatives To Be Considered Within the Rulemaking

Alternative 1. Amend rule as proposed.

- Is this alternative an incorporation of federal standards, either by reference or full text incorporation? No.
- Is this alternative imposed by federal law or is there a comparable federal law? No, this is a site-specific state rule.
- If it is a federal requirement, is it different from federal law? Not applicable.
- If it is different, describe the differences. Not applicable.

Alternative 2. Take no action on the proposed amendments.

- Is this alternative an incorporation of federal standards, either by reference or full text incorporation? No.
- Is this alternative imposed by federal law or is there a comparable federal law? No, this is a site-specific rule.
- If it is a federal requirement, is it different from federal law? Not applicable.
- If it is different, describe the differences. Not applicable.

Applicable Federal Law

326 IAC 7-4-2 is approved by the U.S. Environmental Protection Agency (U.S. EPA) as part of Indiana's State Implementation Plan (SIP). Indiana will send these rules to U.S. EPA to be approved as part of Indiana's SIP so federal law is consistent with the state rule.

Potential Fiscal Impact

Potential Fiscal Impact of Alternative 1. This alternative will have no fiscal impact.

Potential Fiscal Impact of Alternative 2. This alternative would have a fiscal impact on the source since the source would have to change its operations to be able to consistently meet the emission limit for battery No. 1.

Public Participation and Workgroup Information

At this time, 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 Section, Office of Air Quality at (317) 233-5697 or (800) 451-6027 (in Indiana).

STATUTORY AND REGULATORY REQUIREMENTS

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#05-118(APCB) Emission Reporting/CG & CU SO₂ SIP

Susan Bem Mail Code 61-50

c/o Administrative Assistant

Rules 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 IDEM receptionist on duty at the tenth floor reception desk, Office of Air Quality, Indiana Government Center-North, 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 Section at (317) 233-0426.

COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by July 5, 2005.

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

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