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**STATE OF ILLINOIS**  
**Pollution Control Board**

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

March 7, 2005

KIMBLE GLASS, INC. )

Petitioner, )

v. )

ILLINOIS ENVIRONMENTAL PROTECTION )  
AGENCY, )

Respondent. )

*IEPA 05-3*

IEPA-05-55

(Provisional  
Variance- Air)

**Re: Request for Provisional Variance for Furnace B; Electrostatic Precipitator  
Bypass**

On February 16, 2005, the Illinois EPA received from Kimble Glass, Inc. ("Kimble") a request for provisional variance to allow the bypass of the electrostatic precipitator ("ESP") controlling particulate matter emissions from glass-melting furnace B with oxy-fuel melter ("furnace B") while repairs are being made to the ESP at the Chicago Heights facility. The request was accepted for review pursuant to the requirements of the Illinois Environmental Protection Act ("Act") and the applicable regulations.

The Illinois EPA has evaluated the request pursuant to the requirements of Sections 35, 36, and 37 of the Act and 35 Ill. Adm. Code Part 180. The Illinois EPA is granting Kimble's request for provisional variance as the source has demonstrated that an arbitrary and unreasonable hardship will result in the event of a denial. Specifically, Kimble seeks provisional variance from condition 7.5.5(b) of CAAPP permit number 95090043 (requiring operation of the ESP at all times during operation of furnace B) and the pound per hour particulate matter ("PM") limit in condition 7.5.6(a) of CAAPP permit number 95090043 and 35 Ill. Adm. Code 212.321, for a period not to exceed 72 hours.

Kimble estimates that PM emissions during the 72-hour repair period will approximate 6.7 pounds per hour, with an estimated total emission of 482 pounds of PM. Kimble is limited by permit to 6.04 tons of PM per year from furnace B. The emissions resulting

from the bypass of the ESP are not likely to exceed the annual PM limit given the limited duration of emergency provisional variance.

The Illinois EPA is granting Kimble's request for a provisional variance subject to the following conditions:

1. Upon receipt of this letter, Kimble shall notify the Illinois EPA of the specific 72 hours during which the repairs to the ESP will commence and be completed.
2. Kimble shall complete repairs on ESP within 30 days of the issuance of the provisional variance.
3. While repairing/bypassing the ESP, Kimble shall take all reasonable steps to minimize PM emissions including:
  - a. Reducing the input of raw materials by at least 25 percent.
  - b. Increasing cullet input to at least 50 percent (currently 35 to 40 percent).
4. Within 45 days of completing the repairs, Kimble shall send the Illinois EPA a report detailing the cause of the malfunction of and repairs completed on the ESP, actions taken by Kimble to minimize emissions during the bypass/repair event, and details on the process and emissions during the bypass/repair event.
5. Upon completion of the repairs, Kimble shall conduct a stack test of furnace B and the ESP to demonstrate compliance with all applicable emission limits. Kimble shall adhere to the following test guidelines:
  - a. Testing shall be conducted, documented, and reported by an independent testing service in accordance with appropriate USEPA Methods and Procedures and an approved Stack Test Protocol. Copies of the proposed test protocol shall be submitted at least 30 days prior to the scheduled test date. However, the Illinois EPA can accept a shorter notification period if it does not interfere with Illinois EPA representatives' ability to witness the test.
  - b. Final confirmation of the exact date and time of the test shall be provided at least five (5) days prior to the test date.
  - c. Testing shall be conducted under conditions representative of maximum process operating rates and prior to making any

modification to the existing source equipment, control equipment, or stacks.

- d. The final report for the test shall be submitted within 45 days of completion of testing.
- e. Reports and notifications described above shall be submitted to:

- i. Illinois EPA – Compliance and Enforcement Section  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance and Enforcement Section (MC 40)  
P.O. Box 19276  
Springfield, Illinois 62796-9276

- ii. Illinois EPA – Air Regional Field Office  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison Street  
Des Plaines, Illinois 60016

- iii. Illinois EPA – Source Monitoring Unit  
Illinois Environmental Protection Agency  
Bureau of Air, Source Monitoring Unit  
Attn: Kevin Mattison  
9511 West Harrison Street  
Des Plaines, Illinois 60016

- 6. Kimble Glass, Inc. shall sign a certificate of acceptance of this provisional variance and forward that certificate to the Compliance and Enforcement Section at the address indicated above within ten days of the date of this order. The certification should take the following form:

I (We) \_\_\_\_\_, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in \_\_\_\_\_ dated \_\_\_\_\_.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
Authorized Agent

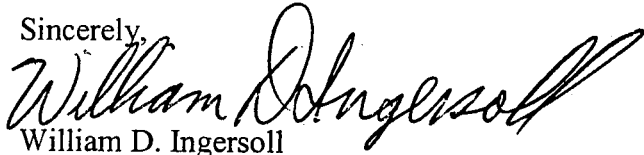
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Title

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Date

Sincerely,



William D. Ingersoll  
Acting Chief Counsel

cc: IPCB, Clerk  
Roshna Bala, Sidley and Austin

I.D. #: \_\_\_\_\_

Name: \_\_\_\_\_ **GERRESHEIMER**

Prog.: \_\_\_\_\_ Category: \_\_\_\_\_

February 15, 2005

Kimble Glass, Inc.  
537 Crystal Avenue  
Vineland, NJ 08360

James B. Rocco  
Manager Environmental Services  
Telephone 856-794-7125  
Fax 856-692-8291  
e-mail jrocco@kimkon.com  
www.kimble.com

Via Overnight Delivery

Ms. Julie Armitage  
Bureau of Air Compliance  
Illinois Environmental Protection Agency  
1021 North Grand Ave.  
P.O. Box 19276  
Springfield, Illinois 62794-9276

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FEB 16 2005

Environmental Protection Agency  
OFFICE OF AIR QUALITY

Re: Kimble Glass, Inc. - Chicago Heights  
CAAPP Permit No. 95090043  
Application for Provisional Variance

Dear Ms. Armitage:

Kimble Glass, Inc. ("Kimble"), a glass manufacturing company, hereby requests the Illinois Environmental Protection Agency's ("IEPA's") recommendation to the Pollution Control Board for an emergency provisional variance from select requirements of the Title V Clean Air Act Permit Program ("CAAPP Permit") for Kimble's Chicago Heights facility ("Facility"). Pursuant to Section 35 of the Illinois Environmental Protection Act and its implementing regulations, 35 Ill. Adm. Code Sections 180.202(b) and 180.204, Kimble submits the following information in support of its request.

1. Relief Requested

Kimble seeks a provisional variance from Condition 7.5.5(b) and certain limitations in Condition 7.5.6(a) of the Facility's CAAPP Permit No. 95090043. Condition 7.5.5(b) requires operation of the electrostatic precipitator ("ESP") at all times during the operation of glass-melting furnace "B" with oxy-fuel melter ("Furnace B"). Condition 7.5.6(a) sets forth emissions limitations for Furnace B, as follows:

Nitrogen Oxides		Particulate Matter		Sulfur Dioxide	
(Lb/HR)	(T/Yr)	(Lb/HR)	(T/Yr)	(Lb/HR)	(T/Yr)
17.00	74.66	1.38	6.04	1.5	6.57

Kimble seeks the provisional variance for a period of 72 hours.

2. Description of Facility

Kimble manufactures borosilicate glass containers for the pharmaceutical industry. The Facility occupies roughly five acres of land at 1131 Arnold Street, Chicago Heights, in Cook County, and is surrounded by industrial facilities to the north, south, and east and by multi-family housing to the west. The Facility has been in operation since the early 1900s.

3. Description of Activity For Which Variance is Sought

At the Facility, Kimble operates a single glass melting furnace, Furnace B, which produces vital glassware for the company's pharmaceutical clients. Particulate emissions from Furnace B are controlled by an electrostatic precipitator ("ESP"). Specifically, the ESP, manufactured by McGill Airclean, employs four electrically charged fields to collect particulate from the furnace's exhaust stream. The ESP plays an integral role in Furnace B's compliance.

At present, however, the ESP for Furnace "B" is not functioning properly, and this situation is jeopardizing the Facility's ability to comply continuously with the Furnace B particulate matter emissions limitations. This situation is occurring despite the fact that Kimble has maintained the ESP in accordance with a standard operating and maintenance protocol and manufacturer's specifications. In fact, during November 2003, Furnace B's ESP received its regularly scheduled cleaning, performed by the ESP manufacturer McGill Airclean, during a minor rebricking of the furnace. Following the cleaning, the ESP was functioning normally. In December 2004, two of the four fields on the ESP began having problems maintaining a sufficient level of voltage to maintain optimal collection efficiency. Kimble personnel immediately attempted to remedy this unforeseen problem using external means in order to forego a bypass of the ESP. Last week, however, these fields shut down without warning and would not restart. Kimble and McGill Airclean have come to the conclusion that something inside the unit likely is causing the fields to be "shorted out." To perform the necessary repairs and maintenance, Kimble must bypass and shut down the ESP. To the best of Kimble's knowledge, the remaining two fields are maintaining compliance. However, optimal performance of the ESP as an air pollution control device requires proper use of all four fields.

#### 4. Compliance Plan

Kimble believes that this emergency internal repair and cleaning will correct the situation and restore the ESP to its full capacity. Accordingly, the Facility plans to perform the following steps. First, the ESP will be shut down to begin cooling the unit. Cooling down will require approximately 12 hours. Once cooled, the ESP will be opened and all collected particulate matter that remains in the ESP will be removed. Following clean-up, Kimble will conduct an inspection of the ESP interior and perform the required repairs. The ESP unit will then be closed, re-heated for approximately five to six hours, and returned to service. If additional work is needed that cannot be completed within this 72 hour period, Kimble will contact IEPA to discuss the best manner of proceeding.

Kimble's Chicago Heights facility has not been granted any other provisional variances during this calendar year and currently is unaware of any other issues relating to compliance with the Furnace B particulate matter limits. The entire repair period for which the provisional variance is requested will last no more than 72 hours.

#### 5. Materials Used During Operation of Furnace

The raw materials used by Furnace B during glass production are silica sand, borax and salt, nepheline syenite, boric acid, dolomite lime, potassium carbonate, and sodium chlorite. None of these raw materials is classified as a hazardous air pollutant under the Clean Air Act.

#### 6. Estimated Air Emissions Resulting From the Provisional Variance

Kimble will take several measures to minimize particulate matter emissions during its repair of the ESP. First, the repair will occur during a production schedule that allows for reduced input by approximately 25 percent. Second, Kimble will increase its cullet input from its current range of 35 to 40 percent to approximately 50 percent, amounting to a nearly 10 percent increase of cullet. As such, the Company estimates that particulate matter emissions during this 72-hour repair period will be 6.7 lbs/hr, with an estimate total emission of 482 lbs

Furnace B has an annual particulate matter limit of 6.04 tons per year. Based on a typical hourly emission rate of 0.335 lbs/hr., the Facility's actual annual particulate matter emissions are 2,901.5 lb./year, or 1.45 tons/yr., which is substantially lower than the Title V permit allowance. Even if the maximum expected particulate matter emissions were generated during the 72 hour repair period, total annual emissions would still fall significantly below the annual limit for Furnace B.

7. Estimated Water Emissions Resulting from the Provisional Variance

Kimble is not aware of any public water supplies that the requested provisional variance would adversely impact.

8. Assessment of Environmental Impacts

Owing to the short time period during which the ESP repair will be conducted, it is unlikely that any exceedence resulting from the provisional variance will cause adverse environmental effects. As indicated above, the predicted level of the exceedence for particulate matter is minimal.

9. Failure to Grant a Provisional Variance Will Impose Arbitrary and Unreasonable Hardship

Kimble seeks a provisional variance that would exempt it from Condition 7.5.5(b), requiring continuous operation of the ESP while Furnace B is running; and Condition 7.5.6(a), which contains particulate matter emissions limits, of its CAAPP Permit. Failure to grant an emergency provisional variance would impose an arbitrary and unreasonable hardship on Kimble for the following two reasons. First, frequent shutdowns cause severe structural damage to glass melting

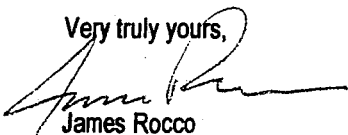
furnaces by over-cycling the refractory brick, leading to very costly repairs and to decreased production. Kimble maintains a regular maintenance cycle for Furnace B and the ESP; requiring additional idling or shutdowns in excess of those already scheduled poses a significant risk that the structural integrity of the Furnace will be jeopardized. Second, the alternative option of continuing to operate the Furnace while the ESP is being repaired, without having received a provisional variance, places Kimble in a position of unreasonable and arbitrary hardship by leaving it open to increased enforcement risks for Title V noncompliance. Moreover, as explained above, the provisional variance requested here would last for only 72 hours and would produce only minimal excess emissions on an annualized basis because of the extent of over-control typically maintained at the Furnace.

\* \* \*

In light of the facts set forth above, Kimble respectfully requests the IEPA's recommendation that the Illinois Pollution Control Board grant a provisional variance, for a period of 72 hours, from Conditions 7.5.5(b) and 7.5.6(a) of the Chicago Heights facility's Title V Air Operating Permit. This letter is submitted without any admission of liability and without any prejudice to any position Kimble may take in regard to this or any other matter.

We would be happy to discuss this matter with you and answer any questions you may have. Please feel free to contact me at (856) 794-7125.

Very truly yours,



James Rocco  
Manager, Environmental Services