State of California
AIR RESOURCES BOARD

Resolution 80-67

November 5, 1980

WHEREAS, the Air Resources Board ("Board") and/or the federal Environmental Protection Agency have established health-based ambient air quality standards for nitrogen dioxide, oxidant (ozone), particulate matter (TSP), and visibility which are consistently exceeded in several of the State's air basins, notably the South Coast Air Shed;

WHEREAS, Health and Safety Code Sections 39003, 39500, 39602, and 41500 authorize the State Board to coordinate, encourage, and review efforts to attain and maintain state and national ambient air quality standards;

WHEREAS, Health and Safety Code Sections 39600 and 39605 authorize the State Board to do such acts as may be necessary to execute the powers and duties granted to and imposed upon the State Board, to assist the air pollution control districts, and to hold public hearings;

WHEREAS, a suggested control measure for the control of emissions of oxides of nitrogen (NOx) from glass melting furnaces was drafted by the Board staff and has been approved under the Suggested Control Measure Development Process by a technical review group consisting of representatives of Environmental Protection Agency, Air Resources Board, and several air pollution control districts;

WHEREAS, the California Environmental Quality Act and Air Resources Board regulations require that an activity not be adopted as proposed unless feasible mitigation measures or alternatives which would substantially reduce any significant adverse environmental effects of the proposed activity are considered, and further require that the Board respond in writing to significant environmental issues raised;

WHEREAS, the Board has held a public meeting on this matter, and has heard and considered the evidence and comments presented by the ARB staff, affected industries, and other interested persons and agencies; and

WHEREAS, the Board finds:

1. That emissions of oxides of nitrogen (NOx) from glass melting furnaces contribute significantly to violations of the state and national ambient standards for nitrogen dioxide (NO_2), TSP, and visibility in several of the state's air basins;

2. That such NOx emissions are not currently subject to air pollution control regulations;

3. That the evidence suggests that the energy penalty associated with the control measure is insignificant and that this energy penalty has been taken into consideration by the Board, along with other costs, when assessing the cost effectiveness of the suggested control measure;

4. That it is technologically feasible and cost effective to reduce emissions to one-half their present rates through the use of combustion modifications and process changes;

5. That the staff report adequately responds to other environmental issues raised, and the Board concurs in the staff's findings that no significant adverse environmental effects are likely to result from adoption and implementation of the suggested control measure.

NOW, THEREFORE, BE IT RESOLVED, that the Board approves the suggested control measure for the control of emissions of oxides of nitrogen from glass manufacturers, as set forth in Attachment A to this Resolution. The Board requests the technical review group to reconsider the measure to reflect changes suggested by the Board in response to comments and evidence received at public meetings.

BE IT FURTHER RESOLVED, that the Executive Officer is delegated the authority to endorse the actions of the technical review group on the above issues.

BE IT FURTHER RESOLVED, that following endorsement of any amendments to the suggested control measure approved by the technical review group, the Executive Officer is directed to forward the suggested control measure to the South Coast Air Quality Management District and the Ventura County Air Pollution Control District with a recommendation that these districts adopt rules of equivalent effectiveness.

BE IT FURTHER RESOLVED, that the Board recognizes the potential need for an exemption for some existing furnaces, based upon existing physical site limitations, technical limitations or financial constraints.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to provide assistance to any district requesting assistance in adopting, interpreting, or implementing the suggested control measure.

BE IT FURTHER RESOLVED, that if significant adverse environmental effects become apparent before or during operation of the control equipment utilized to comply with this suggested control measure once it is adopted into regulatory form the adopting districts, with the assistance of the Board should they desire it, should consider the adoption of mitigation measures or other appropriate action to reduce such adverse impacts, and are encouraged to request the Board's assistance.

I certify that the above is
a true and correct copy of
Resolution 80-67, as adopted
by the Air Resources Board

Sally Rump

Sally Rump, Board Secretary

Attachment A

Suggested Control Measure to Limit NOx Emissions from Glass Melting Furnaces

A. Emission Limitations

	Emission Limit	Effective Date
New Furnaces	2.0 lb NOx/ton glass pulled	January 1, 1983
Rebuilt Furnaces		Next furnace rebuild starting January 1, 1983 All furnaces must comply by January 1, 1987
- producing $\leq$ 200 T/D	4.0 lb NOx/ton glass pulled	
- producing between 200 T/D and 300 T/D	[[-0.015 (T/D)] + 7 lb NOx]/ ton glass pulled	
- producing $\geq$ 300 T/D	2.5 lb NOx/ton glass pulled	

Emission Limit X A = Cogeneration Based Emission Limit

$$A = \frac{\text{Heat Input (Btu/hr)} + \text{Electricity Cogenerated (Btu/hr)}}{\text{Heat Input (Btu/hr)}}$$

Heat input shall be based on the higher heating value of the fuel

All emission determinations shall be in the "as found" condition, at any production rate other than idle. For purposes of this control measure, idle shall be defined as a glass pullrate of less than 10 percent of the district maximum permitted production rate.

Averaging time for compliance determination shall be three hours.*

The NOx emission limit shall be calculated as NO_2.

Manufacturers subject to this control measure shall submit a furnace rebuild schedule to the air pollution control officer by January 1, 1982, which delineates furnace rebuild timetables.

* The glass manufacturer may also choose one of the following options for purposes of compliance determination:

1. Six hours with no peak NOx emission rate to exceed 25 percent of the six hour average; or
2. 24 hours with the use of in-plant continuous monitoring. Such monitoring equipment shall be operated in accordance with conditions specified by the Air Pollution Control Officer.

Exemptions

-- Furnaces that are limited to 15 lbs/hr. of NOx by district permit conditions.

-- Glass remelt facilities that exclusively utilize glass cullet, marbles, chips, or similar feedstocks in lieu of basic (and/or traditional) glass making raw materials.

-- Glass tableware furnaces, SIC code 3229.1.

-- Flat glass melting furnaces.

B. Technology Review

After July 1, 1982, and before January 1, 1983, the Air Resources Board in conjunction with the South Coast Air Quality Management District, or their delegates, shall conduct a public hearing to determine the technological and economic feasibility of meeting an emissions limit on a furnace specific basis to be effective upon furnace rebuild, starting January 1, 1983, with all furnaces complying by January 1, 1987, of 2.0 lb NOx, or less, per ton of glass pulled.

Memorandum

To : Huey D. Johnson
Resources Agency
1416 - 9th Street, 13th Floor
Sacramento, CA 95814

Date : November 17, 1980

Subject : Filing of Notice of Decision of the Air Resources Board

From : **Air Resources Board**

Pursuant to Title 17, Section 60007(b), and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.

Sally Rump

Sally Rump
BOARD SECRETARY

attachments:
Resolution 80-63
[redacted]

State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Meeting to Consider Suggested Control Measure for the Control of Oxides of Nitrogen Emissions from Glass Melting Furnaces

Agenda Item No: 80-21-2, 80-22-1

Public Hearing Date: October 23, 1980, continued to November 5, 1980

Response Date: November 5, 1980

Issuing Authority: Air Resources Board

Comment: Ammonia may be emitted in significant amounts due to some of the emission control equipment.

Response: Proper operation of such emission control equipment will limit ammonia breakthrough to less than 20 ppm. Ammonia emissions at these low levels are not expected to cause adverse effects.

Comment: Some of the emission control techniques will result in an energy penalty.

Response: These energy impacts are insignificant and justified by the benefits associated with the control measure.

CERTIFIED: Sally Rump
Board Secretary

Date: 11/14/80