



Final Rulemaking Control of NO_x Emissions from Glass Melting Furnaces

25 Pa. Code Chapter 129

**Environmental Quality Board Meeting
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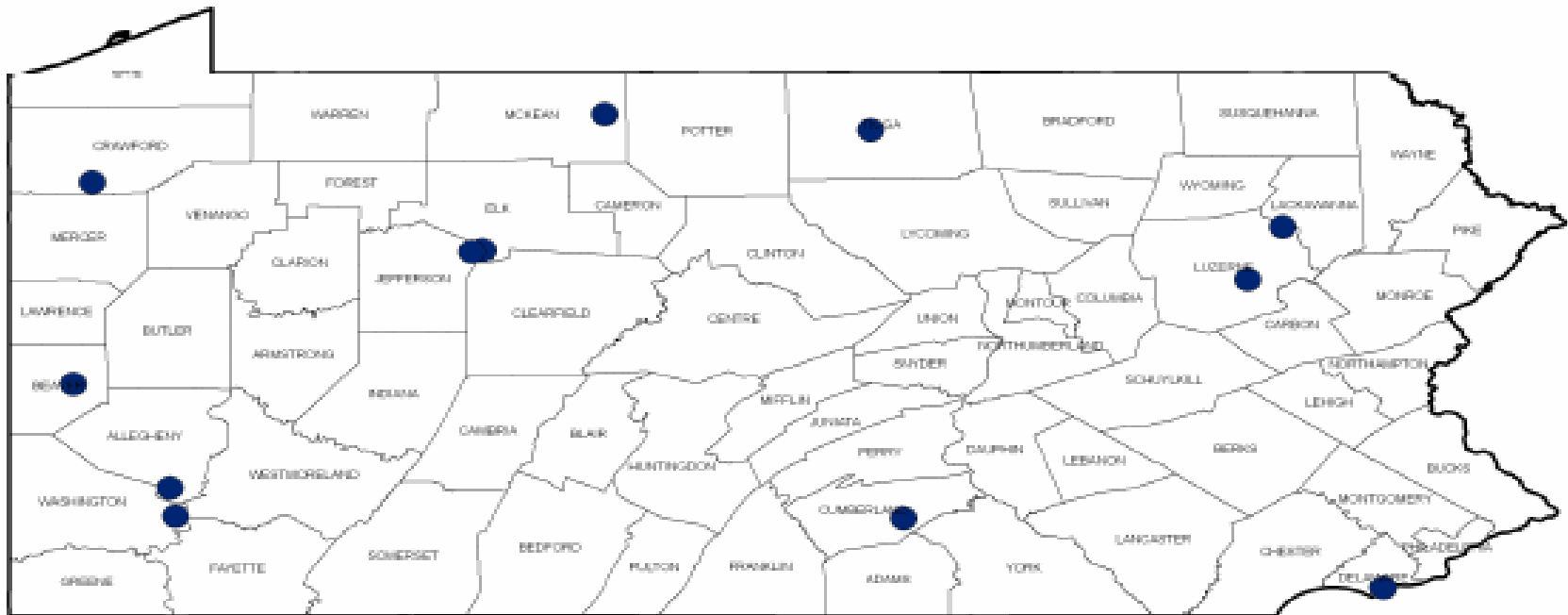
Final Rulemaking: Control of NO_x Emissions from Glass Melting Furnaces

OVERVIEW

- The glass melting furnace final rulemaking is a regional strategy designed to reduce nitrogen oxide (NO_x) emissions, a precursor to the formation of ground-level and fine particulate matter (PM_{2.5}).
- The final-form regulation will apply to the owners and operators of 26 glass melting furnaces, which emitted 9,814 tons of NO_x to the atmosphere in 2005.
- This rulemaking satisfies the “no more stringent than” requirements of the Air Pollution Control Act, because it is reasonably necessary to attain and maintain the 8-hour ozone and PM_{2.5} National Ambient Air Quality Standards.
- Approximately 2,500 tons of NO_x emissions will be reduced annually-- a 25% reduction from 2005 levels.

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Location of Glass Melting Furnaces in Pennsylvania





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Summary of Final-form Regulation

- Applicability – Glass melting furnaces which produce flat, container, fiberglass, pressed or blown glass and other types of glass.
- NO_x Emission Standards – range from 4.0 pounds of NO_x per ton of glass pulled for container glass furnaces to 7.0 pounds per ton of glass pulled for flat glass furnaces.
- Compliance Demonstrations – Annual compliance with the NO_x emission limits can be demonstrated using one of the following:
 - on a furnace-by-furnace basis
 - on a facility wide emissions averaging
 - or a system-wide averaging among furnaces under common control of the same owner.



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Summary of Final-Form Regulation

- Compliance date – January 1, 2012.
- The written petitions must demonstrate that it is technologically or economically infeasible to comply with the NO_x emission limits by January 1, 2012.
- The alternative compliance schedules, interim and alternative NO_x limits must be included in a federally enforceable plan approval or operating permit.
- Alternative Compliance Schedules - The regulation includes a petition process which allows owners or operators to petition the Department or a local air pollution control agency for alternative compliance schedules.
- Interim NO_x Limits -- an owner or operator of glass melting furnaces may submit a petition for an alternative compliance schedule with interim emission limits until compliance with the applicable standard is achieved.
- Alternative NO_x Limits – an owner or operator of glass melting furnaces may submit a petition for an alternative NO_x emission limit.

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Summary of Final-Form Regulation

- The Department recommends that the Board include clarifying revisions to Section 129.304. The revision to subsection (c)(1) shown on page 6, the first sheet of your hand-out, allows all affected owners and operators of glass melting furnaces to submit petitions for alternative NO_x emission limitations.
- Clarifying changes to subsection (c)(2) substitute the word “schedule” for “deadline” and allows for an extension beyond 180 days from the start-up of the furnace after the cold shutdown, if the extension is approved by the Department in writing.



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Summary of Final-Form Regulation

The changes to Section 129.304(c)(3) (viii)-(x), shown on page 7 of your handout, clarify the petition requirements that would apply to all glass melting furnace owners and operators seeking alternative compliance schedules and NO_x emission limitations.



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COSTS

- According to an Ozone Transport Commission report, entitled "*Identification and Evaluation of Candidate Control Measures*," the cost of controls to reduce NOx emissions from glass melting furnaces, range from \$924 to \$2,232 per ton of NOx removed; costs will vary depending on the size of the furnace and the efficiency of the emissions control system.
- The regulation provides for the installation of an alternative monitoring system or method which is projected to cost approximately \$100,000 for each alternative monitoring system. The total cost for the 16 glass melting facilities, is approximately \$1.6 million.
- If an owner or operator elects to install and operate a continuous emission monitoring system, the cost would be approximately \$300,000 for each furnace.



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Public Participation Process

- April 19, 2008 — proposed rulemaking published in the *Pennsylvania Bulletin* with a 66-day public comment period. (38 *Pa.B.* 1838)
- May 19-23, 2008 — public hearings held in Harrisburg, Wilkes-Barre and Pittsburgh, PA.
- June 23, 2008 – public comment period closed.
- September 12, 2009 — An Advance Notice of Final Rulemaking was published in the *Pennsylvania Bulletin* with a 33-day public comment period. (39 *Pa.B.* 5318)

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ADVISORY REVIEW

- November 18, 2009-- the Air Quality Technical Advisory Committee (AQTAC) recommended that the Department evaluate the exemption provisions, role of local agencies data substitution requirements and submit the final-form regulation for EQB consideration.
- December 16, 2009- the Citizen's Advisory Council also concurred with the Department's recommendation to submit the final-form regulation for EQB consideration.



Final Rulemaking:

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- The Department recommends that the EQB approve the final-form rulemaking for glass melting furnaces.
- The final-form glass rulemaking, if adopted, will be submitted to EPA for approval as a revision to the State Implementation Plan.
- Your consideration of this final rulemaking is greatly appreciated.



pennsylvania

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