National Lime Association

LIME

The Versatile Chemical

***Testimony of***
***Keith W. Holman***
***Deputy Executive Director***
***National Lime Association***

***U.S. House of Representatives***
***Committee on Oversight and Government Reform***
***Subcommittee on Regulatory Affairs, Stimulus Oversight and Government Spending***

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| **Date:** | April 6, 2011 |
| **Time:** | 1:30 P.M. |
| **Location:** | Room 2154<br>Rayburn House Office Building<br>Washington, D.C. |
| **Topic:** | "Regulatory Impediments to Job Creation: Assessing the Impact of GHG Regulations on Small Business" |

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Chairman Jordan and Members of the Subcommittee, good afternoon and thank you for giving me the opportunity to appear before you today. My name is Keith Holman and I am the Deputy Executive Director of the National Lime Association. The National Lime Association (NLA) is the trade association for manufacturers of calcium oxide and calcium hydroxide, collectively referred to as "lime."[1] NLA's members produce more than 98% of the commercial lime made in the U.S.

The Subcommittee has requested NLA's views on the impact of greenhouse gas (GHG) regulations on small businesses. For the lime industry, particularly our smaller companies, the impact of EPA's GHG rules is significant. Lime plants generate $CO_2$ emissions, both from the fuel they combust and from the calcination process that turns limestone into lime. Accordingly, lime plants are now subject to rigorous GHG permitting requirements when they are modified. While the GHG rules took effect only three months ago, we already see a chilling effect on lime companies' plans to modernize or expand their plants because of the great uncertainty surrounding GHG permitting. This in turn makes it less likely that lime companies will create new jobs.

We find it particularly troublesome that many small businesses repeatedly asked EPA to convene a Small Business Advocacy Review (SBAR) Panel under the Regulatory Flexibility Act[2] during development of the GHG rules, and EPA refused to do so. Based on the lime industry's 2002 experience going through an SBAR Panel, we can attest to the critical value of the Panel process. Put simply, we believe a Panel is often the **only** way to get EPA to listen to small businesses in our industry and end up with a rule that takes their needs into account. Unfortunately, in the case of the GHG rules, that didn't happen.

### *The U.S. Lime Industry*

The U.S. lime industry is comprised of some 20 companies operating about 50 commercial lime plants. Nearly half of NLA's members are small businesses, as defined by the Small Business Administration.[3] These small lime companies generally have geographically

[1] Lime is used in the production of many vital products, including steel, paper, glass, copper, aluminum, and sugar. It is also used extensively in construction, roadbuilding, and pollution control (wastewater treatment and flue gas desulfurization).
[2] 5 U.S.C. §§ 601-612.
[3] *See* 13 C.F.R. § 121.201.

limited markets – within a few hundred miles of their plants – because lime is restricted by transportation costs.[4] Faced with other, often larger, competitors in their markets, small lime companies face intense competition. These small companies are particularly sensitive to new regulatory costs, such as an EPA requirement to install control equipment upgrades.[5] For this reason, when EPA was preparing in early 2002 to begin a Clean Air Act rulemaking that would impose stringent new air quality requirements on all U.S. lime plants, NLA persuaded EPA to convene an SBAR Panel prior to starting the notice and comment rulemaking process. NLA wanted EPA to have the opportunity to meet with small lime companies, understand their needs, and design the rule with those needs in mind. The Panel process proved to be a very effective way to accomplish those objectives.

***The 2002 Lime MACT Panel***

The Lime MACT[6] Panel convened on January 22, 2002. Seven of the nine small lime companies potentially affected by the rule participated in the Panel process. These small lime companies met with EPA twice, including a face-to-face meeting on February 19, 2002. The companies were given a detailed description of the planned MACT rule, as well as EPA's estimates of the economic impact of the rule on the lime industry. The companies were also given the opportunity to make oral comments on the rule, and to prepare more detailed written comments on the rule. The Panel members – representatives from EPA, the Office of Advocacy, and the Office of Information and Regulatory Affairs (OIRA) in the White House Office of Management and Budget – were present to hear the lime companies' concerns and review their written comments.

Based on the companies' oral and written comments, the Panel members (EPA, Advocacy, and OIRA) prepared a Panel Report to the EPA Administrator, which was completed on March 25, 2002. The 2002 Lime MACT Panel Report is enclosed as an attachment to this testimony. Significantly, EPA responded to these comments with several Panel recommendations to the EPA Administrator or, alternatively, provided detailed explanations of

[4] At a distance of five hundred miles or more, transportation costs can exceed the value of the product.
[5] Research funded by the Office of Advocacy at the U.S. Small Business Administration suggests that small manufacturing firms must spend four and a half times more per employee for environmental compliance than their larger competitors do. *See* W. Mark Crain, *The Impact of Regulatory Costs on Small Firms* (September 2005).
[6] Under the Clean Air Act, Maximum Achievable Control Technology (MACT) standards are established to control hazardous air pollutants from new and existing industrial sources.

why a recommended change to the rule could not be made. EPA followed the Panel's recommendations.

Because of the Panel process, the final Lime MACT standard was tough but something that the lime industry could live with. Several improvements to the rule were only made possible because small lime companies were able to meet face-to-face with EPA and provide information that was critical to the agency's decisionmaking process. For example, the pre-proposal version of the Lime MACT would have required that baghouse-equipped kilns monitor opacity with bag leak detectors (BLDs). Small lime companies explained to the Panel the difficulties and drawbacks of using BLDs, and suggested that EPA also allow the use of Continuous Opacity Monitors (COMs) because the agency had previously determined that COMs constitute enhanced monitoring. Furthermore, for several of these companies, COMS are required under Federal and state law, and cannot be legally removed. The companies described the substantial resources their plants had already invested to install COMs and to train their personnel to use them. The Panel agreed with the small lime companies and recommended that EPA allow COMs as well as BLDs. In sum, the SBAR Panel was immensely helpful in helping EPA understand and address the concerns of small lime companies.

***EPA's 2009 GHG Rulemaking Process***

When EPA announced in early 2009 that it planned to regulate GHGs under the Clean Air Act, numerous industries, including the lime industry, wanted EPA to convene an SBAR Panel. The lime industry knew that it would be significantly affected by GHG regulations. EPA subsequently proposed an "Endangerment Finding" for mobile source GHGs on April 24,[7] and GHG tailpipe standards for light-duty vehicles on September 28.[8] EPA also proposed the so-called GHG "tailoring rule" on October 27.[9] Rather than convene a Panel before proposing any of these rules, EPA chose to host a "public outreach meeting." EPA argued that it was not required to conduct a Panel for these rulemakings, asserting that "EPA is using the discretion afforded to it under section 609(c) of the RFA to consult with OMB and SBA, with input from outreach to small entities."[10]

[7] 74 Fed. Reg. 18.886 (April 24, 2009).
[8] 74 Fed. Reg. 49,454 (September 28, 2009).
[9] 74 Fed. Reg. 55,292 (October 27, 2009).
[10] 74 Fed. Reg. 49,629 (September 28, 2009).

Regardless of whether EPA actually had such discretion not to convene an SBAR Panel, EPA was clearly wrong not to do so. EPA held the public meeting on November 17, 2009, **after** all three GHG rules had been proposed. The meeting was in reality little more than EPA giving attendees a broad brush overview of the proposed rules. NLA and the other trade associations that were present had virtually no opportunity to have a dialogue with the agency about the actual design of the rules. It was also evident from this meeting that the EPA staff had only a basic understanding of the rules and who they would affect, and could not answer many questions about the relationships between the GHG rules and other Clean Air Act regulations.

Pursuant to the outreach meeting, NLA submitted written comments to EPA about the design of the "tailoring rule." While the tailoring rule proposed certain $CO_2$ thresholds below which GHG requirements would be deferred, $CO_2$ emissions from lime plants exceeded the proposed applicability threshold. A substantial portion of those $CO_2$ emissions are generated when limestone is calcined in lime kilns. Because there is no known way to avoid generating $CO_2$ when limestone is calcined and converted to lime, NLA asked that EPA consider excluding calcination process-related GHG emissions from counting against the GHG applicability thresholds.[11] EPA's single paragraph response bundled NLA's request with comments by other groups, but failed to meaningfully respond to any of them, other than to note that the agency would not respond to exclusion requests until some later time. NLA's comment letter, along with the relevant excerpt from EPA's response, is enclosed as an attachment to this testimony. While the process-emissions question was and is a major issue confronting EPA in the implementation of its GHG regulations, NLA has not been able to obtain any meaningful response from EPA, even after Congressional staff received assurances from EPA that the issue would be addressed.

***EPA's "Public Outreach" Was Not Equivalent to the Panel Process***

From the lime industry's perspective, EPA's reliance on the "public outreach" approach as a substitute for the SBAR Panel process is unsatisfactory, for several reasons. First of all, preparing for the Panel process motivates EPA to understand how the planned rule will work, who it will affect, and what the regulatory burdens will be. In the case of the GHG rules, EPA

[11] Similarly, EPA received exclusion requests from other industries where the process of making the product itself generates GHGs, such as yeast manufacturing.

did not clearly understand who would be affected or what the burdens will be. For example, EPA thought that small lime plants and many other small businesses would be deferred from GHG permitting requirements by the tailoring rule, even though this was not true. EPA also had trouble understanding the complexities of integrating the GHG rules into the existing Clean Air Act regulatory framework. As a result, EPA staff at the public outreach meeting were unable to answer many of the questions posed by small business representatives.

Second, in bypassing the Panel process, EPA lost the valuable opportunity to meet actual small businesses face-to-face and exchange information with them. The exchange of ideas and information that can occur within the Panel process is quite different from simply receiving a presentation by an agency about a rule that has already been proposed. Perhaps the greatest value of the Panel process is that it takes place **before** the agency proposes its rule, when there is still a chance to shape the design of the rule. Such face-to-face discussions are most useful when they take place early on in the process, before the figurative rulemaking "cement" starts to harden.

Third, although EPA argued that it "consulted" with SBA and OIRA, there is no evidence that EPA engaged in the degree of interagency discussion that typically occurs when Panel members meet to discuss the recommendations of Small Entity Representatives. The Panel process establishes a context for the three Panel members to meet, discuss the issues raised by small business, and reach consensus on flexible solutions for those issues. The presence and engagement of the three Panel members (EPA, Advocacy, and OIRA) ensures that EPA is held accountable to adequately consider the Panel Report's recommendations. In the absence of a formal Panel Report for the GHG rules, however, EPA was free to ignore the concerns of small businesses. And, by and large, it did.

Fourth, perhaps the most significant aspect of the Panel process is that EPA is required to consider alternatives to its planned rule that would achieve the objectives of the rule without harming small businesses. In the Lime MACT Panel, for example, EPA was able to find an appropriate alternative to the bag leak detection requirement that worked for small lime plants. In developing its GHG rules, EPA never seemed interested in considering alternatives.

For all of these reasons, EPA was wrong to avoid conducting an SBAR Panel. The "public outreach" approach taken by EPA does not – and cannot – take the place of a Panel.

Many of the implementation difficulties now facing EPA, the States, and industry might have been avoided if EPA had taken the time to listen to small business before writing its GHG rules. Now the lime industry as a whole is reluctant to expand or modernize its plants until the permitting uncertainties caused by the GHG rules have been resolved. The same can be said of many other industries, sacrificing an untold number of new jobs that would have been created.

Thank you for the opportunity to testify today. I would be happy to answer any questions that you may have.

# *Keith W. Holman*

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Arlington, Virginia (2010 to present) **Deputy Executive Director**
Assist U.S. lime manufacturers in complying with EPA's greenhouse gas rules, air quality requirements, and other environmental issues.

**Office of Advocacy, U.S. Small Business Administration**
Washington, D.C. (2002 to 2010) **Assistant Chief Counsel, Energy and Environment**
Advocated for small business before the Environmental Protection Agency. Reviewed small business impacts from federal rulemakings involving air quality and climate.

**Miller Nash LLP**
Portland, Oregon (2000 – 2002) **Of Counsel**
Represented clients on environmental issues, including Clean Air Act permitting and enforcement matters.

**United States Chamber of Commerce**
Washington, D.C. (1999 – 2000) **Chief Regulatory Counsel**
Advised the Chamber on energy and environmental law matters; developed Chamber policies environmental, energy, and natural resource issues.

**Perkins Coie LLP Of Counsel**
Washington, D.C. (1997– 1999)
Advised clients on environmental permitting, enforcement, and transactional issues.

**Jones, Day, Reavis & Pogue Associate**
Washington, D.C. (1994 –1997)
Counseled clients on permitting, enforcement, and transactional matters under the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act; resolved clients' environmental issues in property transfers.

**U.S. Environmental Protection Agency**
Washington, D.C./Atlanta, Georgia (1991–1994) **Assistant Regional Counsel**
Advised EPA Headquarters and regional offices on legal issues arising from the Clean Air Act's Title V operating permit program; represented EPA in enforcement actions involving air quality, hazardous waste, wetlands, and asbestos violations.

***EDUCATION:***

**Northwestern School of Law of Lewis & Clark College**
Portland, Oregon **J.D. 1988**
Member, Law Review (Articles Editor 1987-1988)

**University of Washington**
Seattle, Washington **B.A. 1983**

***WRITING:***

Keith Holman, *The Regulatory Flexibility Act at 25: Is the Law Achieving Its Goal?* 33Fordham Urban Law Journal 1119 (May 2006).

Keith W. Holman and David Novello, *Understanding the Clean Air Act Section 112 General Duty Clause*, 6 Journal of Environmental Law and Practice (West Publishing Co.) 26 (Winter 1999).

Keith Holman and George Van Cleve, *Promise and Reality in the Enforcement of the Amended Clean Air Act*, 27 ELR 10097, 27 ELR 10151 (March, April 1997).

Keith Holman and Carla Pierce, *Streamlining EPA's Rulemaking Procedures for Operating Permit Program Submittals Under Title V of the Clean Air Act Amendments of 1990*; Position paper presented to EPA Headquarters in August 1992, recommendations adopted by EPA in May 1993.

Keith Holman, Wickland Oil Terminals v. ASARCO, Inc. *and the 1986 Superfund Amendments: The Tide Turns on CERCLA's Private Right to Recover Hazardous Waste Response Costs*, 17 Environmental Law 307 (1987).

***HONORS/ACTIVITIES:***

Adjunct Professor, University of Maryland Law School (2000-05)
Adjunct Professor, Georgetown University Law Center (1995-96)
Advocacy Excellence Award (2003, 2006, 2007, 2008)
Commendation, U.S. Department of Justice (1994)
U.S. EPA Special Achievement Award (1993)
Law Review Excellence Award (1987)
Member, ABA Special Committee on Climate Change (1998)

Member, District of Columbia, Georgia, and Oregon Bars

**Committee on Oversight and Government Reform**
**Witness Disclosure Requirement – "Truth in Testimony"**
**Required by House Rule XI, Clause 2(g)(5)**

Name: Keith W. Holman

1. Please list any federal grants or contracts (including subgrants or subcontracts) you have received since October 1, 2008. Include the source and amount of each grant or contract.

None –

2. Please list any entity you are testifying on behalf of and briefly describe your relationship with these entities.

National Lime Association –
I am the Deputy Executive Director of the National Lime Association

3. Please list any federal grants or contracts (including subgrants or subcontracts) received since October 1, 2008, by the entity(ies) you listed above. Include the source and amount of each grant or contract.

None –

*I certify that the above information is true and correct.*
Signature: Keith W. Holman Date: April 1, 2011

# Final Report

# of the

# Small Business Advocacy Review Panel

# on EPA.s Planned Proposed Rule

# National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

March 25, 2002

**Table of Contents**

## 1. Introduction

This report is presented by the Small Business Advocacy Review Panel (SBAR Panel or Panel) convened for the proposed rulemaking on the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants that is currently being developed by the U.S. Environmental Protection Agency (EPA or the Agency). Under section 609(b) of the Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), a Panel is required to be convened prior to publication of the initial regulatory flexibility analysis (IRFA) that an agency may be required to prepare under the RFA. In addition to EPA.s Small Business Advocacy Chairperson, the Panel consists of the Director of EPA.s Emission Standards Division (Office of Air and Radiation), the Administrator of the Office of Information and Regulatory Affairs within the Office of Management and Budget, and the Chief Counsel for Advocacy of the Small Business Administration.

This report includes the following:

- background information on the proposed rule under development;
- nformation on the types of small entities that would be subject to the proposed rule;
- a summary of the Panel.s outreach activities; and
- the comments and recommendations of the Small Entity Representatives (SERs).

Section 609(b) of the RFA directs the Panel to report on the comments of small entity representatives and make findings on issues related to identified elements of an IRFA under section 603 of the RFA. Those elements of an IRFA are:

- a description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- projected reporting, record keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements

and the type of professional skills necessary for preparation of the report or record;

- n identification, to the extent practicable, of all other relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule;
- any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities; and
- any impacts, on small entities, of the proposed rule or significant alternatives to the proposed rule.

Once completed, the Panel report is provided to the agency issuing the proposed rule and included in the rulemaking record. In consideration of the Panel report, and where appropriate, the agency is to make changes to the draft proposed rule, the IRFA for the proposed rule, or the decision on whether an IRFA is required.

It is important to note that the Panel.s findings and discussion will be based on the information available at the time the final Panel report is drafted. EPA will continue to conduct analyses relevant to the proposed rule, and additional information may be developed or obtained during the remainder of the rule development process. The Panel makes its report at a preliminary stage of rule development and its report should be considered in that light. At the same time, the report provides the Panel and the Agency with an opportunity to identify and explore potential ways of shaping the proposed rule to minimize the burden of the rule on small entities while achieving the rule.s purposes.

Any options identified by the Panel for reducing the rule.s regulatory impact on small entities may require further analysis and/or data collection to ensure that the options are practicable, enforceable, environmentally sound, and consistent with the Clean Air Act.

## 2. Background

### 2.1 Regulatory History

Under the Clean Air Act (CAA), as amended in 1990, EPA is required to regulate major sources of hazardous air pollutants (HAP). These pollutants are listed in the statute. Major sources are those that emit or have the potential to emit 10 tons per year (TPY) or more of a HAP or 25 TPY or more of a combination of HAP. On July 16, 1992, EPA, as required by statute, published a list of industry groups (known as source categories) that emit one or more of these air toxics. Lime manufacturing was on this list as a category of major sources. For listed categories of "major" sources the Clean Air Act (Section 112) directs EPA to develop emission standards that are based on the application of air pollution reduction measures known as maximum achievable control technology (MACT). The CAA requires EPA to complete all MACT standards for the listed source categories by November 15, 2000. Therefore, there is a

mandatory duty to promulgate the MACT standard for the Lime source category, and a statutory deadline for doing so. If EPA fails to promulgate final standards by May 15, 2002, a so-called hammer falls, requiring sources to apply for individual permits where MACT for each lime manufacturing source would be developed on a case-by-case basis. However, this hammer process does not relieve EPA of its obligation to issue national standards for the Lime Manufacturing source category, and any case-by-case standard issued as part of the hammer process must be superceded if the eventual national MACT standard is more stringent.

The law requires that MACT not be less stringent than:

- the emission control that is achieved in practice by the best controlled similar source, for new sources; and

- the average emission limitation achieved by the best performing 12 percent of the sources in the source category, for existing sources.

This mandated minimum level of control is referred to as "the MACT floor."

## 2.2 Description of Proposed Rule Under Development and Its Scope

The rule would apply only to lime plants that are major sources of HAP. In addition, lime manufacturing operations at pulp and paper production facilities, and beet sugar plants would not be subject to the rule. (Beet sugar plants typically operate only seasonally, and our analysis indicates that beet sugar plants are not major sources of HAP.) Further, lime hydration units and facilities that do not produce lime in a kiln would not be subject to the rule (There are some lime plants that are depot facilities only or produce lime hydrate only and thus would not be subject to the rule.) With respect to the emission points which would be regulated, emission limits would apply to the lime kilns/coolers, as well as to feed materials handling operations. Materials handling operations for the lime product would not be subject to the predecisional draft proposed rule. The emission limitations selected are all based on the MACT *floor*, as opposed to more costly beyond the MACT floor options. The pollutants for which emission limitations have been established include particulate matter (PM; a surrogate for HAP metals in the particulate phase) and hydrogen chloride (HCl). See the summary of the outreach meeting for the potential SERs (Appendix B) for more details on the draft proposed rule requirements.

There are about 110 lime manufacturing plants in the U.S. Thirty of these are captive plants located at beet sugar manufacturing plants, and would not be subject to the rule. EPA believes that about 70 percent of the sources in this source category are major sources. These facilities emit approximately 11,000 tons per year (TPY) of HAP. The primary HAP are hydrogen chloride and toxic metals.

## 2.3 Related Federal Rules

Currently the Federal air emissions regulations that cover this industry are the New Source Performance Standards for Lime Manufacturing Plants (40 CFR Part 60, Subpart HH) and Non-Metallic Minerals Processing Plants (40 CFR Part 60, Subpart OOO). Some facilities have been regulated by State air emission regulations as part of a State Implementation Plan.

7. Overview of Proposal Under Consideration

## 3.1 Potential Requirements and Guidelines of the Proposal Considered by the Panel

Under the predecisional draft rule proposal EPA presented to the Panel, the Agency would propose MACT floors for new and existing lime kilns/coolers and limestone and lime kiln dust materials processing operations. For existing kilns/coolers, the PM emission limit would be 0.12 pounds PM/ton feed material; for new kilns/coolers, the PM emission limit would be 0.10 pounds PM/ton feed. The HCl emission limitation for both new and existing kilns equipped with baghouses or electrostatic precipitators would be a work practice standard: EPA would require that the PM control device inlet gas temperature be below 400. F. Opacity and PM emission limits would apply to the various materials processing operations (*e.g.,* crushers, mills, storage bins, conveyor transfer points, etc.).

The proposal would require performance testing (*i.e.,* testing to determine compliance with the emission standards) for PM initially and every 5 years thereafter, and continuous and/or periodic monitoring of the PM control devices to ensure compliance with the PM and HCl emission limitations. Sources wishing to claim area source status would need to measure HCl emissions using either EPA Method 320 or 321. Further details of the predecisional draft of the rule can be found in Attachment 1 of the summary of the potential SER outreach meeting of December 20, 2001, attached hereto as Appendix B.

## 3.2 Options Presented to the Panel

Prior to the convening of the SBAR Panel, one SER developed and presented to EPA the following issues for the Panel.s consideration:

- Possible exemption of a hydrogen chloride (HCl) standard, under authority of Clean Air Act Section 112(d)(4), pending the outcome of a risk assessment being conducted by the NLA.
- A different approach than the one EPA planned to propose for determining the MACT floor for PM, based upon the highest actual emission level from a well-designed and operated source, using the MACT control technology in use by the best 12 percent of sources for which EPA has data.
- Possible use of a bubble approach.

- Possible exemption of limestone materials processing operations (MPOs) in the quarry.
- Possible use of continuous opacity monitors, as an alternative to bag leak detectors and the monitoring of PM control device operating parameters - since some kilns already have COMs in place.
- Possible use of an alternative method, recently developed under the ASTM consensus process, for measuring HCl (for area source determinations).

In addition, EPA developed a number of provisions in developing the pre-decisional draft proposed rule for Panel review that, if adopted in the final rule, will reduce the rule.s burden on small entities:

- Lime manufacturing operations at beet sugar plants, of which three are small businesses, would not be subject to the rule.
- Lime hydration units and facilities would not be subject to the rule.
- Materials handling operations for the lime product would not be subject to the rule.
- The emission limitations selected are all based on the MACT *floor*, as opposed to more costly beyond the MACT floor options that EPA considered.
- Compliance demonstrations for materials processing operations would be conducted monthly, rather than on a daily basis.
- The minimum performance testing frequency (every 5 years), monitoring, recordkeeping, and reporting requirements specified in the general provisions (40 CFR part 63, subpart A) would be required.
- The rule would not apply to area source lime plants.
- The rule would not require PM continuous emission monitors (CEMS), but EPA will seek comment on their use.

**4. Applicable Small Entity Definitions**

There are approximately 39 lime manufacturing companies operating about 80 lime plants in the U.S. that would potentially be subject to the proposed rule. (These numbers do not include lime plants at beet sugar facilities which would not be subject to the rule.) Of these 39 companies, 12 are classified as small businesses according to the SBA definition and would potentially be subject to the rule. These small businesses operate 14 of the 80 facilities. Small businesses within the lime industry are defined by SBA as any company with a total employment of 500 or less.

**5. Small Entities That May Be Subject to this Regulation**

Some of the 12 small businesses potentially subject to the rule will likely be exempt from the rule because they are not major sources of HAP. EPA estimates that 70 percent of all lime plants are major sources (i.e., 30 percent would be area sources and not subject to the rule). Note

that there are a few lime small businesses (not included in the 12 that are potentially subject to the rule) that would not be subject to the rule, because they do not produce lime in a kiln, *e.g.,* they are depot (storage) facilities and/or produce hydrated lime from lime imported from another lime plant.

**6. Summary of Small Entity Outreach**

EPA staff have communicated with a number of small firms. Some of these communications were documented in the formal notification for this Panel. An outreach meeting with potential small entity representatives was held on December 20, 2001, in Washington, D.C. A summary of this meeting, including meeting materials, is found in the Convening Document and Appendix B. During this meeting, the planned requirements of the proposed rule were presented, and comments were solicited.

In addition, EPA staff have communicated with, and provided information to, the National Lime Association from time-to-time since the lime NESHAP development project began in 1995. The NLA represents commercial lime production companies, both small and large. (7 out of the 12 small businesses are members of NLA.) Communication with the NLA has occurred via formal meetings in person, formal teleconferences, informal telephone calls, electronic mail exchanges, and formal correspondence.

**7. List of Small Entity Representatives**

Table 1 presents the list of Small Entity Representatives solicited to advise the Small Business Advocacy Review Panel convened for this rule. This list was developed in consultation with SBA. It should be noted that of the companies in Table 1, Mercer Lime and Huron Lime are not members of the NLA. (There are 2 other non-NLA member small businesses potentially affected by the rule, but these companies declined to participate on the Panel.)

**TABLE 1. LIST OF SMALL ENTITY REPRESENTATIVES**

| | |
|---|---|
| Edward Soloman III<br>President, Mercer Lime Company | (412) 220 - 0316<br>Slippery Rock, PA |
| Anthony J. Paris<br>President, Huron Lime Company | (419) 433-2141<br>Huron, OH |
| Arline Seeger<br>Executive Director, National Lime | 703-243-5463<br>Arlington, Virginia |

| Association | |
|---|---|
| Fred Nast<br>CEO, Western Lime Corporation | 262-334-3005<br>West Bend, WI |
| Mr. Timothy W. Byrne<br>CEO, United States Lime & Minerals, Inc. | (972) 991-8400<br>Dallas, TX |
| Frank McCarthy<br>President, Linwood Mining and Minerals Corporation | (563) 359-8251<br>Davenport, IA |
| Dana StoneVP - Operations, CLM Corporation | (218) 722-3981Duluth, MN |
| Oscar Robinson<br>General Partner<br>Austin White Lime Company | (512) 255-3646<br>Austin, TX |

## 8. Summary of Comments from Small Entity Representatives

This section summarizes comments received during the Panel. (EPA received an initial set of comments from potential SERs during the pre-Panel phase, which are attached to this Report in Appendix B.) During the Panel**,** SERs provided comments (in the form of a detailed presentation, around which there was extensive discussion) during a face-to-face outreach meeting (held February 19, 2002). Subsequently, the NLA, Huron Lime Company, and Mercer Lime and Stone provided supplemental written comments on March 5, 2002. The points offered at the SER outreach meeting are summarized below; the entire meeting summary, with a copy of the SER presentations, can be found in Appendix C. The comments filed March 5, 2002, are found in Appendix D. It should be noted that most of the March 5, 2002, comments repeat the main themes discussed in the comments received previously, and so the discussion at 8.2 below includes a summary only of new issues and information provided.

### 8.1 Summary of Comments Presented at SER Outreach Meeting (February 19, 2002)

Removal of the HCl Standard Via Section 112(d)(4) of Clean Air Act

The SERs presented an overview of the risk assessment the NLA commissioned to determine whether there would be an ample margin of safety with respect to HCl levels in the atmosphere without an emission standard for HCl. The study concluded that an ample margin of safety exists without a standard for HCl. Section 112(d)(4) of Clean Air Act would allow EPA to forego setting an emission standard for HCl if this is the case.

Economic Impact of the Standard on Small Businesses

The SERs presented their comments on EPA.s draft economic impacts assessment (EIA). The main point the SERs conveyed is that, because the industry is subject to intense competition (due to declining markets, pressure from non-lime product substitutes, foreign producers, and potentially unregulated captive lime producers that may start to sell commercially), and there is an excess of capacity, the costs of the rule cannot be passed through to customers. EPA.s EIA model should reflect this. Many of the SERs presented additional comments, with emphasis on how the pre-decisional draft rule would impact individual companies. Their primary comment was that the pre-decisional draft rule would disproportionately affect small businesses because: lime prices for SERs are generally lower than the industry average, economies of scale will make it easier for large companies to absorb the costs of this rule than small companies, and it will be difficult or impossible for small businesses to obtain capital for new APCDs. The SERs also discussed the low cost and high availability of Chinese magnesia as a substitute for lime in the steel production process. A number of SERs stated they have not been able to raise prices in the past few years, and that some of their customers have instead requested that they lower their price for lime. They all agreed that once a customer is lost due to a price disadvantage (or any other reason), it is difficult to get that customer back.

Technical Issues

The SERs provided comments on the following technical issues via a detailed slide presentation. That presentation is included in Appendix D to this report. Highlights of comments provided outside the formal presentation are as follows.

HCl Work-Practice Standard

SERs believe EPA has overestimated the HCl emissions reductions from lowering APCD inlet temperature. SERs indicated that replacing wet scrubbers to meet the PM limit increases HCl emissions. They also indicated that complying with a 400 degree inlet temperature limit over a 3 hour averaging period would require them to operate at a 350 degree APCD inlet temperature (in order to account for temperature variability) which would diminish ESP efficiency and may damage dry PM control devices. They also indicated that a larger ID fan would be needed to handle the increased air mass flow associated with water injection or air tempering that may be used to reduce temperature and that this would increase costs beyond EPA.s current estimate.

Materials-Handling Operations(MHO) in Quarries

The SERs do not believe that the MHOs in limestone quarries should be regulated. They suggest regulation of limestone MHOs begin with the raw material storage in the production sequence. This is what is required under the Portland Cement NESHAP, and they believe EPA should follow that example They also state that, if the *mean* of the top 12 percent, instead of the *median* of the top 12 percent, is used to establish the MACT floor, then NSPS subpart OOO could not be the basis for that floor because not all of the MHO.s in the top 12 percent are currently subject to subpart OOO. One SER stated that its plant has MHOs (e.g., a crusher)

which process limestone for the kiln as well as other non-lime plant uses such as limestone sales, which would not be regulated under the Lime Manufacturing NESHAP.

PM Standard for Wet Air Pollution Control Devices

One SER stated that his firm recently replaced a wet scrubber with a fabric filter and triggered New Source Review because of an increase in SO2 emissions. SERs stated that this may happen with other plants that replace their wet scrubbers with a dry PM control device to meet the new PM standard. The SERs suggested that EPA create a subcategory that would set an alternative standard for kilns employing a wet PM-control device, because scrubbers allow sources to comply with any $SO_2$ limitations while manufacturing low-sulfur lime (a necessary characteristic for use in steel manufacture) from high-sulfur fuels. SERs also stated that replacing a wet control device with a dry control device would reduce PM and metals emissions but increase $SO_2$ and HCl emissions.

The SERs also suggested EPA allow bubbling of PM emissions from the kiln (*i.e.,* allowing compliance to be demonstrated by summing PM emissions from various regulated sources) as the least burdensome way to achieve the desired emissions reduction. One SER stated that his firm currently sells its de-watered scrubber sludge, and if it were to remove its wet scrubbers (and replace them with fabric filters), it would lose this market. Another SER stated that, based on a vendor quote, it would cost his firm twice as much as EPA estimated to replace its wet scrubbers with fabric filters.

Monitoring

The SERs discussed the difficulties and drawbacks of monitoring with bag-leak detectors (BLDs), and in particular the absence of promulgated specifications and procedures to install, calibrate, and conduct QA/QC for BLDs. They recommended that, in addition to BLDs, EPA should allow the use of continuous opacity monitors (COMs) because the Agency has previously determined that COMs constitute .enhanced monitoring. and provide reasonable assurance of compliance with PM standards. The SERs agreed that continuous opacity monitors should be allowed because, for several of them, COMs are required under other Federal and state requirements, and cannot legally be removed. A couple of SERs described the substantial resources their companies have already invested to install COMs and to train their personnel to operate them.

Another SER suggested that, because the PM limit is based on PM limits for the 6 top-performing kilns, likewise, the opacity limit should be permit-based, based on these same top-performers. opacity limits. All top-performing kilns have opacity limits of 15 percent, except for one (Cutler Magner.s kiln #3), which has a 20 percent opacity limit. The SER said that another basis for the suggested 15 percent opacity limit is that data from one of the top performing kilns (Black River, kiln #4) shows that the kiln.s opacity may range between 10 to 15 percent. The SER believes that promulgating an opacity limit lower than 15 percent would be inappropriate

because the standard could not be achieved by one of the .best-performing. kilns used to establish the MACT floor.

Other SERs mentioned problems associated with monitoring PM control-device parameters, such as ESP voltage and scrubber flow rate and supply pressure. They requested EPA to allow flexibility in choosing scrubber operating parameters. One SER mentioned that his permit requires monitoring of scrubber water-pump amperage, and that they also monitor gas temperature at the outlet of the scrubber.

A SER also described the SERs. concerns about how .violations. of the PM standard are defined in the draft rule. In contrast to the Pulp and Paper MACT standard for lime kilns, which allows operating parameters (*e.g.,* opacity) to be exceeded for up to 6 percent of the reporting period before a violation is deemed to have occurred, the Lime MACT standard specifies that a *single* exceedance of a 3-hour reading of certain operating parameters (*e.g.,* air pressure drop) would constitutes a violation. He suggested that, like the Pulp and Paper MACT standard, as well as the Compliance Assurance Monitoring (CAM) rule, the Lime MACT standard should prescribe maximum periods of time during which, if operating parameters deviate from prescribed levels, this would require that the kiln.s air pollution control device be investigated to ensure it is operating properly *(i.e.,* so-called .corrective action. triggers). He stated that the rule should specify separate, longer time periods during which deviations from prescribed parameter levels would have to occur before constituting a violation.

The SERs stated that the incorporation by reference of chapters 3 and 5 of the American Conference of Governmental Industrial Hygienists (ACGIH) *Industrial Ventilation* manual is unduly prescriptive, and that these requirements are highly complex. The SERs suggested EPA refer to the requirements as guidance only.

Area Source Determinations

The SERs stated that EPA should not require the use of the Fourier Transform Infrared (FTIR) spectroscopy method (EPA Method 320) for the measurement of HCl for area source determinations, since the American Society of Testing and Materials (ASTM) HCl method has been approved and EPA is required to use this consensus-based standard under the National Technology Transfer and Advancement Act. They also suggested that EPA allow the use of a HAP metals .emission factor. so firms could avoid testing for individual HAP metals in making area-source determinations (testing for PM instead and applying an agreed-upon factor for the amount of HAP metal in the PM), and that sources should not be required to test for organic HAPs, since they believe these are inherently low.

Comparison with the Pulp and Paper MACT

The SERs suggested that, in general, EPA should follow the model of the requirements imposed on lime kilns under the Pulp and Paper MACT standards, and they provided the Panel a

summary of these requirements.

## 8.2 Summary of March 5, 2002 Comments

### Pre-decisional Draft Rule Requirements

Kiln HCl Standard and Risk Assessment of HCl:

The SERs noted that they had revised their initial HCl risk assessment in accordance with comments EPA provided after the SERs. presentation on February 1, 2002. The SERs also provided a table comparing the its risk assessment with the HCl risk assessment conducted by EPA for sources in the pulp and paper industry.

The SERs reiterated that, to comply with the 400. F work practice standard, sources would need to operate below 350. F, due to process variability. The SERs stated that using water to cool the gas stream will increase the gas flow rate. The additional flow of the gas stream from water injection will require a new ID fan, which EPA agreed to include as a cost item. The cost of a fan to provide a 150,000 ACFM air-flow rate would be $150,000, with an annual increased energy cost of $93,000.

Materials Handling Operations PM and Opacity Standards:

The SERs expanded on their earlier comments: The SERs reiterated that since certain materials handling operations are not covered in the MACT standard for portland cement facilities, neither should they be covered under the Lime MACT. The SERs reviewed EPA.s rationale for this difference, that MPOs at portland cement plants may be covered under the NSPS Subpart F, whereas the MPOs at lime plants are covered under the NSPS Subpart OOO. The SERs noted that portland cement plants. MPOs may also be subject to Subpart OOO, but that rule.s requirements would end after the secondary crusher conveyor (the point at which subpart F applicability begins).

The SERs also clarified a point it made at the February 19, 2002, SER outreach meeting. If EPA had used the *mean* of the top 12 percent of performing facilities (instead of the *median*), the floor would be 3.25 times higher (i.e., less stringent) than the level of control currently under consideration. The SERs states that, without data on the entire top 12 percent of the sources, the appropriate measure of central tendency cannot be decided, and EPA cannot accurately establish the floor.

At least one SER is concerned that the use of water sprays to control fugitive PM from MPOs would create problems in the screening operations. They referred to problems that arise when heavy rains occur, such as blinding of the screens and the subsequent reduction in production capacity.

Kiln PM standard:

SERs offered process reasons for using a wet scrubber instead of a baghouse for PM control, as summarized below. The SERs offered these comments in support of their request that EPA create a subcategory for kilns equipped with wet scrubbers.

The SERs commented that scrubbers allow a kiln to produce a low-sulfur lime product through careful control of the kiln environment. They referenced a leading technical treatise on lime manufacturing (Oates, *Lime and Limestone* (1998)), which noted that a feature of rotary kilns is that sulfur from the fuel, and, to a lesser extent from the limestone, can be expelled from the kiln in the kiln gases, without over-burning the lime, by a combination of controlling the temperature and the percentage of CO in the calcining zone. As a result, a lime kiln burning high sulfur coal or coke can determine, by adjusting operational parameters, whether the sulfur will go out in the product or in the exhaust gases, and high reactivity, low sulfur limes can be produced using relatively inexpensive high sulfur fuels, subject to emission limits for $SO_2$ in the exhaust gases.

Hence, the SERs noted, scrubbers enable a kiln to produce a low-sulfur lime product (needed for the steel industry) when the only fuel reasonably available to a source is high sulfur coal. Kilns using high-sulfur coal can operate such that the sulfur is emitted through the stack, rather than incorporated into the product. A scrubber makes it possible for a kiln to burn high-sulfur coal, produce a low-sulfur product, and avoid adverse environmental impacts and non-compliance with $SO_2$ emission limits. The need to use locally available fuel is a key operational requirement for lime plants because of the freight costs involved in shipping fuel long distances. This is particularly so for small companies, the SERs noted, because they are less able to reduce freight costs through negotiations with carriers. Finally, the SERs observed that, in the Portland Cement MACT rule, EPA recognized it would be impractical to require facilities to switch from coal to natural gas, because there was insufficient natural gas infrastructure readily available to them. Requiring lime plants to switch from scrubbers to baghouses would effectively result in a similar fuel switching requirement, because these facilities would have to cease using locally available higher sulfur coal, and switch to lower sulfur coal. For many of these plants, however, lower sulfur coal would not be practically available because of the freight cost or other infrastructure limitations.

In summary, the SERs believes a wet scrubber offers an operational advantage by allowing the kiln to burn fuels across a range of sulfur content and still produce a low-sulfur lime product while minimizing $SO_2$ emissions.

Another SER provided the following comments about the sulfur cycle in a kiln. Sulfur from the fuel is vaporized in the kiln flame at about 3,500. F. Kiln operators try to maintain the maximum feed material temperature in the burning zone of the kiln below 2,100. F, to ensure the product is reactive. This temperature range does not promote rapid vaporization of sulfur salts.

However, sulfur salts are emitted in the exhaust gas (*i.e.,* not incorporated into the lime product) when the exhaust gas temperature is maintained above approximately 1,800 . F. If the kiln gas temperature is below 1,800. F, kiln operational problems could result (*e.g.,* a .sticking. problem resulting from the liquid phase of sulfur salts in contact with a kiln.s refractory lining and duct work, and the limestone material).

Another SER stated that its wet scrubbers allow the plant to achieve zero-discharge status under the Clean Water Act, by using storm-water runoff as makeup water for the scrubber. This SER reiterated previous comments that the gaseous emissions of a scrubber would be less than those from a baghouse, and that the capital and operating costs of a wet scrubber are lower than for a baghouse.

This SER also said that the handling of solids from a wet scrubber is easier and renders less fugitive dust emission than those from a baghouse. Further, this SER stated that scrubber solids from its plant are now used in agriculture. But solids from a baghouse would have different characteristics (possibly characterizing them as hazardous waste) and prevent them from being used on farms. The SER remarked that the solids from a baghouse would need to be landfilled, and their firm only has 2 years of land-disposal capacity available to it.

The SERs said that scrubbers require less space than a baghouse at a lime plant, and a lot of lime plants do not have the space at their plant to replace the wet scrubber with a baghouse. One SER mentioned his plant uses a chamber from its underground mine as a wet scrubber, and this frees surface space for other operations.

The SERs indicated that EPA has underestimated the cost to replace wet scrubbers with baghouses by about a factor of two, according to a quote recently solicited by one SER. The SERs state that EPA.s cost estimates do not properly consider space constraints, dismantling of the scrubbers, and replacement of equipment such as stone bins and preheaters. One of the SERs provided a cost analysis which was prepared by an APCD vendor.

Monitoring and Testing Requirements:

The SERs referred to their previous comments to reiterate that EPA Method 9 should be allowed to monitor positive-pressure baghouses and that the rule should allow flexibility to monitor scrubber operating parameters other than flow rate.

The SERs provided reasons the draft pre-decisional rule should not require testing for organic HAPs in support of an area-source determination. They said that, since only limestone is processed in lime kilns, testing for a broad range of HAPs is unnecessary. By contrast, cement kilns emit organic HAP as a result of processing many other types of feed materials, some of which may contain petroleum or kerogens. Several States have confirmed that lime-kiln limestone does not contain kerogens.

**Economic Impact Analysis**

Overcapacity: In earlier comments, the SERs observed that lime manufacturers compete in markets where there is significant overcapacity. In their additional comments, they observed that, even with the shutdown of several kilns in the year 2000, significant overcapacity remains. Furthermore, the capacity levels reported by the USGS do not include deactivated plants, which represent potential capacity that could be reactivated if prices were to increase. The SERs believe this suggests even greater pressure to keep prices down.

Competition from Alternative Products: The SERs emphasized that lime is a basic industrial material, with limited value-added from manufacturing. It is easier to replace lime in some of these processes than complex materials, so lime faces competition from replacement materials in virtually all of its applications.

Lime Markets are Resistant to Price Increases: The SERs observed that lime prices have remained roughly static for the last five years. They point out further that the USGS Minerals Yearbook for 2000 notes that a large increase in natural gas prices led to the shutdown of several kilns throughout the U.S.

Lime industry profit margins: The SERs accept EPA.s estimate of industry profit margins, even though they are probably on the high side, especially for small businesses. The SERs believe that profit margins do not indicate the ability of a firm to pass on cost increases. Small businesses need to generate cash and guard their access to credit and capital so they can grow and maintain/replace existing equipment. It is extremely difficult for a small business to obtain credit for a project, such as the installation of a new APCD, that will not increase the revenues and profits of the business.

Elasticity estimates for the lime industry: The SERs did not know of any documentation to support an estimate for the price elasticity of demand for the lime industry that differed from that contained in EPA's draft EIA.

## 9. Panel Findings and Discussion

The Panel considered a wide range of options that would enable EPA to mitigate impacts on small businesses. The Panel arrived at these options through consideration of the comments of the SERs and its findings based on the assembled record. The Panel believes that the following options would minimize the burden on small entities without compromising the human health and environmental benefits of the regulation or the requirements of the Clean Air Act.

### 9.1 Kiln HCl Standard

The NLA conducted a risk assessment of HCl emissions from lime kilns, with the purpose of demonstrating there would be an ample margin of safety with respect to HCl levels in the atmosphere without the work practice standard under consideration for HCl. Section 112(d)(4) of Clean Air Act would allow EPA to forego setting an emission standard, or to set a standard which is less stringent than the MACT floor, for HCl if this is the case. The EPA has reviewed the risk assessment report, approves of the methodology and model inputs used by the NLA.s consultant, and believes, based on the risk assessment, there would be an ample margin of safety. Thus, the Panel recommends that the proposed rule should not include the HCl work practice standard. On the basis of the Agency.s findings, EPA will not include an HCl work practice standard in the proposal.

**9.2 Materials Handling Operations (MHOs)**

The Panel recommends that the MHOs in limestone quarries should not be considered affected sources under the proposed rule. In other words, the first affected source in the sequence of kiln feed MHOs would be the raw material storage. This is consistent with what is required under the Portland Cement MACT standard. In addition, MHOs pertaining to lime kiln dust would not be an affected source, consistent with the NSPS subpart OOO. The EPA intends to adopt these recommendations in its proposed rule.

**9.3 Kiln PM/Metals Standard**

**(a)Bubbling Provision**

The Panel recommends including, in the proposed rule, a bubbling provision for the kiln PM emission limit, such that the sum of all kilns. and coolers. PM emissions at a lime plant would be subject to the PM emission limit, rather than each individual kiln and cooler. In this approach, kilns that over-comply could compensate for kilns not meeting the emission limit. The affected source would encompass all the lime kilns and coolers at the lime plant. A weighted average approach would be used for determining compliance with the PM emission limit*, i.e.,* the sum of the PM emissions from all the kilns and coolers at the plant, measured during the Method 5 performance test, would be divided by the sum of the limestone feed rates to all the kilns at the plant during the test, resulting in emission rate units of pounds PM per ton of limestone feed. The EPA intends to adopt these recommendations in the proposed rule.

**(b) Establishment of Subcategories**

About 20 percent of the lime produced in the US is from kilns equipped with wet scrubbers. Many of these wet scrubbers would be replaced with electrostatic precipitators (ESPs) or baghouses in order to meet the PM standard currently being contemplated. (The rule does not

apply to plants that are area sources, and does not dictate how the PM standard would be met, and some plants may elect to upgrade their wet scrubbers to meet the PM standard, but most likely major source lime plants would replace them with baghouses, and incur additional cost.) Because scrubbers are more effective than dry PM controls at removing $SO_2$ (and HCl), the Panel is concerned that such an approach would result in increases in $SO_2$ emissions from these sources. The Panel, therefore, recommends that EPA undertake an analysis of the costs and emissions impacts of replacing scrubbers with dry APCDs and present the results of that analysis in the preamble. The Panel also recommends that EPA consider and request comment on establishing a subcategory because of the potential increase in $SO_2$ and HCl emissions that may result in complying with the PM standard. The Panel further recommends that EPA specifically request comment on any operational, process, product, or other technical and/or spatial constraints that would preclude installation of a dry APCD.

## 9.4 Area Source Determinations

### (a) Measuring HCl Emissions

The current draft of the rule would require a source to measure its HCl emissions using EPA Method 320 to claim it is an area source (assuming its HCl emissions were below 10 tons per year). The Panel recommends that the recently-developed American Society of Testing and Materials (ASTM) HCl manual method be allowed as well for the measurement of HCl for area source determinations. The National Technology Transfer and Advancement Act directs agencies to use voluntary consensus standards unless to do so would be inconsistent with applicable law, or would be impractical. An agency.s decision not to use a voluntary consensus standard must be explained in a letter by the agency to both Congress and OMB. Here, the EPA intends to adopt the Panel recommendation and propose to use the recently-developed ASTM method.

### (b) Other HAPs

The Panel recommends that EPA clarify in the preamble to the proposed rule that it is not specifically requiring sources to test for all HAPs to make a determination of whether the lime plant is a major or area source. Since EPA believes that HCl is most likely to be the only HAP that would cause a lime plant to be a major source, it is only requiring that sources test for HCl if they wish to claim area source status. EPA will further investigate the potential to emit other HAPs at lime plants, and based on its analysis, EPA will (1) consider allowing the use of a HAP metals emission factor, expressed as a ratio of metals:PM, to allow sources to test for PM and then calculate HAP metals emissions rather than to employ the costly and complex direct test for each HAP metal; and (2) EPA will consider stating in the preamble that sources would not be required to test for organic HAPs in making a major source determination, as lime kilns are not expected to emit significant quantities of organic HAPs. The Panel recommends that, in addition to further investigating these issues, EPA solicit public comment on the issues.

**9.5 Monitoring Requirements**

**(a) Bag Leak Detectors, COMS, and Other Monitoring**

EPA is currently contemplating proposing that kilns equipped with baghouses monitor ongoing compliance through the use of bag leak detectors (BLDs). The Panel recommends that EPA consider providing the option of using continuous opacity monitoring systems (COMS) in place of BLDs.

The proposal preamble and/or associated docket materials will discuss the applicability, advantages, and disadvantages of using COMS and BLDs (such as each method.s sensitivity or lack of sensitivity, availability and quality of promulgated or approved specifications and procedures to verify initial performance, potential interferences or other quality assurance problems, inapplicability to certain APCD designs or configurations, cost, and precision and accuracy relative to the operating system to be monitored and the standards to be proposed); request comment on whether and how opacity could be used as a limit or an operating parameter, and what would be an appropriate MACT floor opacity limit for COMS; and request data on the foregoing issues.

The Panel recommends that EPA consider and request comment on using a COMS to monitor compliance with an opacity limit (a surrogate for HAP metals emissions). The Panel also recommends that EPA discuss in the preamble that it is considering a range of opacity levels between 10 and 15 percent as the MACT floor opacity limit. A 10 percent opacity level represents what EPA currently believes is a minimum level of sensitivity for COMS. A 15 percent opacity level is the opacity limit under the NSPS for lime kilns (subpart HH), and based on a preliminary analysis may also be the median opacity permit limit for the top 6 performing lime kilns. Opacity data from one of these top performing kilns indicates that an opacity value lower than 15 percent may not be continuously achievable.

\Another approach to using a COMS would be to use it in a way similar to how a BLD would be used to indicate the need for inspection and maintenance of the PM control device. Under this approach, EPA could specify a time period over which a significant increase in opacity level would trigger inspection of the PM control device for leaks or other malfunctions, and maintenance (if needed). EPA believes that COMS have limited sensitivity at opacities below 10 percent and that the relevant range of opacities for the aforementioned application would be below 10 percent. If COMS were allowed under the rule, EPA would prefer to set an opacity limit because of the COMS. ability to directly measure opacity, instead of using the COMS in the aforementioned way similar to how a BLD would be used. However, the Panel recommends that EPA solicit comment on this option, specifically including comments regarding the opacity levels expected from a kiln in compliance with the PM limit and the sensitivity of COMS at those levels.

The Panel also recommends that EPA take comment on whether the rule should specify separate, longer averaging time periods (or greater frequencies of occurrence) for demonstrating compliance with parameter limits, or other alternative approaches for demonstrating compliance with operating parameter limits.

The Panel recommends that EPA request comment on an approach for demonstrating compliance involving two tiers of standards for monitoring operating parameters whereby, if the conditions of the first monitoring tier are exceeded, the facility operator would be required to implement corrective actions specified in an established plan to bring the operating parameter levels back to established levels, and if the conditions of the second tier are exceeded, the exceedance would constitute a violation of the standard in question.

The EPA will request comment in the proposal preamble about the technical feasibility or appropriateness of using a bag leak detector on a positive pressure, multi-stack baghouse, and whether EPA Method 9 (manual observation of opacity) should be allowed in lieu of bag leak detectors for this type of PM control device.

**(b) ACGIH *Industrial Ventilation* manual**

The Panel recommends that the incorporation by reference of Chapters 3 and 5 of the American Conference of Governmental Industrial Hygienists (ACGIH) *Industrial Ventilation* manual be removed from the rule. The Panel believes these requirements are highly complex and unnecessary, and that EPA should not dictate how to design and operate a source.s industrial ventilation system, as long as the source is in compliance. The EPA intends to adopt these recommendations.

**(c) Other PM Control Device Operating Parameters**

The Panel recommends that EPA take comment in the preamble about the suitability of other PM control device operating parameters that can be monitored to demonstrate compliance with the PM emission limits, in lieu of or in addition to the parameters currently required in the draft rule. For example, for scrubber-equipped kilns, EPA should consider modifying the proposal preamble language to discuss allowing the use of operating parameters other than scrubber liquid flow rate (*e.g.,* wet scrubber water pump amperage and wet scrubber exhaust gas outlet temperature). This approach would potentially offer sources some flexibility in choosing which parameters to monitor. The EPA intends to adopt these recommendations.

**9.6 Economic Impacts Analyses**

The Panel recommends that EPA reevaluate the assumptions used in modeling the economic impacts of the standard, taking into consideration the inputs provided by the NLA and other SERs. Given that the NLA and other SERs have stated there is little ability to pass on control costs to their customers and there is considerable opportunity for product substitution in a number of the lime industry.s markets, EPA will conduct a sensitivity analysis using different price and supply elasticities reflective of such conditions to provide a broader picture of the potential impact of this regulation on the lime industry.

## Appendix A: List of Materials SBAR Panel sent to SERs

- Seven-page detailed summary of draft proposed rule - sent December 11, 2001.
- Technical memorandum detailing how cost and economic impacts were estimated - sent December 12, 2001.
- Draft Economic Impacts Assessment Report - sent December 13, 2001.
- A detailed breakdown of EPA.s estimate of annual costs to comply with rule for each small business - sent December 11, 2001.
- A detailed breakdown of EPA.s estimate of cost/sales to potential SERs, with the sources of information used for the sales figures - sent January 8, 2002.
- One page summary of draft proposed rule - sent December, 2000.
- Pre-decisional draft preamble language which included sections on the monitoring requirements, area source determination, and the rationale for selection of all of the rule.s requirements. - sent January 30, 2002.
- In conjunction with this draft preamble language, various technical memoranda that support the MACT standards determinations.
- A detailed breakdown of EPA.s estimate of capital costs to comply with rule for Austin White Lime Company - sent December 11, 2001.

In addition to the above items sent to the SERs, the docket for this rulemaking has been established for over a year, and all items, reports, and memoranda that have been finalized have been added to docket and have been available to all interested parties through the Air Docket office in Washington, D.C.. A list of all items in the docket was sent to the NLA and has been available to anyone requesting one. There are over 500 items in the docket currently, and over 100 technical memoranda. Docket items can be requested of the Air Docket Office over the phone and sent to interested parties for a small fee.

In addition to all the materials in the docket, numerous draft memoranda not yet in the docket have been sent to the NLA for their review. These include all of our draft cost memoranda and analyses, which were sent to the NLA in the 1st quarter of 2001. The NLA has scrutinized these cost analyses, and EPA has revised some of its memoranda in consideration of their comments. These memoranda have since been put into the docket. Other pertinent memoranda

that have been sent to the NLA (in addition to the aforementioned cost-related memoranda) include, but are not limited to, the following:

- Memorandum related to baseline emissions estimates - sent December 28, 2001.
- Memorandum related to lime cooler exhaust - sent December 28, 2001.
- Memorandum related to the MACT for HCl - sent December 28, 2001.

**Appendix B: Summary of the Potential SER Outreach Meeting Held on December 20, 2001**

**Appendix C: Pre-Panel Written Comments Submitted by Potential SERs on January 15, 2002**

**Appendix D: Summary of the SBAR Panel's Outreach Meeting with SERs on February 19, 2002**

**Appendix E: Written Comments Submitted by SERs on March 5, 2002**


# THE NATIONAL LIME ASSOCIATION COMMENTS ON EPA'S PROPOSED PREVENTION OF SIGNIFICANT DETERIORATION AND TITLE V GREENHOUSE GAS TAILORING RULE, 74 Fed. Reg. 55,292 (October 27, 2009)

## EPA Docket No: EPA-HQ-OAR-2009-0517

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## INTRODUCTION

The National Lime Association (NLA) is submitting comments on EPA's proposed rule to tailor the major source applicability thresholds and significance levels for greenhouse gas ("GHG") emissions under the Clean Air Act's ("CAA") Prevention of Significant Deterioration ("PSD") and operating permit ("Title V") programs.

NLA is the trade association for manufacturers of high calcium quicklime, dolomitic quicklime, and hydrated lime, collectively referred to as "lime." All NLA members will be directly affected if the PSD program and Tailoring Rule apply to GHG emissions. Nearly half of NLA's members are small businesses.

We commend EPA for being proactive by proposing regulations intended to mitigate the devastating impact that GHG regulation could have on the regulated community, state permitting agencies, and our fragile economic recovery. The Tailoring Rule is designed to phase in regulation of GHG emissions. For at least six years, EPA would temporarily:

1. increase major source applicability thresholds from 100/250 tpy under PSD and 100 tpy under Title V to 25,000 tons per year (tpy) in carbon dioxide equivalent emissions ("$CO_2e$") for both programs; and
2. increase the PSD significance levels from zero to 100 tpy to a level between 10,000 tpy $CO_{2e}$ and 25,000 tpy $CO_2e$.

EPA recognizes this Rule is necessary because *current* applicability and significance levels would capture a vast number of small sources such as residences, schools, and hospitals and subject them to one of the most complex and time-consuming regulatory programs. Relying on the doctrines of administrative necessity and "absurd results," EPA claims the Rule provides a "tailored" approach to avoid a paralyzing administrative burden on small sources and regulators. EPA requests comment on whether:

1. the 25,000 tpy applicability threshold adequately relieves administrative burdens;
2. the significance threshold should be 10,000 tpy, 25,000 tpy, or some level in between; and
3. there are other mechanisms to streamline the PSD and Title V programs.

NLA's overarching concern with the Tailoring Rule is that it will require lime plants and other pyroprocessing facilities to engage in the futile and time-consuming exercise of going through PSD review only to conclude what is already known - - that BACT for calcination emissions is no controls. The Tailoring Rule focuses exclusively on the eighty percent of GHG emissions that result from combustion of fossil fuels. The proposed Rule fails to address emissions from industries that emit carbon dioxide ("$CO_2$") as a by-product of the chemical reaction inherent in the process.[1] Failure to address these process emissions is significant as more than one half of

[1] The cement and soda ash industries also have significant process emissions from pyroprocessing.

GHG emissions from lime plants come from calcining (cooking) limestone. Throughout our comments, NLA will refer to these as "process" or "calcination" emissions.

If calcination emissions are subject to the PSD program, then lime plants will be discouraged from undertaking energy efficiency projects that would otherwise reduce GHG emissions. As discussed below, energy efficiency projects reduce fuel consumption, GHG combustion emissions, and emissions of other criteria pollutants. However, some of these very same energy efficiency projects present the potential to increase lime production and, therefore, increase related calcination emissions. Because BACT for calcination emission will be demonstrated to be "no additional controls," the only way a lime plant could avoid PSD review would be to make less lime, thereby eliminating the incentive to invest in energy efficiency projects. Thus, the Rule puts lime plants between a rock and a hard place - - they can either forgo energy efficiency projects, thereby consuming more fossil fuels, emitting more combustion emissions, and producing less lime; or they can invest in energy efficiency projects and undergo lengthy PSD review, only to conclude at the end of the day that BACT for calcination emissions is no additional controls.[2]

Before finalizing the Tailoring Rule, a comprehensive regulatory impact analysis is needed to determine its economic impact on affected stationary sources and, in particular, small businesses with process emissions that would otherwise avoid the PSD program.[3] These and other comments are set forth more fully below.

## I. The PSD Program Should Encourage Energy Efficiency Projects By Excluding Calcination Emissions

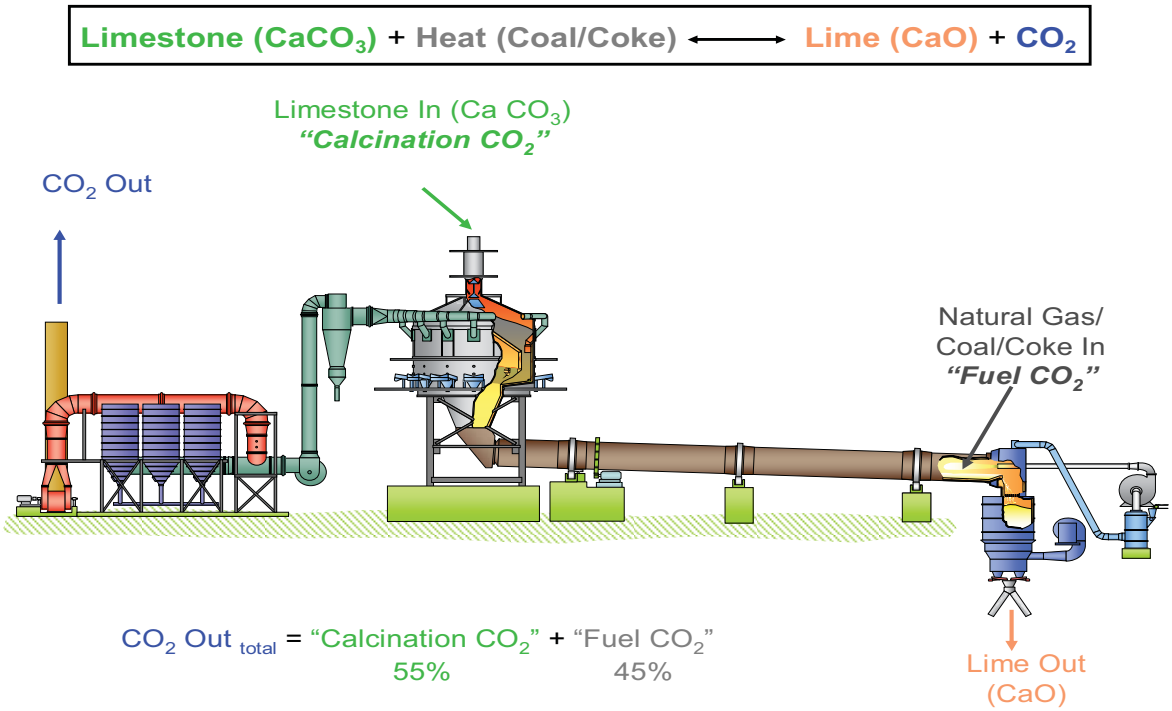
EPA most likely intended to promulgate a rule that would encourage energy efficiency projects. Unfortunately, the proposed Tailoring Rule will discourage industries with process emissions from undertaking energy efficiency measures or will penalize those that do undertake these projects. A brief explanation of how process emissions are generated in the lime industry shows how the PSD program will harm such industries.

Lime is used in a variety of products and applications, including many that benefit the environment.[4] As shown on the diagram below, lime (calcium oxide or "CaO") is made by heating limestone (calcium carbonate) to high temperatures.

[2] Energy efficiency and other physical changes and changes in method of operation will, of course, remain subject to PSD review for all other regulated pollutants.

[3] Small businesses within the lime industry are defined by Small Business Administration as any company with a total employment of 500 or less. 13 C.F.R. § 121.201.

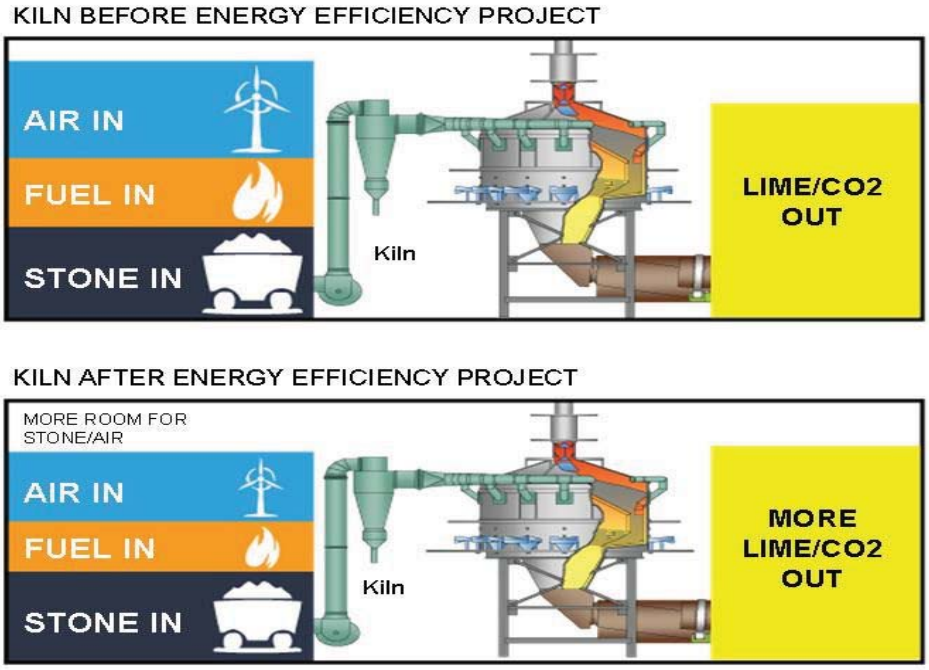
[4] Lime plays a key role in many air pollution control applications. Lime is used to remove acidic gases, particularly sulfur dioxide ($SO_2$) and hydrogen chloride (HCl), from flue gases, and it is being evaluated for the removal of mercury from power plant emissions. In addition, lime is used for effective treatment of municipal wastewaters, sewage biosolids, animal wastes, industrial liquid wastes and sludges, and petroleum wastes.




Once limestone is heated by the combustion of fuel (most lime plants use solid fuels), the limestone (calcium carbonate) is "calcined" into lime. During the calcining process, calcium carbonate ("$CaCO_3$") is converted to CaO (quicklime) and carbon dioxide ("$CO_2$") is released as an essential part of the process. The release of $CO_2$ inherent in calcining limestone (process emissions) cannot be reduced through the application of any economically or technologically "available" controls, as defined in EPA's NSR Manual. In addition to these process emissions, lime manufacturing also results in combustion-related $CO_2$ emissions ("combustion emissions") from the use of fossil fuels.

Due to the high temperatures required to "cook" limestone, lime production is energy intensive. To reduce potential global warming impacts, the lime industry committed to reduce its $CO_2$ emissions intensity as part of DOE's Climate VISION program. There are energy efficiency measures to *decrease* fuel consumption and related GHG emissions from the combustion of fossil fuels. As shown on the graphic below, efficient use of available fuel ensures that less energy is "lost" and more energy is directed to producing lime, resulting in a decrease in the

energy intensity of the lime production.




However, while energy efficiency projects reduce the rate of combustion-related GHG emissions per ton of lime produced, such projects may not change the rate of *process* $CO_2$ emissions per ton of lime produced. Therefore, *total* $CO_2$ process emissions could increase as a result of a modest increase in lime production made available by improved energy efficiency. The following example illustrates how a routine maintenance project that improves energy efficiency could increase total $CO_2$ emissions from a kiln greater than the proposed significance levels.

Lime plants periodically replace a kiln's feed end seal to both minimize ambient air from cooling the kiln air and to reduce the demand on the induced draft fan ("I.D. fan").[5] By replacing the seals, there will be less ambient air in the kiln and less fuel will be needed to maintain the kiln's temperature. In addition, the I.D. fan will use less electricity because it no longer needs to pull cooler ambient air through the kiln. As shown below, the replacement of a seal would not result in an increase above the PSD significance levels for current criteria pollutants. However, there is a net emissions increase of $CO_2$ above 25,000 tpy simply because lime production is increased by roughly 50 tons per day.[6] Thus, efforts to improve energy efficiency may have the net effect

[5] An induced draft fan pulls air from the combustion end through the kiln in order to calcine and preheat the stone. If air leakage from the kiln seals is reduced, then the load and the demand for electricity by the induced draft fan will decline, and the performance of the baghouse will improve as less air is moved through the baghouse per unit of lime production.

[6] Not all energy efficiency projects increase lime production capacity. Any increase in production is dependent on the kiln and other factors.

of increasing $CO_2$ emissions due to calcination emissions above the proposed significance levels.[7]

## ENERGY EFFICIENCY PROJECT TRIGGERING 25,000 TPY THRESHOLD

**Project:** Replace feed end seal in preheater kiln

| Pollutant | PSD / NSR Significance Levels (tpy) | Emissions Factors | Emission Factor Units | Source of Emissions Factors | Baseline Emissions (tpy) | Potential Emissions (tpy) | Net Increase (tpy) |
|---|---|---|---|---|---|---|---|
| PM | 25 | 0.12 | lb/tsf | MACT | 18.83 | 20.99 | 2.16 |
| $PM_{10}$ | 15 | 55 | % of total PM | AP-42, Appendix B | 10.36 | 11.54 | 1.19 |
| $PM_{2.5}$ | 15 | 27 | % of total PM | AP-42, Appendix B | 5.09 | 5.67 | 0.58 |
| NOx | 40 | 3.1 | lb/ton lime | AP-42, Section 11.17 | 243.27 | 271.11[8] | 27.84 |
| SOx | 40 | 34.8-coal 180-coke[1] | lb/ton solid fuel | Mass Balance | 111.21 | 111.21 | 0.00 |
| CO | 100 | 1.5 | lb/ton lime | AP-42, Section 11.17 | 117.71 | 131.188[8] | 13.47 |
| $CO_2$ | 25,000 | 1.4 | tons/ton lime | Industry Average | 219,730 | 244,878 | **25,148** |

| | |
|---|---|
| Existing Production | 430 |
| Future Production | 479.21 |
| Fuel Consumption (tpy) | 36,500 |
| Coal tpy | 29,930 |
| Coke tpy | 6,570 |

Consequently, lime manufacturers face a dilemma – either be penalized for undertaking energy efficiency projects by limiting lime production, or continue to operate a kiln in a more expensive and less fuel-efficient manner. The Tailoring Rule can remedy this paradox *by excluding process* emissions from the applicability thresholds and significance levels.

It is pointless to subject process emissions to the PSD program. If calcination emissions are subject to PSD, then lime plants will be required to submit to the complex, expensive, and time-consuming process of obtaining a PSD permit, while state and federal regulators will expend resources reviewing the permit application, only to confirm what is already known - - that BACT for calcination emissions is no additional controls. Fuel costs alone are sufficient to ensure that new and modified kilns will utilize the most energy efficient designs that are economically and technologically available.

[7] NLA does not concede that any energy efficiency projects discussed in these comments are non-routine or that the kilns were not capable of accommodating increased production. The sole purpose of the examples is to illustrate how very minor energy efficiency projects can increase calcination emissions above the proposed significance levels.

[8] Although the calculations indicate that $NO_x$ and CO emissions would potentially increase as a result of the project, these emissions would actually decrease per unit of production as a result of reduced fuel consumption. The projected increase reflects the fact that $NO_X$ and CO emissions for lime plants in this example are calculated in terms of pounds *per ton of lime*.

Including process emissions within the PSD program also creates inherent unfairness to pyroprocessing industries because they will, for all practical purposes, have a lower significance level than the vast majority of GHG emission sources. For example, GHG emissions from an electric generating station result almost exclusively from the combustion of fossil fuels.[9] A power plant will not trigger PSD review if the project does not increase *combustion* emissions by more than 25,000 tpy. In contrast, if a lime plant undertakes a project that increases combustion emissions, that plant will effectively have a significance level that is half that of most other sources because roughly half of lime plant GHG emissions are calcination emissions.

Because less than five (5) percent of the United States' GHG emissions are from industrial process emissions,[10] exclusion of calcination emissions from the PSD program will not have a material effect on air quality or global warming. EPA can easily administer a PSD program that separates combustion and process emissions because the GHG Reporting Rule requires facilities to separately calculate and report GHG combustion and process emissions. *See e.g.*, 40 C.F.R. 98 Subpart C and Subpart S.

## II. A Significance Level Less Than 25,000 TPY Will Subject Even More Trivial Projects to PSD

NLA believes EPA greatly underestimated the number of PSD permits that will be required for new and modified sources that exceed the applicability and significance levels for GHGs. Regulating agencies currently issue 280 PSD permits per year for new and modified facilities.[11] EPA incorrectly projects that a 25,000 tpy applicability and significance level will result in "only" 400 additional PSD permits per year. The projection of a 140 percent increase in the number of PSD permit applications is based on two assumptions: (1) 2% of existing sources would make modifications requiring a PSD permit for GHGs; and (2) most physical changes will trigger PSD for other criteria pollutants.[12] However, the kiln seal repair project described above calls into question the second assumption. EPA's analysis fails to account for those industries with process emissions making minor, routine maintenance improvements that could result in an increase greater than the significance level only for $CO_2$.

If the significance level is less than 25,000 tpy, EPA is likely to capture thousands of additional minor activities that the PSD program was not intended to regulate. For example, a lime plant that performs routine maintenance by adjusting the burner flame could exceed a $CO_2$ significance level of 10,000 tpy. Lime kilns often use open pipe burners to combust fuel and provide heat to the kiln. The burner flame is frequently adjusted to improve heat transfer from the flame to limestone. If heat transfer improves, then less fuel is needed to produce the same amount of lime.[13] As shown in the table below, the adjustment of the burner flame would not increase emissions of any criteria pollutant above the significance level. However, the change could

[9] Power plants have minor process emissions from the use of limestone in their flue-gas desulfurization units.
[10] "Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2007 (April 15, 2009), at 4-1 to 4-2.
[11] 74 Fed. Reg. 55,292, 55,301 (Oct. 27, 2009) (col. 1).
[12] *Id.* at 55,331 (col. 1); "Methodology for Estimating Modified Sources That Would Be Subject to PSD Permitting for GHGs."
[13] As explained above, reduced fuel consumption reduces exit gases and improves operation of the I.D. fan, creating more room in the kiln for limestone and the $CO_2$ emitted as part of the calcination process.

increase lime production by only 20 tons per day, which could lead to an increase in $CO_2$ emissions in excess of the 10,000 tpy significance level.

## ENERGY EFFICIENCY PROJECT TRIGGERING 10,000 TPY THRESHOLD

**Project**: In preheater kiln with standard open pipe burner, adjust flame to optimize temperature in burning zone

| Pollutant | PSD / NSR Significance Levels (tpy) | Emissions Factors | Emission Factor Units | Source of Emissions Factors | Baseline Emissions (tpy) | Potential Emissions (tpy) | Net Increase (tpy) |
|---|---|---|---|---|---|---|---|
| PM | 25 | 0.12 | lb/tsf | MACT | 18.83 | 19.76 | 0.92 |
| $PM_{10}$ | 15 | 55 | % of total PM | AP-42, Appendix B | 10.36 | 10.87 | 0.51 |
| $PM_{2.5}$ | 15 | 27 | % of total PM | AP-42, Appendix B | 5.09 | 5.33 | 0.25 |
| NOx | 40 | 3.1 | lb/ton lime | AP-42, Section 11.17 | 243.27 | 255.19 | 11.91 |
| SOx | 40 | 34.8-coal 180-coke[1] | lb/ton solid fuel | Mass Balance | 111.21 | 111.21 | 0 |
| CO | 100 | 1.5 | lb/ton lime | AP-42, Section 11.17 | 117.71 | 123.48 | 5.77 |
| $CO_2$ | 25,000 | 1.4 | tons/ton lime | Industry Average | 219,730 | 230,492 | **10,762** |

| | |
|---|---|
| Existing Production | 430 |
| Future Production | 451.06 |
| Fuel Consumption (tpy) | 36,500 |
| Coal tpy | 29,930 |
| Coke tpy | 6,570 |

The lower threshold of 10,000 tpy is likely to dramatically increase the number of PSD permit applications and applicability determinations and lengthen the time needed to obtain a permit. The increase in permitting activity, coupled with the lack of guidance on what constitutes BACT for $CO_2$, will create gridlock and uncertainty within permitting agencies and industry, further strangling the PSD permitting process.

NLA cannot comment on the number of new PSD permits that may be required if the significance level is below 25,000 tpy because EPA's analysis assumes a significance level of 25,000 tpy.[14] Common sense, however, tells us that a lower significance level will require sources to evaluate more projects, obtain more applicability determinations, and/or obtain PSD permits for more projects.

[14] *See* "Regulatory Impact Analysis for the Greenhouse Gas Tailoring Rule" at 18 (a significance level of 25,000 tpy is assumed for analytical purposes); "Methodology for Estimating Modified Sources That Would Be Subject to PSD Permitting for GHGs" at 3.

Lime plants that have gone through PSD review report that a two-year wait to obtain a permit is not unusual. This delay is likely to increase if a lower significance level is applied to minor, routine energy efficiency projects, like adjusting the burner flame. Increased permitting likely to flow from a lower significance threshold will further delay the permitting time, impose excessive costs on industry and permitting agencies, and delay or preclude environmentally beneficial projects. In the end, the PSD program, intended to encourage economic growth and environmental protection, could result in a decline in both.

## III. The Tailoring Rule Should Be Effective After the Light-Duty Vehicle Rule is Implemented and BACT Is Determined

The Tailoring Rule -- including applicability of PSD requirements to sources of GHGs -- will be effective when GHGs are "subject to controls" under the CAA.[15] EPA has suggested that GHGs be considered "subject to controls" 60 days after the publication date of the relevant vehicle standards. For the reasons set out below, this interpretation will cause serious problems for both sources and states, and EPA should instead interpret "subject to controls" as the date when EPA *certifies* that the first 2012 model vehicles meet the GHG limits in the vehicle rule.

The biggest problem with EPA's proposed date is that it will wreak havoc on state-run PSD and Title V programs. States need time to conform their programs with EPA's rule. Setting an effective date too soon may mean that in many states, automatic, statutory PSD applicability could apply before a version of Tailoring Rule has been incorporated into the State Implementation Plan ("SIP"). EPA already stated that it does not plan to issue a SIP Call, impose a Federal Implementation Plan, or otherwise require states to amend their PSD rules and Title V operating programs,[16] so states are left to determine for themselves how to incorporate the new rule. If a state is unable to do this before the proposed effective date of the vehicle rule, there will be an avalanche of PSD permit applications and PSD applicability determinations that the Tailoring Rule is designed to avoid.

The National Association of Clean Air Agencies, which represents state air regulators responsible for implementing the PSD program, has also urged that the Tailoring Rule not be effective before EPA certifies the 2012 model vehicles so that states have more time to prepare for the Rule's requirements.

The proposed Rule's response to this concern is to immediately "correct" SIPs by revoking EPA's prior approval of SIPs with thresholds below 25,000 tpy for GHGs. This plan carries a significant risk that courts may not agree that EPA may circumvent the procedural requirements of SIP Calls and public notice and comment by withdrawing prior approvals of any GHG threshold below EPA's 25,000 tpy. In addition, this plan disrupts the normal, orderly process of revision of state programs.

Even if EPA can conform SIPs by adding boilerplate language that EPA limits its approval to thresholds in the Tailoring Rule, it cannot change state legislation imposing regulatory thresholds

[15] *In re Deseret Power Elec. Coop.*, PSD Appeal No. 07-03 (EAB Nov. 13, 2008) at 33.
[16] 74 Fed. Reg. at 55,343 (col. 2 and 3).

and govern source PSD and operating permit requirements. Those changes must be made by state legislators, and that process could take years to complete. States run the risk of being sued if states issue permits for sources that emit more than 100/250 tpy of GHGs *before* the state law and regulations are amended.

Additional time is also needed to develop BACT guidance that is necessary to fully evaluate the economic impact of regulating GHG emissions under the PSD and Title V programs. Currently, the Clean Air Act Advisory Committee's Climate Change Workgroup is struggling to develop BACT guidance for source categories that emit the most GHG emissions. By all accounts, there are sharp divisions within the Workgroup as to what BACT should be and a resolution does not appear to be imminent. Only after BACT is evaluated will EPA have information necessary to fully analyze the economic impact of this Rule.

Accordingly, EPA's final rule should provide that PSD applicability to GHG sources should be effective no earlier than when EPA *certifies* that the first 2012 model vehicles meet the GHG limits in the vehicle rule.

## IV. There Is No Basis for EPA's Certification That The Rule Doesn't Impose A Significant Economic Impact on Small Businesses

The Small Business Regulatory Flexibility Analysis and the Small Business Regulatory Fairness Act (SBREFA) require EPA to certify whether a regulation imposes a significant adverse economic impact on a substantial number of small businesses. For businesses for which a significant adverse impact is determined, SBREFA requires EPA to evaluate measures to reduce these impacts.

EPA states in the light-duty vehicle rule that the ("SBREFA") review of the potential impacts on small entities of regulating GHG emissions under the PSD program would occur in the context of the Tailoring Rule.[17] However, the Tailoring Rule lacks any analysis of the *costs* of regulating GHGs under the PSD program and the impact of those costs on small businesses. Instead, the analysis in the Rule focuses exclusively on *avoided* costs.

Nearly half of NLA's members are small entities that have Title V permits and would be "major" sources of GHG emissions covered by this Rule. As described above, the Tailoring Rule will discourage energy efficiency and other improvement projects at lime plants, and thus adversely impact them. One way EPA could minimize this impact for lime (and other pyroprocessing industries) is to (1) make the determination now that BACT for calcination emissions is no controls and (2) exclude calcination emissions from the threshold calculations.[18] Absent consideration of such mitigation efforts, EPA's certification under Section 605(b) of the Regulatory Flexibility Act, which is subject to judicial review, is improper.

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[17] 74 Fed. Reg. 49,454, 49,629 (Sept. 28, 2009).

[18] Because the vast majority of GHG emissions result from the combustion of fossil fuels, the Tailoring Rule focuses exclusively on combustion units and ignores process emissions. *See e.g.*, 74 Fed. Reg. at 55,297 (col. 1); "Summary of Administrative Necessity Basis for a $CO_2$-e Significance Level (Aug. 2009) (EPA analyzed annual sales data of boilers, Compression ignition non-emergency engines, and spark ignition engines to estimate the number of combustion units that may trigger PSD for $CO_2$-e).

*  *  *

NLA appreciates the opportunity to submit these comments. Please feel free to contact me at (703) 243-0666 if you would like to discuss our comments or raise any questions.

Sincerely,

/s/ Leslie Bellas

EPA United States Environmental Protection Agency

May 2010

# Prevention of Significant Deterioration and Title V GHG Tailoring Rule: EPA's Response to Public Comments

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Air Quality Policy Division
Research Triangle Park, NC

"takes effect"; and, based on the anticipated promulgation of the LDVR, that the GHG requirements of the vehicle rule would take effect on January 2, 2011.

On April 1, 2010, we finalized the LDVR as anticipated, confirming that manufacturer certification can occur no earlier than January 2, 2011. Thus, under the terms of the final notice for the Interpretive Memo, GHGs become subject to regulation on that date, and PSD and title V program requirements will also begin to apply upon that date.

## 8.3 Requests for Specific Exemptions/Deferrals from Applicability

Although we did not propose any categorical exemptions, many commenters request exemptions from major source and major modification applicability determinations under title V and PSD for certain types of GHG-emitting sources or certain types of GHG emissions.

### 8.3.1 Source Categories

**Comment:**

Many commenters request complete and permanent exemptions from the applicability or other requirements of the permitting rules with respect to GHG emissions as set forth in the proposal with respect to a wide variety of sources, source categories, and types of emissions.

Requests for exemptions for small sources, such as farms, homes, and other residential or commercial buildings:

- Smaller sources such as residential homes (4522), commercial buildings (4522), retail stores (4522), small space heaters (4522), and pool houses (4522) should be exempt from GHG permitting. Another commenter believes that sources such as agricultural, residential, and small businesses (as defined by the SBA) should be exempted from this rule during the first 5-7 years to allow EPA and permitting authorities time to gain experience with the program (5367). In addition, small businesses and service providers must be provided with education, resources, and tools to help small business owners understand whether and how they will be impacted by the rule and how they can report and comply (5367).
- Four commenters (3953, 4572, 5168, 5743) state that EPA anticipates at some future date to require the "absurd results" of having entities emitting more than 100 or 250 tpy of GHG to comply with PSD and title V permitting requirements. Thus, under the Tailoring Rule, it presumably is not a question of if permitting will be applied to farms, ranches and other small entities, but a question of when such requirements will be applied. The distinction between exemption and deferral for such entities becomes important when considering that PSD is a pre-construction program because exempt entities can begin building, but deferred entities may not be on as solid legal ground. Thus, small entities like farms and ranches will not escape PSD or title V requirements, even with the Tailoring Rule.

The semiconductor industry should be exempt (5141, 5143), including solar and LED (8640); or at least defer action on the semiconductor industry pending further study of alternatives for this industry (8460) because:

- PSD is ill-suited to regulate GHG from the semiconductor industry. (8640)
- These sources have a small contribution to the total GHG inventory, comprising only 0.1 percent of the total U.S. inventory of GHG. (5141, 5143, 8640)
- The industry is making substantial efforts to reduce GHG emissions under a partnership with EPA. (5143)
- Significant competitiveness issues for this industry to be permitted (5141, 5143, 8640). It is not realistic for this industry to be subject to PSD permitting considering the substantial lead time needed to conduct monitoring and prepare an application (8640).
- The high GWP factors for the GHGs emitted by this industry will burden them with permitting. (5141, 5143)

For the semiconductor industry, short of an outright exemption, one commenter (5141) urges EPA to adopt other approaches to minimize burdens. At a minimum, such approaches should include a deferral until streamlining mechanisms become available, or a separate regulatory regime for the high GWP emissions, and different thresholds, especially for PFCs, which may trigger permitting at low volumes.

Energy-intensive trade-exposed (EITE) industries, industries that consume a great deal of energy and that are subject to intense international competitiveness should be exempted pending further analysis of the impacts on those industries, and pending international agreements covering industrial GHG emissions (4771, 5169, 5737). If not exempted, regulation of the manufacturing/industrial sector, or at least the EITE producers should be delayed until the "second phase" of regulation, after 6 years (5737). EPA has not carefully considered the environmental and economic consequences of this action because if we had, we would have exempted them for several reasons, including that other countries typically exempt similar sources from GHG cap and trade programs because the industries are making significant energy efficiency improvements absent GHG regulation, and because permitting such sources may cause many facilities to move to countries that have less regulation or no regulation for GHGs.

Regulation of the glass manufacturing industry will not achieve $CO_2$ emission reductions for the foreseeable future. Process emissions account for 20-30 percent of emissions, but there are no substitute raw materials to reduce emissions. Glass manufacturers already use low-carbon fuels and recycle scrap glass to the extent possible. (4771, 5169) In addition, glass products (e.g., windows and windshields) are often used to meet specified energy efficiency standards, and are used in solar cells. (4771)

The PSD program should exclude calcination emissions to encourage energy efficiency projects (5133). It is pointless to subject process emissions to the PSD program because it is already known that BACT for calcination emissions is no additional controls and fuel costs alone are sufficient to ensure that new and modified kilns will utilize the most energy efficient designs that are economically and technologically available. In addition, because less than 5 percent of the U.S.'s GHG emissions are from industrial process emissions, exclusion of calcination emissions from the PSD program will not have a material effect on air quality or global warming.

- Some generators may feel the need to accept a limit on hours of operation to avoid PSD or title V requirements, and that could impair communities' ability to obtain a reliable supply of electricity in emergency situations. (4122, 4318, 4523, 4749, 4770, 4992, 5080, 5038, 5089, 5114, 5128, 5257, 5317, 5327, 5601, 5741, 6459, 8301)
- Emissions from these emergency generation units are truly negligible including those generating units that meet the "black start" definition except where those units run more than 1,000 hours. (4122, 4318, 4523, 4992, 5038, 5052, 5080, 5089, 5114, 5128, 5257, 5327, 5601, 5741, 6459, 8301)
- Becoming subject to PSD and BACT requirements could jeopardize their ability to meet the Nuclear Regulatory Commission (NRC) Reliability and Availability requirements, which would place nuclear power plants at risk of not being able to perform in emergency situations and thus not complying with their NRC-required Emergency and Security Plans. (5788)

Research and development facilities, including national labs involved in defense and homeland security should be exempt from the GHG requirements, especially minor GHG emissions from research activities, to avoid confusion with EPA's GHG Mandatory Reporting Rule. (8546)

The EPA should defer regulation of $SF_6$ in the transmission of electricity until the second phase of the PSD permit program because there are no known $SF_6$ controls and $SF_6$ is used to prevent arcing and death. If $SF_6$ is regulated, it should be controlled through BMPs – possession stewardship and good tank recycling practices for $SF_6$ delivery, use, and return of tanks. (5052)

**Response:**

Although the proposal for the Tailoring Rule generally addressed how the statutory requirements for major source applicability (100/250 thresholds) could be phased-in in ways that would offer relief to traditional and non-traditional sources, such as residences, farms, small business, and semiconductor manufacturers, it did so by establishing relatively high $CO_2e$ thresholds during the early implementation period and lowering the thresholds over time as streamlining mechanisms become available to reduce administrative burdens. We did not propose any permanent exemptions of any kind or temporary exemption based on source category. Also, note that the proposal discussed energy efficiency, process efficiency improvements, recovery and beneficial use of process gases, and certain raw material and product changes in the context of short-term, low-cost means of achieving GHG emission reductions for small-scale stationary sources, but not in the context of exemptions.

As discussed previously, we are still considering whether permanent exemptions from the statute are justified for GHG permitting based on the "absurd results" legal doctrine. However, we do not have a sufficient basis to take final action at this time to promulgate any of the suggested exclusions on the grounds, described previously, suggested by the commenters. We did not propose any sort of permanent exclusion based on an interpretation of the statutory provisions of PSD or title V. Regardless of any arguments about the legality and advisability from a policy or economic standpoint of such exclusions, we would need to propose a PSD and/or title V specific legal and policy rationale that fits within the CAA, to specify details

regarding our implementation approach, and to provide an opportunity for public comment before adopting any such exclusion. Therefore we are not doing so here. We note, however, that nothing in this rule forecloses the opportunities we may have to explore such options in the future. Therefore, we are taking no action in this rule on these various commenters' requests for exclusions.

Some commenters also recommended that we create exclusions for their particular source categories for the specific purpose of avoiding overwhelming permitting burdens. We did solicit comment on alternative approaches to burden relief in the proposal. Some commenters suggested that the "administrative necessity" or "absurd results" rationale, each of which would be based on extraordinary administrative burdens, could be used to create at least temporary exclusions that would allow more sources to escape permitting than what we proposed. However, commenters have not, to date, provided specific information about the costs and administrative burdens associated with permitting their source categories. In addition, we have finalized steps 1 and 2 using the threshold-based approach, which applies the various legal doctrines, in the context of the Chevron framework, in a way that effectively exempts all small sources during this part of the phase-in, while assuring the administrability of the permitting programs for the sources that remain subject to them. Furthermore, specifically with respect to high GWP gases as discussed previously, we are maintaining the statutory mass-based threshold, and this should address commenters' concerns regarding the inclusion of those gases. Therefore, we reiterate that we are not finalizing any such exclusions in this rule and, as noted above, we are not taking final action in the commenters' requests for exclusions.

Concerning the comment that we did not take appropriate economic and environmental considerations into account for this rulemaking action, we disagree. The approach we finalize in this notice for steps 1 and 2 minimizes economic burdens by limiting permitting to the largest GHG emission sources. We further note that the PSD program as applied to the sources that are covered in steps 1 and 2 contains an express requirement to take energy, environmental, and economic considerations into account when making control technology (i.e., BACT) decisions and accordingly many of the concerns about control costs will be able to be accounted for in that analysis. Also, EPA, in collaboration with the SBA, conducted an outreach meeting with small entities to brief them on the Tailoring Rule and its environmental and economic impacts and to seek advice and recommendations from them on the proposal. (*See* Docket No. EPA-HQ-OAR-2009-0517-19130).

Several commenters were concerned that the proposal defers, rather than exempts, permitting at the statutory thresholds (100/250 tpy), and thus, that small sources will eventually be subject to permitting that those thresholds. In response, we do not have adequate information at this time to conclude that the statutory thresholds will ever be administrable for permitting GHG sources, so the commenters are premature in assuming that the statutory thresholds will apply to any particular source categories, or anyone, in the future. We explain in the preamble for the final rule how we will address smaller sources in a future rulemaking based on the 5-year study – we explain that in no event will sources below 50,000 tpy $CO_2e$ be subject to PSD or title V permitting, nor will PSD modification be triggered for emission increases below 50,000 tpy $CO_2e$, during the 6-year period ending April 30, 2016, which is the date by which we have committed to complete a rulemaking action based on the 5-year study to determine exemptions