

APPENDICES

Appendix A: Materials Shared with Small Entity Representatives

Appendix B: Written Comments Submitted by Small Entity Representatives

Editor's Note:

> This is a document produced by the U.S. Environmental Protection Agency.

> These appendices relate to the: "Final Report of the Small Business Advocacy Review Panel on EPA's Planned Proposed Rule Risk and Technology Review (RTR) Amendments to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Mineral Wool Production (Mineral Wool RTR), October 2011"

> Access the final report at: <http://www.epa.gov/rfa/wool-emissions.html>

Appendix A: Materials Shared during Outreach with Small Entity Representatives

Materials shared prior to or at April 27, 2011 Pre-Panel Outreach Meeting

Materials shared prior to or at June 16, 2011 Panel Outreach Meeting

Materials shared prior to or at April 27, 2011 Pre-Panel Outreach Meeting

- Agenda
- SER fact sheet
- List of potential SERs
- SBAR Panel process presentation
- Mineral Wool rulemaking presentation

EPA's Pre-Panel Outreach Meeting with Potential Small Entity Representatives
Risk and Technology Review for Mineral Wool Production

Wednesday, April 27, 2011

10:00 a.m. – noon, Eastern

10:00 Welcome and Introductions

10:15 RFA/SBREFA Overview

10:30 Background Presentation

11:15 Discussion

11:50 Summary and Closing

Teleconference dial-in number: (866) 299-3188
Conference code: 202 566 2372

Dial the toll-free teleconference number listed above. At the prompt, enter the conference code followed by the pound [#] sign. Note: You will hear music until the leader dials into the call.

Attending the meeting in person:

This meeting will be held at EPA Headquarters in Ariel Rios North, Room 7530 at 1200 Pennsylvania Ave. NW, Washington DC. Any invited Small Entity Representative may attend in person if desired.

We are unable to pay for travel expenses to Washington, DC for the meeting. If you would like to attend in person, you must RSVP with Madeline Barch at (202) 564-0234 or barch.madeline@epa.gov for directions and building access information.



FACT SHEET

WHAT POTENTIAL SMALL ENTITY REPRESENTATIVES SHOULD KNOW ABOUT THE SMALL BUSINESS ADVOCACY REVIEW PANEL PROCESS

What is an EPA Small Entity Representative?

The Small Business Advocacy Review (SBAR) Panel will ask a selected group of Small Entity Representatives (SERs) to provide comments on behalf of their company, community, or organization to advise the Panel regarding a particular proposed rule. SERs' participation in the rulemaking process will ensure that EPA hears small entity concerns.

A SER is a person appointed by the Small Business Advocacy Chair (SBAC) as a participating representative of small entities likely to be subject to the requirements of a specific proposed rule under development. The Regulatory Flexibility Act (RFA) defines small entities as small businesses, small governments, and small non-profit organizations.

Why does EPA need Small Entity Representatives?

EPA has an ongoing commitment to minimize the burden of its regulations on small entities to the extent feasible, while still meeting its statutory requirements. The Small Business Regulatory Enforcement Fairness Act (SBREFA), enacted in March 1996, amended the RFA to provide small entities with an expanded opportunity to participate in the development of certain regulations.

In particular, EPA must convene a SBAR Panel for certain proposed rules under development, unless the Agency determines the rule will not impose a significant economic impact on a substantial number of small entities. Each Panel is led by the SBAC and includes federal representatives from the Small Business Administration (SBA), the Office of Management and Budget (OMB), and EPA. The Panel meets with SERs likely to be subject to the rule to hear their views on the potential impacts of the rule and on ways to reduce them.

Who is eligible to be a Small Entity Representative?

A small entity stakeholder is eligible to be a SER if he or she is directly subject to the particular proposed regulation that is under development and meets one of the following definitions of small entity listed below. Please note, however, EPA has the authority to use an alternative definition after notice and comment, and for small businesses, consulting with SBA.

- **Small Business:** Defined under Section 3 of the Small Business Act. SBA defines "small business" variably, based on each firm's category in the North American Industry Classification System.
- **Small Organization:** Any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.
- **Small Governmental Jurisdiction:** Governments of cities, counties, towns, townships, villages, school districts, or special districts, with population of less than 50,000.

Typically, EPA prefers the actual owners or operators of small businesses, community officials, and non-profit organizations for this purpose. However, a person from a trade association that exclusively or primarily represents potentially regulated small entities, may also serve as a SER.

Who chooses Small Entity Representatives?

For each rule that may have a significant economic impact on a substantial number of small entities, EPA identifies what types of small entities are likely to be subject to the rule and works in partnership with other Agency offices in developing a list of potential SERs. EPA also consults with the SBA's Chief Counsel for Advocacy to identify individuals to serve as SERs. The SBAC considers these recommendations and appoints a group of official SERs.

At what stage in the rulemaking does the Panel process occur?

Prior to proposing a rule, EPA engages its small entity stakeholders in a dialog to learn more about their concerns and ideas regarding the rule under development. If the Agency believes that the rule may have a significant economic impact on a substantial number of small entities, EPA will begin the SBAR Panel process. This process is intended to provide a special opportunity for small entities to participate in the rulemaking.

What will being a Small Entity Representative entail?

Generally, SERs will be asked to review background information, listen to informational briefings and provide oral and written comments to the Agency and later to the Panel.

Typically, prior to convening a Panel, EPA will provide the SERs with some background information on the rule and ask for their initial feedback. The Agency may also arrange a meeting with small entities potentially subject to a particular rule to hear their initial concerns and suggestions. Representatives of OMB and SBA are also invited to this meeting.

After the SBAR Panel is convened by the SBAC, the Panel will provide the SERs with some additional information, followed by a teleconference and/or a face-to-face meeting to give them the opportunity to communicate directly with the Panel members. The Panel also generally requests SERs' comments in writing. The goal of this consultation is to provide a forum for the SERs to raise issues of concern and to provide the Panel with insight into technical issues and potential ways of approaching them.

What will be done with my small entity input?

Each SBAR Panel has 60 days to consider SER comments in addition to other rule-related materials prepared by EPA and prepare a report to the Administrator of EPA on the potential small entity impacts of the rule and on possible ways to reduce those impacts. The Panel report is considered by the Agency as it makes decisions on the proposed rule and is made part of the official rulemaking record with all written small entity comments appended. SERs may also submit comments during the standard public comment period after the publication of the proposed rule in the Federal Register.

Potential Small Entity Representatives

Rulemaking for Mineral Wool Risk and Technology Review

Name	Company	City
Lee Houlditch	Amerrock Products	Nolanville, TX
John Dolin	Industrial Insulation Group	Phenix City, AL
Tom Lund	Isolatek Int'l	Huntington, IN
Christopher Bullock	Rock Wool Mfg	Leeds, AL
Steve Edris	Thermafiber, Inc.	Wabash, IN

Non-SER Participant, Helper to the SERs

Name	Company	City
Angus Crane	NAIMA (trade assn)	Alexandria, VA

An Overview of the Small Business Advocacy Review Panel Process

Alexander Cristofaro, Small Business Advocacy Review Chair (SBAC)
Pre-Panel Outreach Meeting, April 27, 2011



Office of the Administrator
Office of Policy
Office of Regulatory Policy and Management
<http://www.epa.gov/op/orpm.html>

Today, I'll answer these questions...

- What is a Small Business Advocacy Review (SBAR) Panel?
- How does a Panel fit into the rulemaking process?
- How do Small Entity Representatives (SERs) participate in the Panel process?
- What is the difference between this Pre-Panel meeting and the future Panel meeting?
- What does the Panel do with SER recommendations?

What is an SBAR Panel?

- A Panel consists of representatives from the:
 - agency authoring the regulation (i.e., EPA),
 - Office of Management and Budget (OMB), and
 - Small Business Administration (SBA).

Title 5, section 609(b)(3), of the *United States Code* (USC). This is also known as section 609(b)(3) of the RFA.

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What is an SBAR Panel? (cont'd.)

- SBREFA amended the 1980 Regulatory Flexibility Act (RFA), which requires agencies to:
 - “assure that small entities have been given an opportunity to participate in the rulemaking process”¹ for any rule “which will have a significant economic impact on a substantial number of small entities.”²

¹ 5 USC 609(a)

² 5 USC 602(a)(1)

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Panel within the rulemaking process?

“the panel shall review **any material the agency has prepared...**, including any draft proposed rule, **collect advice and recommendations** of each individual small entity representative identified by the agency after consultation with the Chief Counsel [for Advocacy of the Small Business Administration], on issues related to”¹ the following:

- Who are the small entities to which the proposed rule will apply? ²
- What are the anticipated compliance requirements of the upcoming proposed rule? ³
- Are there any existing federal rules that may overlap or conflict with the regulation? ⁴
- Are there any significant regulatory alternatives that could minimize the impact on small entities? ⁵

¹ 5 USC 609(b)(4)

² 5 USC 603(b)(3)

³ 5 USC 603(b)(4)

⁴ 5 USC 603(b)(5)

⁵ 5 USC 603(c)

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Panel within the rulemaking process?

(cont'd.)

Let's focus on “**any material the agency has prepared**”

- For this Panel, EPA will not provide a proposed rule, though we expect to discuss regulatory alternatives in as great a detail as we can.
- It is EPA's policy to host SBAR Panels like this one well before a proposed rule is written so we have adequate time to incorporate your advice and recommendations into senior management decision-making about the proposed rule.
- Participation in the Panel outreach meeting does not preclude or take the place of participation in the normal public comment period at the time the rule is proposed.

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How do SERs participate?

...Let's focus on "collect advice and recommendations"

- This is how SERs help the Panel members.
 - You're expected to provide advice and recommendations on the materials shared today and at the future Panel outreach meeting.
 - You will have an opportunity to submit written comments as well as the verbal comments you provide in the meetings.
- Those of you joining this meeting to assist the potential SERs are asked not to speak to allow the potential SERs ample time to talk.

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How do SERs participate? (cont'd.)

- As potential SERS, you are in a unique position during the Pre-Panel outreach and Panel outreach meetings
- You have the opportunity, because of your status as a small entity expected to be regulated by this rule, to influence the decisions senior EPA officials make about the forthcoming regulation

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Pre-Panel vs. Panel Outreach Mtg.?

- **Pre-Panel Outreach Meeting**
 - Conducted by EPA with SBA and OMB as invitees
 - Overview of the RFA, how the Panel process works, and the role of SERs
 - Background and overview of proposed rulemaking
- **Panel Outreach Meeting**
 - Chaired by SBAC, but all Panel members have active role
 - Bulk of meeting spent discussing regulatory alternatives and input of SERs

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What does the Panel do with your recommendations?

- EPA, OMB, and SBA prepare a joint Panel report:
 - Submitted to the EPA Administrator
 - Considered during senior-management decision-making prior to the issuance of the proposed rule
 - Placed in the rule's docket when the proposed rule is published

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Contact Information

- Contact my staff:
 - Madeline Barch, RFA/SBREFA staff contact
EPA Office of Policy
202-564-0234
Barch.Madeline@epa.gov
 - Lanelle Wiggins, RFA/SBREFA Team Leader
EPA Office of Policy
202-566-2372
Wiggins.Lanelle@epa.gov

SBAR Panel Briefing: Risk and Technology Review (RTR) for Mineral Wool Production

Susan Fairchild
US EPA/OAQPS/SPPD

April 2011

Internal Draft EPA document. Do not quote or cite.

Purpose & Overview

- Purpose:
 - To explain your role as a Small Entity Representative (SER) in providing feedback
 - To provide an overview of potential changes to the MACT standards for Mineral Wool as a result of the statutorily-required reviews.
- Agenda:
 - SER Guidance
 - Introduction to Mineral Wool
 - Existing MACT standards
 - Overview of the required reviews (both RTR and court-ordered)
 - Potential changes due to these reviews
 - Approaches Considered
 - Impacts of Potential Options
 - Regulatory Flexibility Options for Small Entities
 - SER Questions

What is a Small Entity Representative (SER)?

- A SER is a representative of a small entity who may be subject to the requirements of a proposed rule that EPA has under development.
- SERs' participation in the rulemaking process helps to ensure that EPA hears the concerns and suggestions of small entities.
- The Panel (EPA, SBA, & OMB) uses your input to prepare a report that includes the Panel's recommendations on minimizing the burden on small entities. The report is part of the rulemaking record and is considered by Agency decisionmakers.

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3

What is Mineral Wool ?

- Mineral wool is a fibrous, glassy substance made from natural rock, blast furnace slag, or other similar materials and consists of silicate fibers typically 4 to 7 micrometers in diameter
- Products made from mineral wool are used for thermal or acoustical insulation, sound control and absorbency, and fire protection
- 6 companies, 7 facilities, 18 production lines
 - 3 bonded product lines
 - 15 non-bonded product lines
- 5 of the 6 companies are Small Businesses
- All facilities are major sources of HAP emissions

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Internal Draft EPA document. Do not quote or cite.

4

What are the existing MACT Standards for Mineral Wool?

- The MACT regulates *some* of the processes that emit hazardous air pollutants (HAP)
- It was promulgated on 6/01/1999, with 3-year compliance deadline (6/01/2002)
 - CO, PM, and formaldehyde were used as surrogates for HAP emitted from regulated processes
- It reduced HAPs by 51 tons per year, and PM by 205 tpy
- MACT established at floor level of control

Cupola	Existing Sources	0.10 lb PM per ton of melt
	New Sources	0.10 lb PM per ton of melt 0.10 lb CO per ton of melt, or Reduce uncontrolled CO emissions \geq 99%
Curing Oven	Existing and New Sources	0.06 lb formaldehyde per ton of melt, or Reduce uncontrolled formaldehyde emissions \geq 80%

1/27/2011

Internal Draft EPA document. Do not quote or cite.

5

Why reevaluate the existing MACT Standards?

1. Petition for Rulemaking (Jan. 14, 2009) requests the standard to be reviewed.
 - The court vacated the Brick MACT based on a number of factors, including the methodology used to calculate the MACT floors, unregulated pollutants and processes, and unproven surrogacy relationships.
 - We call these „Brick MACT’ issues, and we are required to address them.
 - The petition identified the Mineral Wool MACT as having similar issues.
2. Risk and Technology Review Required by the Clean Air Act and compelled by a court ordered deadline.
3. We are making all these revisions at one time to
 1. Conserve resources
 2. Avoid making two consecutive changes to the MACT. That could impose additional controls under a second amendment that would cost industry more than if all amendments are done together in one rulemaking

1/27/2011

Internal Draft EPA document. Do not quote or cite.

6

What is an RTR?

- The Clean Air Act requires EPA to evaluate the risk remaining within 8 years after implementation of the MACT standards. We call this a risk review.
- The act also requires us to review the industry for new technological developments that may reduce HAP beyond MACT. We call this the technology review.
- EPA is conducting these 2 reviews together under the Risk and Technology Review, or RTR program.
 - We consider costs in both the risk and the technology reviews.
- The RTR will be reflected as amendments to the MACT standard.
- We're late on these reviews, and are under a court ordered deadline to repropose the Mineral Wool RTR by October 31, 2011.

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Internal Draft EPA document. Do not quote or cite.

7

Why Repropose the Mineral Wool RTR?

- The RTR for Mineral Wool was proposed in 2008, but ...
 - It was based on insufficient data (NEI) to support a conclusion of no risk
 - The one (test) data point that was used to estimate industry emissions came from a facility that closed down during development of the proposed rule
 - We received no comment after proposal that provided additional data on which to support a no risk conclusion
 - It did not address either "Brick MACT" issues or the startup, shutdown, or malfunction vacature.
- We made the decision to repropose using emission test data
- The industry collected their data and conducted emission tests to support the reproposal in lieu of a formal Section 114

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8

What is Involved in the Technology Review?

- The Act requires that we review the MACT standard every 8 years to consider advances in practices, processes and control technologies
- This allows us to tighten existing MACT standards with cost-effective controls
- As we conduct the Technology Review, we also assess MACT to:
 - Address unregulated emission points
 - Require consistent monitoring and add electronic compliance reporting
 - Fix administrative requirements that are duplicative or inconsistent

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Internal Draft EPA document. Do not quote or cite.

9

What is involved in the additional reviews required by the courts?

Two Court decisions obligate EPA to review MACT standards to:

- 1) Determine if EPA set deficient MACT standards (Brick MACT issues)
 - a. Review MACT floor calculations
 - b. Review surrogacy relationships
 - c. Set emission limits for all HAP-emitting processes
- 2) Set Startup and Shutdown requirements because the applicable provisions were in the vacated General Provisions.

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10

How do the Risk, Technology and MACT Reviews Interact?

- For both residual risk and technology reviews, we evaluate control options
 - Risk is evaluated by both the toxicity of pollutants and the proximity of the facility to the nearest person.
 - Technology is evaluated by new controls and systems in the industry
- In most cases, we have flexibility in how we revise MACT standards
- An example: Actual vs. Allowable Emissions
 - Actual emissions levels being achieved by the facilities and are measured. Allowable emissions are the amount allowed to be emitted in the company's Title V permit.
 - If „actuals' are much less than „allowables', EPA could reduce the level allowed down to the level being achieved by the facilities
 - This typically is a low cost way to reduce potential risks
- After evaluating control options for both reviews (often the same options), we choose options that are cost-effective and reduce risks the most.

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For example....

- There is no existing source emission limit in the MACT for COS. This is a „Brick MACT' issue and we're required to fix it.
 - We have reviewed the ICR data to see what controls exist now for COS reduction
- The risk of exposure to COS emissions from the mineral wool industry will also be assessed.
- These reviews inform one another because the control technologies that reduce COS emissions also reduce risk from exposure to COS
- Most of the industry currently incinerates COS from the cupola emissions even though that is not required under the MACT rule.
 - This is sufficient to develop a MACT floor for COS
 - Because most facilities already do this, it is not an additional cost for these
 - The cost to control COS under this rule would be incurred at 4 cupolas
 - If one of these 4 cupolas also feeds into a bonded product line, the incinerator at the curing oven could be used for COS incineration as well

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12

Brick MACT Issue: MACT Floor for Formaldehyde

- We must determine if the MACT floor emission limit was calculated correctly for formaldehyde, and amend MACT if needed.
 - Because formaldehyde is only emitted from bonded product lines, any changes to the MACT would only affect the 3 product lines that use a curing oven to cure their bonded products

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Internal Draft EPA document. Do not quote or cite.

13

Brick MACT Issue: Surrogacy Relationships

- We were petitioned on the use of unproven surrogates for certain HAPs. We have 3 options to address this issue
 1. We can establish surrogacy relationships:
 - a. CO as a surrogate for COS
 - b. Formaldehyde as a surrogate for phenol
 - c. Formaldehyde as a surrogate for methanol
 2. Or we could use a different surrogate as long as we validate the relationship
 - THC could be used as a surrogate for all organic HAPs
 3. Or we can establish HAP-specific emission limits.
- We can address this issue using a combination of the above options
- Method 318 was developed for Mineral Wool MACT and tests for phenol, methanol, formaldehyde and COS. A new test method may not be needed.

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Brick MACT Issue: MACT Floor for Unregulated Processes

- Fiber Collection and Cooling were not regulated under MACT, and we must set the MACT for these processes
- Although collection and cooling occur at all mineral wool lines, only the 3 lines with a curing oven incur a brick MACT issue (because these are the only lines with formaldehyde)
- Cooling of the bonded product after it is cured in the oven emits organic HAP
 - The emission limit for these HAP will be based on the MACT floor control
 - One of the three bonded lines control collection and cooling using the curing oven incinerator
- Routing organic HAP emissions from these processes through the incinerator controlling the curing oven may be a low-cost option for the remaining 2 uncontrolled collection and cooling lines

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Internal Draft EPA document. Do not quote or cite.

15

Brick MACT Issue: MACT for Unregulated Pollutants

- Only new cupolas have a COS emission limit under the MACT standard
- Existing cupolas are unregulated for COS, even though we know they emit COS
- Therefore, we are required to determine the MACT floor emission limit for COS for existing sources

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Other Potential Changes to the MACT

- Startup and Shutdown requirements may change due to GP vacature
- Performance test requirements could change to reflect any new pollutant emission limits and any increase in the frequency of performance testing
- Reporting and recordkeeping requirements could change to reflect any new requirements

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Impacts of Potential Options

IF...	THEN...	POTENTIAL IMPACTS...
We require COS emission limit at cupolas at the level achieved by incineration.	4 uncontrolled cupolas will have to either duct cupola exhaust through an existing incinerator, or install a new incinerator	COS will be reduced further SO2 emissions will increase Costs: Existing incinerator- new ductwork design and pressure balance of the system New incinerator- design and installation
We require control of organic HAP from collection and / or cooling.	The 2 existing uncontrolled bonded lines will have to reduce organic HAP to meet the MACT floor Companies may change their formulation of binder to exclude organic HAP	Cost: new ductwork design and pressure balance of the system R & D costs for reformulation of binder
Research Question: The formaldehyde /phenol-methanol surrogacy is invalid	Our first choice is to establish THC as a surrogate for all organic HAP Emissions limits that are specific to each HAP could be established (2 nd choice)	Parameter monitoring would likely still be required- not a change from MACT Parameter monitoring would likely still be required.
Research Question: We validate the CO/COS surrogacy relationship	The monitoring requirements for new cupolas will apply to existing cupolas	Parameter (incinerator) monitoring required at incinerators
Research Question: We can not validate the CO/COS surrogacy	We will remove the CO limit from the MACT rule and insert instead a COS emission limit for existing cupolas	Parameter monitoring will likely still be used. MACT will reflect the COS level achieved by an incinerator

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Internal Draft EPA document. Do not quote or cite.

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Pros and Cons of Potential MACT Floor Changes

Change	Pros	Cons
The floor for COS at existing cupolas is the average of the best performing 5 cupolas.	1-Sources may be able to use existing incinerators to comply	1-when COS is incinerated, it forms SO ₂ . 2- So a solution to a toxics problem creates a potential criteria program problem ¹ .
MACT for organics from collection at bonded product lines is added to the rule.	1-Sec 112 does not define how the MACT is calculated for fewer than 5 sources	1-New incinerator is likely to be costly
MACT for organics from cooling at bonded product lines is added to the rule	1-Sec 112 does not define how the MACT is calculated for fewer than 5 sources 2-Emission limit can be based on current level achieved 3-All bonded product lines have low organic emissions because most are driven off at curing stage.	1-Does not reduce risk
The MACT floor for formaldehyde is tightened to lower limits	1-Facilities can likely meet lower emission limits now (actual formaldehyde emissions are much lower than the level allowed under MACT) 2-A lower emission limit can also be met by higher temp of incineration	1-Cost of fuel if incinerator temp is increased to meet limit

¹ We are concerned about the potential health impact of this issue and are working toward a resolution. I /G7/2011 Internal Draft EPA document. Do not quote or cite.

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What are some critical factors in the Mineral Wool RTR?

- Timing of Risk Review
 - We expect risk modeling to be complete this month.
 - The results of the risk modeling will show us what exposures to pollutants MUST be reduced to reduce risks.
- Risk Review Results
 - Risk is a factor of the both the toxicity of a substance AND the exposure potential
- Technology Review
 - Under 112(d), we must review new technology within the industry within 8 years of MACT, regardless of the rulemaking petition. Because we're late on this review, we are under a court-ordered deadline.
 - The MACT amendments will be based on the new industry information

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How can EPA ease impacts to industry?

- Depending on whether the changes are a result of the risk review or technology review, there are different compliance schedules.
- Subcategorization of sources may be appropriate, based on new data.
- If additional emission reductions are needed to reduce risk, that doesn't necessarily mean additional add-on controls will be required
- These opportunities, when present, will be considered when we develop the RTR rules.

1/31/2011

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How can EPA ease impacts to industry? Compliance schedules

- Under section 112(f) standards developed (i.e., to address Residual Risks, high risks, etc.), facilities have 90 days to comply with the standard
 - This can be extended by the permit writer up to 2 years for existing sources to comply with 112(f) standards if that extra time is needed to install controls, etc....
- On the other hand, if we promulgate standards under a technology review 112(d)(3) (i.e., MACT), 112(d)(6) or under 112(h) (i.e., Work Practice standards), we can provide up to 3 years for existing facilities to comply.
- Therefore, if a rule revision is clearly "risk" based, the max time we can allow for compliance is up to 2 years, but
- If we can justify that a revision is based on Control Technologies, we can provide up to 3 years, which may be preferable in some cases (e.g., sources need more than 2 years to install the controls, etc.).
- We consider these differences as we develop the RTR rules.

1/31/2011

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How can EPA ease impacts to industry? Subcategorization

- We may “distinguish among classes, types and sizes of sources within a category or subcategory in establishing” MACT standards (112(d)(1))
- So if there are *fundamental differences* among processes in an industry, we can subcategorize among them.
- Some examples of subcategorization we’ve used in other rules:
 - Reverberatory furnace vs. electric arc furnace
 - Clay refractory vs. non-clay refractory
- We may also subcategorize according to
 - Raw material source (although industry could choose different raw materials to reduce their emissions)

1/27/2011

Internal Draft EPA document. Do not quote or cite.

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How can EPA ease impacts to industry? to Reduce Risk

- Because some good routine business practices conserve resources and limit loss of material, EPA can use them in the rule as a low or no-cost option as HAP reduction measures to reduce risk.
- Examples include:
 - Mist spraying of dry toxic raw materials at piles, storage, or inlet of melting processes (glass plants). These measures are already used at various industries to prevent emissions of toxics and loss of raw material.
 - Covers, spill guards, curved tank walls to prevent release of toxic fumes (from electroplating baths)

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Internal Draft EPA document. Do not quote or cite.

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Appendix

- Questions for SERs
- Mineral Wool Project Schedule
- List of Affected Entities

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Questions for SERs

- What do you spend in MACT compliance costs ?
 - Some cupolas are controlled with an incinerator following the baghouse (only PM control was required for existing cupolas under the MACT.) What do you spend annually to operate the incinerator?
 - Some cupolas also have flue gas desulfurization following the incinerator to remove the SO₂ that's formed by the combustion of COS. What are your costs to operate desulfurization?
 - What are the costs you incur as a result of MACT recordkeeping?
- What opportunities for flexibility do you have in MACT compliance?
- What aspects of your process limit the amount of formaldehyde that can be sprayed at the collection and binder application stage?

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Internal Draft EPA document. Do not quote or cite.

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Questions for SERs (cont'd)

- EPA must review the MACT floor for the Mineral Wool industry and determine whether it was set at the correct level (i.e., that MACT for formaldehyde from curing ovens does not need to change).
- To help us do this:
 - How did the emissions of formaldehyde change from pre-MACT levels to after the MACT was promulgated in 1999?
 - Do you have any test reports for curing ovens from the pre-MACT time period that show those levels?
- To what extent are production processes customized to achieve a marketable product?

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Questions for SERs (cont'd)

- Carbonyl sulfide (COS) is highly flammable and is released at very high levels (avg. 70 tpy) from the cupola. We are looking at measures that would be effective in reducing COS. Has anyone considered rerouting the exhaust gases back through the cupola to reclaim waste energy and to destroy COS?
- Are any cupolas enclosed, with fumes vented to the control device(s)?
- The constituents of the raw materials fed into cupolas factor into the cupola emissions. We are trying to understand the stoichiometry of the COS and SO₂ relationship from the cupola, and how that can be resolved. To that end:
 - From what industries are your slags purchased?
 - Is testing of the slag performed prior to sale to determine metals or sulfur content?
 - Do you choose your coke supplier according to the coke preparation or it's sulfur content?
- Have you changed your raw materials to change the cupola emissions, and what were the results of those changes?
 - Please include changes even if they did not yield the result you wanted.

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Questions for SERs (cont'd)

- Are there other Federal rules that overlap with the Mineral Wool MACT?
 - If so, do any of the associated compliance requirements overlap or contradict one another? For instance, do you have to report the same information in different units of measurement, or on different reporting frequencies?
 - If so, what reporting frequency, units, or other requirements of the reporting do you suggest to align overlapping Federal rules?
 - Does your manufacturing and operating equipment produce an electronic report or similar output that could be used to replace existing Federal reporting requirements?
- Are you aware of other means of easing / streamlining existing Federal rule requirements ?

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Mineral Wool Production Project Schedule

- Voluntary ICR sent out (May 2010)
- ICR & test data still coming in (Feb 2011)
- Complete data entry and QA review (Feb 2011)
- Pre-Panel Outreach Meeting (April 2011)
- Convene SBAR Panel (May 2011)
- Panel Outreach Meeting (June 2011)
- Panel Concludes (July 2011)
- Administrator signature (October 2011)

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Mineral Wool Production Stakeholders

Name	Company	City	# Employees
Angus Crane	NAIMA (trade assn)	Alexandria, VA	--
Lee Houlditch	Amerrock Products	Nolanville, TX	33
Christopher Bullock	Industrial Insulation Group	Phenix City, AL	130
Tom Lund	Isolatek Int'l	Huntington, IN	~200
Tim Scott	Rock Wool Mfg	Leeds, AL	47
Steve Edris	Thermafiber, Inc.	Wabash, IN	130
John Bolden	USG Interiors*	Chicago, IL	>1,000

* USG is the only company in the industry that is not a small business. They operate 2 plants in Walworth, WI ,and in Redwing, MN.

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Materials shared prior to or at June 16, 2011 Panel Outreach Meeting

- Agenda
- SBAR Panel process refresher presentation
- Mineral Wool rulemaking information update presentation
- North American Insulation Manufacturers Association presentation

**Panel Outreach Meeting with Potential Small Entity Representatives (SERs)
for the rulemaking
Risk and Technology Review for Mineral Wool Production**

Date: Thursday, 06/16/2011

Time: 10:00 a.m. – 12:00 p.m. (Eastern)

RSVP: Please RSVP **by 06/14/2011** with Madeline Barch at Barch.Madeline@epa.gov or (202) 564.0234. Note whether you're attending by conference call or in person.

Location: *For those people attending in person:*

- Room 1426, EPA West
1301 Constitution Ave NW
Washington, DC 20004
- Non-EPA attendees:
 - Any invited SER may attend in person if desired.
 - If you would like to attend in person, you must RSVP for directions and building access information.

OR

For those people joining by conference call:

- 1-866-299-3188, access code 2025662372
- At the prompt, enter the conference code followed by the pound [#] sign. Note: You will hear music until the leader dials into the call.

Agenda

10:00 Welcome and Introductions

10:20 Presentation on the Rulemaking
- Susan Fairchild, EPA.

10:50 Discussion
- Angus Crane, NAIMA, will begin the discussion.

11:50 Summary and Closing

A Refresher on the Small Business Advocacy Review Panel Process

Alexander Cristofaro, Small Business Advocacy Review Chair (SBAC)
Panel Outreach Meeting, June 16, 2011



Office of the Administrator
Office of Policy
Office of Regulatory Policy and Management
<http://www.epa.gov/op/orpm.html>

Today's Topics

- What is a Small Business Advocacy Review (SBAR) Panel?
- Your role as a Small Entity Representative (SER)
- The difference between an SBAR Panel and a proposed regulation

What is an SBAR Panel?

- A Panel consists of representatives from the:
 - Agency authoring the regulation (i.e., EPA)
 - OMB's Office of Information and Regulatory Affairs (OIRA)
 - SBA's Office of Advocacy
- The Regulatory Flexibility Act (RFA) instructs the Panel to:
 - Review "any material the agency has prepared" related to the development of the regulation
 - Collect advice and recommendations from SERs
 - Prepare a report within 60 days of the Panel convening

See Title 5, section 609(b)(3)-(5), of the *United States Code* (USC). This is also known as section 609(b)(3)-(5) of the Regulatory Flexibility Act (RFA).

3

What is an SBAR Panel? (cont'd.)

- The types of materials the Panel will review and on which you, the SERs, will provide advice and recommendations are specified by law
- Section 609(b)(4) of the RFA states that "the panel shall review any material the agency has prepared...on issues related to":
 - "a description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply" (Sec. 603(b)(3))
 - "a description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record" (Sec. 603(b)(4))
 - "an identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap or conflict with the proposed rule" (Sec. 603(b)(5))
 - "a description of any significant alternatives to the proposed rule which accomplish the stated objective of applicable statutes and which minimize any significant economic impact ...on small entities" (Sec. 603(c))

4

Your role as a SER

- EPA values this SBAR Panel process because it provides us with important small entity perspectives and information
- Your verbal and written input is considered and valued by the Panel as the Panel develops the Panel report
- Copies of your written comments will be appended to the Panel Report and a chapter in the Panel report will summarize them.
- The Panel will consider the comments you provide to us, but the findings that ultimately appear in the report are those of the Panel members: EPA, OMB, and SBA
- The Administrator will carefully consider the input we gather from the SERs and the Panel members, but is not legally bound to adopt the recommendations of the Panel

5

The difference between an SBAR Panel and a proposed regulation

- SBAR Panel
 - Reviews materials related to:
 - the impacts of the regulation on small entities
 - Federal rules which may intersect with this proposed regulation
 - Alternatives to the regulation that may minimize small entity impacts
 - EPA uses the Panel report to inform our decision-making about the forthcoming proposed regulation
- Proposed regulation
 - Fully formed regulatory proposal or set of regulatory alternatives
 - You will have an opportunity to comment on the proposal, just like any other public citizen

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Thank You

- Participation is voluntary and we appreciate the time and energy you put towards this rulemaking.
- Thank you - we know it is, and has been, an intense resource commitment.
- Contact my staff:
 - Madeline Barch, RFA/SBREFA staff contact
EPA Office of Policy
202-564-0234
Barch.Madeline@epa.gov
 - Lanelle Wiggins, RFA/SBREFA Team Leader
EPA Office of Policy
202-566-2372
Wiggins.Lanelle@epa.gov

Mineral Wool Information Update

Addendum to the April 2011
SBAR Panel Briefing

May 2011

Review

- 13 Production Lines fed by 11 cupolas
 - Cupolas are regulated for PM as a surrogate for metals
 - They also emit COS and acid gases, for which there is no MACT standard
- 3 of the 13 production lines also operate a curing oven
 - Curing ovens are currently regulated for formaldehyde. That limit is used as a surrogate for phenol and methanol.
 - The collection process emits HAP but is not currently regulated under MACT

Preliminary Risk Assessment Results

Result		HAP Drivers
Number of Facilities Estimated to be in Source Category	7	N/A
Maximum Individual Lifetime Cancer Risk (in 1 million)	4	formaldehyde
Maximum Hazard Index	0.04	formaldehyde
Maximum Acute Hazard Quotient [scaling factor = 3]	9 0.6	formaldehyde (REL) formaldehyde (AEGL-1, ERPG-1))
Number of Facilities With Potential for Acute Effects	1	formaldehyde
Number of People Living Within 50 Kilometers of Facilities Modeled	3,700,000	n/a
Greater than or equal to 1 in 1 million	1,650	n/a
Estimated Cancer Incidence (excess cancer cases per year)	0.0004	n/a
Formaldehyde Contribution to Cancer Incidence:	64%	
Arsenic compounds Contribution to Cancer Incidence:	33%	n/a

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3

Preliminary Risk Conclusions

- The risks due to the mineral wool industry are low, and do not compel us to amend the MACT based on risk alone
- The default acute factor is 10X; the acute factor we used here is 3, and is based on industry supplied data.
- The risk review included all processes and emissions from testing results
- The risk (4 in one million) is due to emissions of arsenic and formaldehyde at cupolas and collection, respectively.
- One facility is driving the risk (formaldehyde from collection).
- Collection is a Brick MACT issue and will be addressed under those revisions.
- After the risk from collection is addressed, our risk review on the mineral wool industry will be concluded

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Amendments Driver

- Brick MACT issues are driving the changes to the standard
 - Missing floors for pollutants and / or processes
 - Surrogacy changes
 - Startup and Shutdown provisions

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Status of MACT Floor Development

- The emission limit work is PRELIMINARY and the numbers are DRAFT
- All information is pre-decisional. EPA has NOT made conclusions or decisions on the emission limits, and have expressed some as ranges.
- The creation of SO₂ from COS incineration is a major issue.
 - Prolonged exposure to SO₂ has potential severe health effects.
 - PSD and NSR programs would have impacts

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Plans to Determine Validity of the MACT Floor

- We plan to review the docket, the preamble to the proposal, supplementary proposal, final rule and industry data to determine the validity of the MACT floor as promulgated in 1999.
- From materials we've reviewed so far, we have not found reason to believe the MACT floors were invalid for the processes and pollutants it covered; nevertheless we must satisfy the court on this point

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Summary of Potential Changes and Impacts

		Pollutant					
		COS	PM (for HAP metals)	Formaldehyde	Phenol	Methanol	HF/HCl
Cupolas	New	Current CO standard revised to COS standard 0.02-0.05	No change expected	X	X	X	New MACT standard (expected low impact) 9.63 e-3 to 1.36e-2
	Existing	New MACT standard Possible: 0.05					
Curing	New	X	No change expected	New MACT standard (expected low impact) 7.62e-5 to 4 e-4	New MACT standard (expected low impact) 1.57e-4 to 4.74 e-4	X	
	Existing						
Collection	New	X	New MACT Standard. Possible range: 0.31-1.01	New MACT standard. Possible range: 6.8e-3 to 0.15	New MACT standard. Possible range: 4.1e-3 to 2.17e-2	X	
	Existing						

All numerical standards are expressed in units of lbs. pollutant per ton melt

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Plans for Emission Limit Reviews

- We do not anticipate changes to be made to the existing and new cupola PM emission limits
 - We plan to keep the PM limit as a surrogate for metals
- Changes will likely be made to the MACT floors to reflect changes in surrogacy
 - CO: COS
 - Formaldehyde: phenol
 - Formaldehyde: methanol
- These changes are unlikely to result in a more stringent standard because we intend to use existing data to establish the HAP-specific emission limits currently reflected by compliance with the MACT
 - MACT floor for phenol and methanol can be established based on testing and the compliant formaldehyde limits
 - We plan to determine the floor levels for each pollutant at MACT compliant levels based on the emissions testing conducted under the ICR
- Emission Limits will be added for pollutants and processes that were not regulated under MACT. We will use the UPL approach as appropriate:
 - Emission limits will be added to the standard for COS from existing cupolas
 - Emission limits may be for the first time added to the standard for HF and HCl from existing and new cupolas

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UPL Can be Used to Develop Emission Limits

- $$UPL = \bar{X}_T + t(p, df) \times \sqrt{S^2 (1/n + 1/m)}$$
- \bar{X}_T = the average of the best performing existing sources;
- $t(p, df)$ = the t statistic for a confidence level p , and df degrees of freedom;
- S^2 = the pooled variance;
- n = the number of test runs (all sources) USED IN THE ANALYSIS; AND
- m = the number of (future) compliance test runs (for run-by-run data $m=3$)

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MACT Floor Using the UPL

- Using the UPL to determine a MACT floor:
 - If the UPL is used to determine the new MACT floors, the 99% confidence level UPL represents the value below which the average value from a compliance test would fall 99 % of the time
 - Depending on the data, we elaborate on this equation in order to account for number of runs, skewness, variability, etc.
 - The equation takes into account many factors (including variability) and adds a ‘cushion’ in order to account for these factors. The amount of ‘cushion’ it adds depends upon the data itself. In general, the fewer data points and/or the broader the range of the data points, the more ‘variability’ that is reflected in the UPL.
 - However, few data points may not show extreme variability if the data are close
- The UPL may not be the best approach if...
 - ...the data are few, and if some are unreliable, the variability may not be dependable within a reasonable confidence level
 - ...the calculated UPL is much higher or much lower than an existing MACT for sources shown to be in compliance with the MACT
 - ...the data show an abnormal distribution which can not be normalized

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Preliminary Emission Limit Work*

- We may establish a COS emission limit for existing cupolas
 - Based on the best 5 controlled sources, which incinerate COS
 - Testing shows these achieve 0.02 lb COS /ton melt emission limit
 - UPL calculates 0.05, considering variability
 - This level corresponds to 0.35 lb CO /ton melt
- We may establish MACT for new and existing collection processes
- The DRAFT limit takes variability and normality into account
- Because of the limited data and uncertainties associated with the data, a potential formaldehyde limit could be in the range between 0.5-1.01 lb/ton melt
- Limits outside this range are possible
- This approach is not without it’s problems: incineration of COS creates SO₂.
- We are evaluating the secondary pollutant issues as well as the data

* Different approaches to developing the MACT floor for fewer than 5 sources are possible. These data reflect one approach only.

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Relative Cost of Potential Changes

No Changes Expected

- PM limit as a surrogate for metal HAP

Changes Expected- No / Low Cost

- HAP-specific Emission limits (COS, Phenol, Methanol, Formaldehyde) replacing surrogacy
- New Emission limits for HF, HCl from existing and new cupolas

Changes Expected – Cost

- MACT floor for COS from existing cupolas (5 affected sources)
- MACT floor for organics from collection (1 affected source)

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What are the Cost Drivers?

LOWER COSTS

- Testing Costs
- Ducting newly regulated emissions to existing control devices

HIGHER (DRIVER) COSTS

- Cost of control for COS from existing cupolas
- Cost of control for formaldehyde, phenol, methanol from collection

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Measurement and Monitoring Plans

- Formaldehyde, methanol, phenol and COS will be measured using M318, the method in the rule that was developed specifically for this industry.
- HF and HCl would be measured using FTIR (also M316).
- Alternative methods to measure pollutants can be used if they are valid, submitted to EPA for review, and approved by EPA for this purpose.
- We plan to continue parameter monitoring of processes and controls to show compliance with the standard.

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Compliance Deadlines

- Because the amendments will be made under 112(d)(3) (MACT standards for new and existing sources) the compliance deadlines can be up to 3 years from promulgation, with a possible extension of 1 additional year for installation of air pollution control equipment
- This is approximately 5 years from now

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Appendix B: Written Comments Submitted by Small Entity Representatives

Comments Received from potential SERs following the April 27, 2011 Pre-Panel Outreach Meeting

Comments Received from SERs following the June 16, 2011 Panel Outreach Meeting

Comments Received from potential SERs following the April 27, 2011 Pre-Panel Outreach Meeting

- Angus Crane, North American Insulation Manufacturers Association (NAIMA)



*Celebrating 75 Years
of Energy Efficiency*



VIA E-MAIL

May 16, 2011

Ms. Susan Fairchild
Sector Policies and Programs Division
Metals and Minerals Group (D243-02)
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
109 TW Alexander Drive
Research Triangle Park, NC 27711

RE: NAIMA's Comments and Recommendations on SBAR Panel Briefing: Risk and
Technology Review for Mineral Wool Production

Dear Ms. Fairchild:

INTRODUCTION

The North American Insulation Manufacturers Association ("NAIMA") appreciates the opportunity to provide comments and recommendations related to the issues identified during the SBAR Panel Briefing: Risk and Technology Review for Mineral Wool Production in April 2011. NAIMA is the trade association of North American manufacturers of rock and slag wool insulation. The rock and slag wool insulation manufacturing process is subject to the Mineral Wool MACT Standard. The Mineral Wool MACT was subcategorized into two groups: bonded and unbonded. NAIMA wants these subcategories maintained. NAIMA has represented all rock and slag wool producers in the United States throughout the MACT process and the different phases of the Risk and Technology Review for Mineral Wool Production.

NAIMA's comments demonstrate that the mineral wool insulation industry is a much smaller industry than it was when the Mineral Wool MACT Standard was promulgated in 1999. The most significant change in the industry is its more than 50 percent reduction in the number of facilities. These comments will also provide an overview of the current mineral wool industry, including correct information on operating lines and production; demonstrate that the 1999 MACT floor was correctly set; respond to EPA's findings and proposals with recommendations and suggestions on how to avoid an impact on the small businesses which make up a majority of the mineral wool industry; and establish that if certain actions are taken by EPA, significant and adverse impacts will be incurred.

These comments also document that there have been significant reductions in emissions in the mineral wool industry and that the health risk arising from mineral wool insulation production has been significantly and sufficiently reduced, such that any remaining residual risk does not justify subjecting the industry to further regulatory requirements. This conclusion is consistent with EPA's finding in 2008 that "no revisions to the . . . national emission standards regulating [the Mineral Wool Production Source Category] are required at this time."¹

Finally, these comments again ask EPA to provide specific information concerning EPA's formaldehyde risk assessment, including assumptions, specific values, and proposed control measures. EPA agreed to provide this information, but thus far EPA has provided only its methods document concerning the development of preliminary risk estimates generally. Accordingly, NAIMA will supplement these comments once it receives this information.

MINERAL WOOL INDUSTRY OVERVIEW

The U.S. rock wool and slag wool insulation manufacturers are also known as "mineral wool" producers. Historically, the term "mineral wool" encompasses rock, slag, and fiber glass insulation production. For the purposes of the MACT Standard and its subsequent residual risk analysis, the industries were separated into a Mineral Wool Source Category and a Wool Fiberglass Source Category. The term "mineral wool" encompasses two products – rock wool and slag wool – that use different raw materials in their manufacture. Rock wool is primarily made from natural rocks, like basalt or diabase. Slag wool is made primarily from iron ore blast furnace slag.

Production begins when natural rock or iron ore blast furnace slag is melted in a cupola furnace or pot. Once melted, this hot, viscous material is poured in a narrow stream onto one or more rapidly spinning wheels, which cast off droplets of molten material and creates fibers. As the material fiberizes, its surface may be coated with a binder material and/or de-dusting agent (*e.g.* mineral oil). The fiber then is collected and formed into batts, blankets, boards, pipe insulation, or other forms for use as insulation, or baled for use in other products such as acoustical ceiling tile, spray-applied fireproofing, and acoustical materials. Key points in the manufacturing process include: the cupola furnace, where the raw materials are melted; the blow chamber, where air, and in some cases a binder, is sprayed over the fibers; a curing oven, used only in bonded-product manufacturing to bond the fiber with the binder material; and a cooling area.

NAIMA notes that 5 of the 6 U.S. companies currently operating in the mineral wool industry are small businesses, defined by the Small Business Administration ("SBA") (and incorporated by statute) for the mineral wool SIC code (3296) as a company with less than 750 employees, 13 C.F.R. § 121.601. The mineral wool companies that are small businesses are Amerrock Products LP; Industrial Insulation Group, LLC; Isolatek International; Rock Wool Manufacturing; and Thermafiber, Inc.

¹ 73 Fed. Reg. at 60,455 (October 10, 2008).

The current operation of U.S. mineral wool companies are represented in the following Table:

Company	Location	Bonded-Product Production Lines	Nonbonded-Product Production Lines	Date of Installation
Amerrock	Nolanville, TX	0	2 ²	1986
Isolatek	Huntington, IN	0	2	1929
IIG	Phenix City, AL	1 ³	1	1990
Rock Wool Mfring	Leeds, AL	1 ⁴	1	1970
Thermafiber	Wabash, IN	1	1	1935
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ⁵ 1979 ⁶
TOTAL		3	10	

This table has been verified by all industry participants and is an accurate representation of current industry operations. This is significant because it corrects EPA’s representation of the number of production lines on slide 4 of EPA’s April 2011 PowerPoint presentation entitled “SBAR Panel Briefing: Risk and Technology Review (RTR) for Mineral Wool Production.” There are 13 production lines, not 18.

MINERAL WOOL INDUSTRY EMISSIONS HAVE DROPPED SIGNIFICANTLY

The 1999 MACT Floor Emission Limit Was Calculated Correctly

In EPA’s “SBAR Panel Briefing,” the Agency specifically requested information that could demonstrate that the MACT floor emission limit was calculated correctly. NAIMA volunteered to provide 2002 and 2005 emissions data to demonstrate that the MACT had reduced emissions. This data was provided to EPA in 2007. To put the data into perspective, it is important to know the following: The 2002 NEI data does not reflect industry-wide implementation of the Mineral Wool MACT Standard nor the reduced number of production facilities currently operating. The 2005 emissions data can be again provided to EPA in facility-specific spreadsheets.

² Amerrock has two operational lines, but due to a consent order with Texas Commission on Environmental Quality (“CEQ”), Amerrock is only permitted to operate one line at a time.

³ IIG continues to operate both an unbonded and bonded line at the former Owens Corning facility in Phenix City, Alabama, but those lines are not operated simultaneously. In other words, only one cupola is in operation at IIG at any time.

⁴ Rock Wool Manufacturing has permits to operate both an unbonded and bonded line, but because the market for unbonded product used in manufactured housing has been largely taken over by cellulose insulation, only the bonded line currently is operating.

⁵ Cupola 1 was added to USG’s Red Wing, Minnesota facility in 1973.

⁶ Cupola 2 was added to USG’s Red Wing, Minnesota facility in 1979.

The Mineral Wool MACT went into effect in June 2002, but a few facilities received from EPA one-year extensions of the compliance deadline. The 2005 data represents an industry-wide compliance with the MACT Standard.

The difference in aggregate, industry-wide emissions between 2002 and 2005 is as follows:

Hazardous Air Pollutant	2002 NEI (Aggregate) (TPY)	2005 Emissions (Aggregate) (TPY)	Percent Reduction (%)
Carbonyl Sulfide	428.321	382.779	10.63
Formaldehyde	30.223	17.826	41.02
Triethylamine	25.903	19.010	26.61
Phenol	18.237	14.592	19.99
Methanol	4.000	3.113	22.18
Hydrogen Fluoride	1.331	0.610	54.18
Benzene	1.000	0.510	49.00
Ethylene Glycol	0.025	0.000	100.00
Manganese & Compounds	0.0158	0.0003	98.10
Chromium & Compounds	0.3172	0.0005	99.84
Selenium & Compounds	0.0008	None Reported	N/A
Nickel & Compounds	0.0004	0.0001	74.26
Arsenic & Compounds (Inorganic Including Arsine)	0.0004	None Reported	N/A
Lead & Compounds	0.0003	0.0001	64.32
Cobalt & Compounds	0.0000496	None Reported	N/A
Beryllium & Compounds	0.0000483	None Reported	N/A
Mercury & Compounds	0.0000088	None Reported	N/A
Cadmium	0.0000034	None Reported	N/A
Cadmium Oxide	0.0000019	None Reported	N/A
Cadmium & Compounds	0.0000005	None Reported	N/A

U.S. Mineral Wool Production Facilities Have Significantly Declined, Further Reducing Emissions

As explained in greater detail below, during the last twelve years since the MACT Standard was issued, mineral wool companies have liquidated or dramatically restructured before emerging from bankruptcy. No new plants or production lines have been introduced since 1990. As a result, the number of manufacturing plants is less than half the number it was in 1999. In addition, many of the surviving plants have reduced the number of operating cupolas or production lines.

The reduced number of cupolas, which are specialized furnaces that melt the raw materials, similarly illustrates the industry's economic hardship. These furnaces are at the heart of the manufacturing process. When the Mineral Wool MACT was promulgated in 1999, 31 mineral wool cupolas were operating throughout the United States, as follows:

Mineral Wool Production Lines – 1999

Company	Location	Bonded-Product Production Lines	Nonbonded- Product Production Lines	Date of Installation
American Rockwool	Spring Hope, NC	0	2	1978
American Rockwool	Nolanville, TX	0	2	1986
Celotex	Pittston, PA	0	1	1957
Celotex	Lagro, IN	0	2	1946
Fibrex	Alexandria, IN	0	2	1970
Isolatek	Huntington, IN	0	2	1929
MFS Inc.	Bethlehem, PA	0	2	1970
Owens Corning	Phenix City, AL	1	1	1990
Rock Wool Mfring.	Leeds, AL	1	1	1970
Sloss	Birmingham, AL	0	5	1947
Thermafiber	Wabash, IN	1	1	1935
Thermafiber	Tacoma, WA	1	1	1946
Thermafiber	Birmingham, AL	1	1	1959
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ⁷ 1979 ⁸
TOTAL		5	26	

No new mineral wool production facilities have started operations since the issuance of the Mineral Wool MACT Standard, and two companies have changed owners. The following is a list of the operating mineral wool facilities when EPA went through the first residual risk analysis in 2007 and 2008 and the number of production lines:

⁷ Cupola 1 was added to USG's Red Wing, Minnesota facility in 1973.

⁸ Cupola 2 was added to USG's Red Wing, Minnesota facility in 1979.

Company	Location	Bonded-Product Production Lines	Nonbonded-Product Production Lines	Date of Installation
Amerrock	Nolanville, TX	0	2 ⁹	1986
Isolatek	Huntington, IN	0	2	1929
IIG	Phenix City, AL	1 ¹⁰	1	1990
Rock Wool Mfring	Leeds, AL	1 ¹¹	1	1970
Sloss	Birmingham, AL	0	5	1947
Thermafiber	Wabash, IN	1	1	1935
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ¹² 1979 ¹³
TOTAL		3	15	

As described in greater detail below, the mineral wool industry already responded to one Advanced Notice of Proposed Rulemaking and a Notice of Proposed Rulemaking (October 10, 2008) on residual risk and provided EPA extensive emissions data. EPA concluded in the Proposed Rulemaking in 2007 that additional controls or requirements were not necessary.

Now a new and more demanding residual risk analysis is underway. At the commencement of this second residual risk analysis, the industry is even smaller.

⁹ Amerrock has two operational lines, but due to a consent order with Texas Commission on Environmental Quality (“CEQ”), Amerrock is only permitted to operate one line at a time.

¹⁰ IIG continues to operate both an unbonded and bonded line at the former Owens Corning facility in Phenix City, Alabama, but those lines are not operated simultaneously. In other words, only one cupola is in operation at IIG at any time.

¹¹ Rock Wool Manufacturing has permits to operate both an unbonded and bonded line, but because the market for unbonded product used in manufactured housing has been largely taken over by cellulose insulation, only the bonded line currently is operating.

¹² Cupola 1 was added to USG’s Red Wing, Minnesota facility in 1973.

¹³ Cupola 2 was added to USG’s Red Wing, Minnesota facility in 1979.

Company	Location	Bonded-Product Production Lines	Nonbonded-Product Production Lines	Date of Installation
Amerrock	Nolanville, TX	0	2 ¹⁴	1986
Isolatek	Huntington, IN	0	2	1929
IIG	Phenix City, AL	1 ¹⁵	1	1990
Rock Wool Mfring	Leeds, AL	1 ¹⁶	1	1970
Thermafiber	Wabash, IN	1	1	1935
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ¹⁷ 1979 ¹⁸
TOTAL		3	10	

Please note that the closure of Sloss in 2009 was a particularly significant reduction for mineral wool production. Sloss operated five lines of non-bonded product. Its closure reduced the total production lines from 18 to 13.

To NAIMA’s knowledge, there are no other mineral wool manufacturing plants operating in the United States. NAIMA has been informed that Armstrong is constructing a new facility to compensate for the loss of Sloss’s Fiber Production Division. Sloss provided Armstrong a large share of its fiber used in its ceiling tile. Given the size of the industry and the economic barriers to entry, it is highly unlikely that competitors could be operating in the U.S. without the knowledge of NAIMA or the industry.

As the above charts illustrate, since 1999, eight mineral wool production facilities have ceased operations and three facilities have reduced the number of operating lines. The following eight facilities have closed and have ceased operations since 1999: American Rockwool, Spring Hope, North Carolina; Celotex, Pittston, Pennsylvania; Celotex, Lagro, Indiana; Fibrex, Alexandria, Indiana; MFS, Bethlehem, Pennsylvania; Thermafiber, Tacoma, Washington; Thermafiber, Birmingham, Alabama; and Sloss Industries, Birmingham, Alabama.

¹⁴ Amerrock has two operational lines, but due to a consent order with Texas Commission on Environmental Quality (“CEQ”), Amerrock is only permitted to operate one line at a time.

¹⁵ IIG continues to operate both an unbonded and bonded line at the former Owens Corning facility in Phenix City, Alabama, but those lines are not operated simultaneously. In other words, only one cupola is in operation at IIG at any time.

¹⁶ Rock Wool Manufacturing has permits to operate both an unbonded and bonded line, but because the market for unbonded product used in manufactured housing has been largely taken over by cellulose insulation, only the bonded line currently is operating.

¹⁷ Cupola 1 was added to USG’s Red Wing, Minnesota facility in 1973.

¹⁸ Cupola 2 was added to USG’s Red Wing, Minnesota facility in 1979.

The following facilities have reduced the number of operating lines: Amerrock Products LP; Industrial Insulation Group, LLC (“IIG”); and Rock Wool Manufacturing. The former American Rockwool facility in Nolanville, Texas is now owned by Amerrock, and the former Owens Corning facility in Phenix City, Alabama is now owned by IIG. It is important to recognize that total closures have more impact than reduction of production lines.

The closed facilities are described in detail below, which shows it is improbable that any will return to production. Specifically:

- American Rockwool, Inc., Spring Hope, North Carolina, is a former member of NAIMA. This company was a sister company to a current NAIMA member, Thermafiber, Inc. Thermafiber has not operated the MACT-compliant facility since August 26, 2002, when it was idled for economic and competitive reasons. The facility has two production lines, each with a coke-fired cupola and associated packaging equipment that manufacture unbonded mineral wool products. Historically, a large portion of the output was sold as residential and manufactured housing insulation. Much of this business was lost to alternative products such as cellulose insulation, which is cheaper to manufacture (*i.e.*, shredding newspaper and applying fire retardant chemicals). American Rockwool sold the facility in April 2009 to a non-manufacturing party. The current owner has no plans to resume operating the factory as a mineral wool plant. All mineral wool operating permits have expired. To restart it would require obtaining new operating permits and most likely significant investment to bring the plant current with new requirements plus return it to profitability. For seven years, the plant was maintained in an idle state with all permits such that it could be restarted if market conditions changed. That never happened, so it was sold.
- Celotex, Pittston, Pennsylvania, is a former member of NAIMA. (*See* Attachment 1 regarding BPB purchase of Celotex.) BPB/Celotex is no longer manufacturing mineral wool in Pittston, Pennsylvania or anywhere else in the United States. BPB/Celotex ceased operating in Pittston, Pennsylvania in December 2003. (*See* attached press release on plant closing at Attachment 2.) While in operation, the BPB/Celotex Pittston plant had one cupola and an incinerator as part of the cupola process. The Pittston facility is not engaged in the manufacture of mineral wool fibers.
- Celotex, Lagro, Indiana, is a former member of NAIMA. (*See* Attachment 1 regarding BPB purchase of Celotex.) BPB/Celotex closed its facility in Lagro, Indiana. Saint-Gobain, which is parent company to CertainTeed, a NAIMA fiber glass member, recently purchased this facility; however, it is not being used while the owner explores the possible sale of the property. The Lagro facility is not manufacturing mineral wool fibers. (*See* Statement of CertainTeed Executive at Attachment 3.)
- Fibrex Insulations, Inc., Alexandria, Indiana, is a former member of NAIMA. The Fibrex facility in Alexandria, Indiana is identified as a closed mineral wool facility on EPA’s list

of mineral wool production facilities.¹⁹ The Fibrex facility was closed in 2000. The property is currently owned by Sloss Industries Corp. As the attached letter from a Sloss executive indicates, the facility is not currently used for mineral wool production. The manufacturing equipment has been scrapped. Therefore, there is no manufacturing capacity in the Alexandria, Indiana facility. A Sloss executive states that Sloss has no plans to restore manufacturing equipment in the Alexandria facility or to resume mineral wool production at the Alexandria facility. (See Statement of Sloss Executive at Attachment 4.) For clarification purposes, NAIMA notes the EPA's list of mineral wool production facilities identifies the Alexandria facility as being located in Virginia. This is incorrect. Neither Fibrex nor Sloss has ever operated a mineral wool production facility in Alexandria, Virginia, only in Alexandria, Indiana.

- MFS, Inc., Bethlehem, Pennsylvania, is a former member of NAIMA. MFS, however, is no longer manufacturing mineral wool in Bethlehem, Pennsylvania or anywhere else in the United States. MFS ceased operations in March 2006. As the attached news release from the United States Attorney's Office for the Eastern District of Pennsylvania indicates (see Attachment 5), MFS was having difficulty complying with its permitted air emissions limits. Because it could not afford the fines or the modifications to its manufacturing process, MFS ceased operations. A proposed Consent Decree, *United States v. MFS, Inc.*, was lodged with the United States District Court for the Eastern District of Pennsylvania. The Consent Decree requires the performance of injunctive relief including performance testing and payment of penalties before MFS may commence operations again. (See Attachment 6.) These factors make the reopening of MFS highly unlikely. The Chief of the Civil Division of the United States Attorney's Office, Eastern District of Pennsylvania, Virginia Gibson, is identified in the attached Federal Register notice. Ms. Gibson should be able to provide confirmation that MFS is not operating. The U.S. Attorney's Office for the Eastern District of Pennsylvania provides the following telephone number where Ms. Gibson may be contacted: (215) 861-8200. While in operation, MFS had two cupolas.
- Thermafiber, Inc.'s former Tacoma, Washington, facility was closed on August 29, 2002. The manufacturing plant was demolished and the property was sold to the Port of Tacoma in late 2002. (See Minutes from the Executive Session of the Port of Tacoma at Attachment 7.) Because the plant was demolished and the property is now owned by the Port of Tacoma, the facility will never operate again.
- Thermafiber, Inc.'s former Birmingham, Alabama, facility was closed on April 13, 2000. The manufacturing plant was dismantled with the remnants being sold as scrap. The buildings and property were sold to a local salvage company in December 2002. A Thermafiber executive states that the new owner has no intention of ever rebuilding the manufacturing facility. (See Statement of Thermafiber Executive at Attachment 8.)

¹⁹ EPA also notes that the Fibrex facility in Aurora, Illinois, is closed.

- Sloss Industries, Birmingham, Alabama, changed its name to Walter Coke in 2008 and closed their Fiber Production Division at the end of 2009. There is no indication that Sloss plans to reopen the facility.

Thus, a plant-by-plant analysis shows that very few of the facilities closed since 1999 could restart production if demand were to increase.

SUMMARY OF EPA'S PREVIOUS FINDINGS AND PROPOSAL

EPA's Advanced Notice of Proposed Rulemaking on Risk and Technology Review, Phase II, Group 2,²⁰ called for extensive collection of emissions data. NAIMA provided this emissions data in the agreed upon format of facility-specific Excel spreadsheets on a CD which contained the 2005 data for all operating facilities in the Mineral Wool Production MACT Source Category. NAIMA also provided extensive industry information and detailed facts on the closure of plants.

Based in part on the information provided by NAIMA and its member companies, EPA issued a Proposed Rule on National Emission Standards for Hazardous Air Pollutant Emissions: Mineral Wool Production.²¹ EPA concluded in that Proposed Rule "that no revisions to the . . . national emission standards regulating" the Mineral Wool Production Source Category are required, and that "the current MACT standard provides an ample margin of safety to protect public health."²²

Between 2008 and 2010, environmental groups challenged EPA's residual risk rulemaking, specifically identifying the mineral wool rule as one requiring further review. On December 27, 2009, EPA informed NAIMA that it intended to serve Section 114 inquiries on all fiber glass and rock and slag wool producers in the United States. As a result of this action, NAIMA requested that EPA allow each industry to respond on a voluntary basis. Based on a May 5, 2010 commitment letter, NAIMA and EPA agreed that each industry would respond voluntarily to this inquiry. 2010 was spent gathering extensive existing and new data to satisfy EPA's request. This undertaking has cost the mineral wool and fiber glass insulation industry well over \$2 million; this expenditure was particularly difficult during the ongoing industry slowdown caused by the economic crisis and the significant downturn in new construction.

NAIMA REQUESTS SPECIFIC RISK ASSESSMENT INFORMATION FROM EPA

During the April 27, 2011 SBAR Panel Briefing, EPA stated that although it had not yet completed its risk assessment, it had made some preliminary findings, including: generally risks are low, and they do not indicate that further regulation is required to mitigate risk; formaldehyde presents the highest risk; and any possible revision to the rule based on risk is due to formaldehyde emissions. Accordingly, NAIMA requested specific information concerning

²⁰ 72 Fed. Reg. 14,734 (March 29, 2007).

²¹ 73 Fed. Reg. 60,431 (October 10, 2008).

²² 73 Fed. Reg. 60,455 (October 10, 2008).

EPA's formaldehyde risk assessment, including assumptions, specific values, and proposed control measures, so that NAIMA could provide meaningful comments. EPA agreed to provide this information and even requested that NAIMA provide certain additional formaldehyde emissions data, but thus far EPA has provided only its methods document concerning the development of preliminary risk estimates generally. NAIMA has worked with EPA to provide EPA the additional formaldehyde emissions data it requested, and NAIMA has been in regular contact with EPA to obtain the specific formaldehyde risk assessment information. NAIMA again asks that EPA provide its formaldehyde risk assessment, including assumptions, specific values, and proposed control measures. NAIMA will supplement these comments once it receives that information.

RESPONSES TO OPTIONS BEING CONSIDERED

Technological Control Options

There exists a variety of pollution control options for the mineral wool insulation industry. Many of these options have been implemented in different locations throughout the industry. Obviously, some options are less expensive and others are cost prohibitive. This variety has enabled the industry to make choices about how it will achieve the emission limits imposed by the Mineral Wool MACT Standard. Retaining this ability to choose is imperative to the preservation of the remaining five small businesses in the mineral wool industry because the imposition of specific technological requirements costing substantial expenditures would likely result in at least three of the small businesses being forced out of business. For example, Amerrock is struggling to meet immediate fundamental financial needs – a mandated technological addition would be its death knell. Rock Wool Manufacturing is owned by a Trust, and that Trust has plainly stated that any significant expenditure of funds, for example \$5 million for an incinerator, would result in the closure of mineral wool operations. Similarly, Isolatek International is owned by a Trust mandated by Federal Court for the benefit of Asbestos Victims. Any change in regulation that forces a technology change totaling in the millions of dollars will inflict severe economic damage and cause Isolatek to abandon mineral wool production, placing the survival of the company in doubt. Therefore, NAIMA strongly urges EPA to focus on a performance standard rather than imposing specific technological requirements.

Set forth below is a list of control options, with the pros and cons of each one.

Incinerators

Incineration is a treatment process that involves the combustion of organic substances contained in waste materials. Incineration of waste materials converts the waste into ash, flue gas, and heat. The flue gases must be cleaned of gaseous and particulate pollutants before they are dispersed into the atmosphere. The advantage with this process, of course, is its proven destruction of VOCs. The disadvantages of installing an incinerator at mineral wool facilities are

as follows: 1) incinerators increase emissions of certain pollutants, specifically SO₂;²³ 2) EPA has consistently recommended against incineration when sulfur-containing compounds are present because it forms highly corrosive acid gases – the mineral wool process contains sulfur compounds;²⁴ and 3) there are enormous costs to the individual mineral wool companies. These costs include, but are not limited to: 1) the initial purchase of the incinerator itself;²⁵ 2) the cost of installation of the incinerator²⁶ – these are mechanically and technologically complex machines and require a team of professionals to install, calibrate, and initiate the operation of the incinerator; 3) increases in gas bills;²⁷ and 4) maintaining the incinerator.²⁸ The emissions from mineral wool facilities are sufficiently low that the imposition of such a costly technology is not justified. Therefore, NAIMA recommends that an incinerator requirement not be instituted because it would be financially devastating for small businesses.

Regenerative Thermal Oxidizers

A regenerative thermal oxidizer (“RTO”) is an industrial process for the treatment of exhaust air. The system uses a bed of ceramic material to absorb heat from the exhaust gas and uses the captured heat to preheat the incoming process gas stream. The basic operation of an RTO consists of passing a hot gas stream over a heat sink material in one direction and recovering that heat by passing a cold gas stream through that same heat sink material in an alternate cycle. RTO’s chief advantage is its ability to destroy air toxics and VOCs. When coupled with recuperative heat exchangers, heated combustion air can be returned to the process to reduce fuel (e.g., coke for cupolas or gas for curing ovens) consumption. The disadvantages include: 1) RTO’s cost of nearly \$1-2 million; 2) the installation is a lengthy process and requires action of professionals to install and calibrate the machinery – even then mistakes or miscalculations can bring down the entire system; 3) its massive size may require acquisition of additional real estate – there is only so much room for an industry that is already overloaded on pollution control equipment; 4) there is a well-recognized high energy cost; and 5) there is wear and tear on moving parts, which requires high maintenance and requires part replacements every 2-3 years (with proper maintenance) – with improper maintenance, the parts might need replacement in 6 months to a year. These disadvantages all translate into an enormous cost.

²³ A study by Enviroplan, Inc. demonstrates that emissions of certain pollutants that possess established hazardous characteristics would increase if a cupola incinerator were installed on mineral wool manufacturing facilities. Specifically, the Enviroplan report indicates that incineration of cupola emissions would result in significant secondary emissions of NO_x and SO₂.

²⁴ Environmental Protection Agency, *Air Pollution Control Technology Fact Sheet* (<http://www.epa.gov/ttn/catc/dir1/fthermal.pdf>).

²⁵ The purchase price for an incinerator is between \$2 and \$5 million dollars.

²⁶ This installation would be between \$1.5 and \$3 million dollars.

²⁷ Projected gas bills per month would be over \$50,000 and with the increase in gas prices over time could potentially put these mineral wool plants out of business. Furthermore, some mineral wool facilities, specifically Amerrock, do not have access to a gas line to heat the incinerator.

²⁸ Projected costs of maintaining the incinerator is between \$200,000 to \$600,000 dollars per year.

Wet Scrubber

A wet scrubber is a process involving a variety of devices that remove pollutants from a furnace flue gas or from other gas streams. In a wet scrubber, the polluted gas stream is brought into contact with the scrubbing liquid – by spraying it with the liquid, by forcing it through a pool of liquid, or by some other contact method – so as to remove the pollutants. Scrubbers can be designed to collect particulate matter and some gaseous pollutants. Wet scrubbers remove dust particles by capturing them in liquid droplets. The advantage of this system is that wet scrubbers remove some pollutant gases by dissolving or absorbing them into the liquid. Any droplets that are in the scrubber inlet gas must be separated from the outlet gas stream by means of another device referred to as a mist eliminator or entrainment separator. Also, the resultant scrubbing liquid must be treated prior to any ultimate discharge or being reused in the plant. Some of the disadvantages of wet scrubbers involve problems with reproducibility, reporting, and the water droplet size falling. As a result, the monitoring and collecting of samples would be almost impossible using this system. Other disadvantages of wet scrubbers include corrosion, the need for entrainment separation or mist removal to obtain high efficiencies, and the need for treatment or reuse of spent liquid.²⁹ Wet scrubbers may also require stack gas reheat requirements prior to exhausting to the atmosphere.

Super-Sonic Scrubber

The Super-Sonic scrubber is a new wet scrubber. It has been applied in metals refining processes which have sub-micronic particulate emissions. The Super-Sonic scrubber sends shock waves that separate and capture four types of pollutants: metal and particulates, sulfur dioxide, nitrous oxide, and carbon dioxide. The Super-Sonic scrubber is extremely expensive and requires on-site steam supply for the ejector driven systems.³⁰ Moreover, engineering integration is not feasible for mineral wool companies. This, therefore, is not a viable option.

Absorption System

Absorption systems use the solubility of sulfur dioxide in aqueous solutions to remove it from the gas stream. Once sulfur dioxide has dissolved in solution to form sulfurous acid (H_2SO_3), it reacts with oxidizers to form inorganic sulfites (SO_3) and sulfates (SO_4). This process prevents the dissolved sulfur dioxide from diffusing out of solution and being re-emitted. The disadvantage with an absorption system is that it would have to be a massive system and would be extremely expensive to operate.

²⁹ Environmental Protection Agency, *Draft Technical Support Document for HWC MACT Standards, Volume 1, Description of Source Categories* (February 1996) (http://www.epa.gov/osw/hazard/tsd/td/combust/tech/tsd_v1.pdf; see also <http://www.wetscrubbers.com/>).

³⁰ *Effective and Economic CO₂ Capture and All-Pollutants Capture using the new CEFECO Process*, Coal-Gen 2010 Conference (August 11, 2010) (<http://phx.corporate-ir.net/External.File?item=UGFvZW50SUQ9MzkzMjU5fENoaWxkSUQ9Mzk4MjQwFR5cGU9MQ==&t=1>).

Hybrid System – Absorption and Incineration

A hybrid system uses a combination of both absorption and incinerator components. In this hybrid system, small amounts of water are sprayed as a fine mist into the flow of ambient air being directed over the surface to remove acid gases and other volatilized components. Incinerators, on the other hand, involve the combustion of organic substances contained in waste materials. Hybrid systems are designed to include the advantages of both absorption and incineration systems including the efficient capture of fine particulate, gases and volatile metals. However, these hybrid systems are very complex and come with increased operating costs. The disadvantages of this system also include the increased costs of buying, installing, and maintaining this equipment; increase in emissions of certain pollutants; and the enormous costs of fueling the systems.

Binder Substitution – Formaldehyde

EPA has identified substitution of formaldehyde binder with a non-phenol binder as a possible control technology. The substitution of the current formaldehyde binder with a non-phenol formaldehyde binder has been investigated by mineral wool companies. In fact, companies have tested alternative non-phenol binders, but these substitute binders fail to meet the rigorous requirements for fire performance. As described more fully herein, mineral wool products are specified and selected because of its unique fire resistant properties. Non-formaldehyde binders compromise that very important trait – the very essence of mineral wool strength. Additionally, alternative binders that have been investigated diminish the integrity and rigidity of insulation panels. Furthermore, humidity and moisture attacks over time are known to degrade the products' integrity, making it susceptible to fall out and failure. Therefore, substitution of the formaldehyde binder, at this time, is not an acceptable alternative. The mineral wool industry is committed to continue to investigate and explore such options, but it is not willing to mar the jewel of its product performance to further lower emissions that are already established as low. Moreover, the fiber glass industry has invested even greater resources into testing binder alternatives, and their extensive research has not found an acceptable substitute for the more demanding commercial and industrial insulation markets.

Batching Operation

Companies have provided EPA with confidential business information that addresses steps taken in the batching operations to reduce formaldehyde emissions, including pre-reaction with urea and use of other nitrogen compounds.

Electrostatic Precipitator

An electrostatic precipitator (“ESP”) or electrostatic air cleaner is a particulate collection device that removes particles from a flowing gas, such as air, using the force of an induced electrostatic charge. The advantages of electrostatic precipitators are that they can be highly efficient filtration devices that minimally impede the flow of gases through the device and can easily remove fine particulate matter such as dust and smoke from the air stream. The major

disadvantages of an ESP are that they are high in capital and maintenance costs and, because of corrosion, the internals must be made of expensive alloys. Another disadvantage is that the flushing liquid cannot be uniformly distributed over the surface and leads to dry spots of collected particles.³¹ The resulting build-up of collected particles causes the precipitator electrical performance to degrade. As a result, there are increased emissions from that section of the electrostatic precipitator.

Business Practices That Reduce Risk

Specific business practices that reduce risk include: 1) routine equipment and area housekeeping; 2) frequent and repetitive maintenance on process and control equipment; 3) binder flow shutoff when any fiber production is stopped; 4) generally short – 1-2 week long – melt campaigns which give ample time to maintain and correct certain conditions; and 5) binder and collection chamber parametric monitoring.

UNREGULATED EMISSION POINTS

EPA has identified unregulated emission points – collection chamber, cooling, and COS cupola emissions. The following are specific responses to these emissions.

Collection Chamber

The collection chamber was not regulated in the original MACT. EPA proposes adding emission limits to the collection chamber with formaldehyde being the risk driver. NAIMA recommends a 4 lbs. per ton of melt formaldehyde limit for the collection chambers. This limit is recommended because installing most control technology on the collection chamber would be cost prohibitive to install and would be financially infeasible to maintain. The air flow for the collection chamber is very large – six times that of the curing oven – and that enormous air flow would mandate equipment of such massive size and operation as to be prohibitive. Therefore, NAIMA seeks a formaldehyde emissions limit higher than that imposed on the curing oven because of limited control options that are financially and technologically viable.

As with the other control technology discussions above, NAIMA emphasizes the importance of establishing a limit and allowing each individual company to determine the control technology that will enable it to achieve that emission limit. Specific options include those technologies discussed herein. EPA suggested companies might be able to re-route exhaust through existing incineration or other control equipment. It is doubtful any company has equipment with sufficient capacity to handle additional flow and pollutant loading. Other options include further optimization of binder batching processes and possibly binder recipe alterations.

³¹ Caine, John C., Shaw, Hardik G.; *Next Generation Wet Electrostatic Precipitators, Paper No. 723* (http://www.southernenvironmental.com/pdf/Membrane%20WESP_rev1.pdf). See also, EPA-CICA Fact Sheet, *Dry Electrostatic Precipitator Air Pollution Technology Fact Sheet* (<http://www.p2pavs.org/ref/10/09867.pdf>).

Cooling

NAIMA recommends that no emission limit be set for the cooling operation. The negligible offgassing that might occur at this point in the process does not justify imposition of any limit. By the time the mineral wool reaches this point, the binder has already been cured. Certainly, the cost of control equipment for the cooling section could not be justified by reduction of minimal risk.

Carbonyl Sulfide

In the past, NAIMA notes that EPA has not identified carbonyl sulfide (“COS”) as a “HAP Driver.” Indeed, COS (carbonyl sulfide) should not be a HAPs Driver for residual risk purposes. This is appropriate given that the scientific record on COS is limited at best. The scientific record certainly does not support COS as a significant risk. COS is, however, the largest HAPs pollutant reported from mineral wool production. As discussed below, the majority of COS in the atmosphere is from naturally-occurring sources. Therefore, NAIMA urges EPA to consider the following information regarding COS in any further assessment of residual risk from mineral wool production relating to COS emissions.

The available data on carbonyl sulfide do not indicate that carbonyl sulfide emissions from mineral wool manufacturing facilities present any significant risk to workers or surrounding communities. Carbonyl sulfide is naturally prevalent in the atmosphere at relatively high concentrations and is the most abundant sulfide compound in the earth’s atmosphere.³² Most sources of atmospheric carbonyl sulfide are natural, with anthropogenic emissions making only a small contribution to overall atmospheric levels. Approximately 43 percent of atmospheric carbonyl sulfide is directly emitted from natural sources such as oceans, marshes, and volcanoes.³³ An additional 35 percent derives from atmospheric transformation of carbon disulfide to carbonyl sulfide.³⁴ Thus, almost 80 percent of atmospheric carbonyl sulfide results from natural sources. Biomass burning and coal-fired power plants are by far the largest two anthropogenic sources, accounting for 12 and 5 percent respectively, of total carbonyl sulfide releases to the atmosphere.³⁵ All other worldwide anthropogenic sources of carbonyl sulfide – including titanium dioxide manufacturing, carbon black manufacturing, petroleum refining, aluminum producing, and mineral wool manufacturing in the United States and elsewhere – account collectively for only approximately 4 percent of total carbonyl sulfide levels.³⁶

Representing only a small fraction of this 4 percent of global emissions, U.S. mineral wool manufacturing facilities thus contribute a negligible share of the overall atmospheric levels of

³² P. Werneck, *Chemistry of the Natural Atmosphere* (Academic Press, 1988).

³³ Khalil, M.A.K. and Rasmussen, R.A. (1984). “Global Sources, Lifetimes, and Mass Balances of Carbonyl Sulfide (COS) and Carbon Disulfide (CS₂) in the Earth’s Atmosphere,” *Atmospheric Environ.* 18:1805-1813.

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ Chin, M. and Davis, D.D. (1993), “Global Sources and Sinks of OCS and CS₂ and Their Distributions,” *Global Biogeochem. Cycles*, 7:321-338.

carbonyl sulfide.³⁷ No adverse health effects have ever been attributed to the relatively high concentrations of carbonyl sulfide that naturally occur in the atmosphere. The negligible addition to atmospheric carbonyl sulfide levels that results from mineral wool manufacturing would therefore not be expected to have any discernible impact on human health. The limited health data available on carbonyl sulfide do not indicate any carcinogenicity or other chronic toxicity, with known adverse health effects limited to acute toxicity at very high concentrations. These data indicate that carbonyl sulfide is unlikely to cause any significant health risks at ambient levels surrounding mineral wool manufacturing plants.

During the mineral wool manufacturing process, COS is emitted as a by-product. The COS emissions originate from the coke used as the heat source that melts the slag or natural rock. COS is produced via the incomplete combustion of sulfur and carbon from coke in a reduced atmosphere. Thus, COS is not manufactured or used as an additive to the mineral wool manufacturing process, but is found only as an unwanted by-product.

Based on this information, NAIMA recommends an emission limit for carbonyl sulfide of 5 lbs. per ton of melt and NO imposition of specific technology to reach that limit.

CURRENT MONITORING REQUIREMENTS EFFECTIVELY TRACK OPERATIONS EFFECTIVENESS

NAIMA urges EPA to allow the existing mineral wool insulation operations to maintain current monitoring operations. As observed by Ms. Fairchild in her plant visits to Thermafiber and Isolatek, current monitoring is extensive. In fact, on a daily basis, each shift conducts frequent monitoring. Continuous monitoring will not significantly increase the effectiveness of monitoring programs in place. Indeed, current monitoring devices have worked effectively since implementation of the MACT process. Current monitoring operations are ongoing and effective without any potential gaps or breaches that pose significant risk. The continuous monitoring option is unrealistic for small businesses for a variety of reasons: 1) The acquisition of new monitoring equipment is costly. Adding another cost to an industry that is already beleaguered by the economic downturn, significant investments in pollution control equipment, and the threat of foreign competition does not make sense. 2) Most continuous monitoring equipment requires a trained professional, which, obviously, adds more costs. The old adage “if it works, don’t fix it” seems to apply here. 3) There is no evidence or suggestion that the current monitoring system has failed in its objective or increased risk by failing to perform its intended function.

³⁷ EPA has long recognized the importance of considering risk in context when making risk management decisions and to evaluate, for example, the relative contribution to total exposure levels from the particular source or sources being regulated. See, e.g. EPA, *Reducing Risk: Setting Priorities and Strategies for Environmental Protection* (1990); Memorandum from Robert Sussman, Chair, EPA Science Policy Council, to EPA Administrator Carol Browner re: Science and Policy in Risk Assessment (May 31, 1994).

DUPLICATIVE OR INCONSISTENT ADMINISTRATIVE REQUIREMENTS

NAIMA and its members have not, at this time, identified duplicative or inconsistent administrative requirements with the Mineral Wool MACT Standard.

MINERAL WOOL'S UNIQUE OPERATIONS DICTATE UNIQUE STARTUP, MALFUNCTION, AND SHUTDOWN REQUIREMENTS

The unique features of mineral wool production defuse the typical concerns surrounding startup, shutdown, and malfunction. Mineral wool production emissions are measured by tons of melt pulled. During shutdown or startup, there is no melt being pulled. Moreover, a mineral wool production startup is not like a fiber glass furnace startup where melting a batch of glass that can be pulled could take a significant amount of time. Instead, the mineral wool process startup is of a short duration – typically two hours. Similarly, a shutdown – typically once per week – shuts down the melting process. The power system that drives the melting and fiberization process is tied to the control systems. Therefore, in most malfunctions or shutdowns, the entire system is down. There may be, at most, only a temporary exceedance of the emission limit for a very short duration. EPA should allow flexibility during startup, shutdown, or malfunction as long as the company is following its startup, shutdown, malfunction plan.

ACTUAL EMISSIONS DATA IS NOT REPRESENTATIVE OF WHAT IS CONSISTENTLY ACHIEVABLE

EPA has discussed setting emission limits based on actual emission data, for example existing data supplied to EPA by companies through NAIMA or the data collected by BTEC. This data presents a snapshot in time and is not necessarily indicative of normal and routine operations throughout the year under any and all circumstances. The mineral wool companies need emission limits that can be consistently met over an extended period of time with all the circumstances and variables in operating conditions that arise. Relying upon actual data does not provide a reliable, predictable, and, most importantly, achievable emission limit throughout the year. Therefore, NAIMA urges EPA to retain the existing emission limits for PM and formaldehyde from the cupola. Specific recommendations are contained herein with respect to carbonyl sulfide and formaldehyde emissions from the collection chamber.

SURROGATES MAY NOT ALWAYS BE NECESSARY FOR THE MINERAL WOOL MACT

NAIMA and its members urge EPA to abandon a surrogate for carbonyl sulfide (COS). With the development of EPA Test Method 318 for COS, the measurement will be a more accurate reflection of the actual COS emissions. Carbon monoxide (“CO”) has been used as a surrogate for COS. While there is a correlation between CO emissions and formation of organic HAP emissions, COS is a single HAP, not multiple HAPs like the metals, and testing directly for that one HAP is preferable.

On the other hand, NAIMA urges EPA to retain particulate matter (“PM”) as a surrogate for the various metals that may be present in trace amounts in the mineral wool process. Specifically, there are various metals that have an identified presence in mineral wool emissions, but the volume is so miniscule that to test for each metal seems counterintuitive, and, given that the majority of mineral wool manufacturers are small businesses, it also seems unnecessarily costly when the emissions can just as effectively be monitored with one test for particulate matter.

Similarly, NAIMA urges EPA to retain formaldehyde testing as a surrogate for phenol and methanol for the same reasons PM data is more efficient than multiple tests for separate metals.

RESPONSES TO EPA’S SPECIFIC QUESTIONS

EPA, in its April 27, 2011 presentation, proposed that Small Entity Representatives (“SERs”) from the mineral wool companies answer questions on operating and compliance costs. To avoid compromising this confidential business information or encroaching on antitrust laws by discussing these questions, NAIMA asked its mineral wool companies to send these responses to a third party who collected this data, aggregated it, and provided it to NAIMA in a form that we can now communicate to EPA without identifying company specific information.

The following questions asked by EPA are presented in an aggregate form to represent the mineral wool industry. These aggregate numbers represent the five mineral wool small businesses in the United States:

1. What do you spend in compliance costs?
 - The mineral wool industry spends \$1,890,862³⁸ in compliance costs.
2. If you operate an incinerator, what do you spend annually to operate the incinerator?
 - The mineral wool industry spends \$519,055³⁹ annually to operate the incinerator.
3. If you operate using desulfurization, what do you spend annually to operate the desulfurization?
 - Only one mineral wool company reported on operation of desulfurization; this number can be provided as CBI.
4. What are the costs you incur as a result of MACT recordkeeping?
 - The mineral wool industry incurs costs of \$69,400⁴⁰ as a result of MACT recordkeeping.

³⁸ Aggregate of five mineral wool companies.

³⁹ Aggregated number.

Other questions not dealing with costs are addressed throughout this letter in the appropriate sections.

MINERAL WOOL INSULATION PRODUCTS PROVIDE ENVIRONMENTAL BENEFITS

A. Mineral Wool Insulation Increases Energy Efficiency

Energy efficiency is an effective mechanism to reduce emissions, and EPA's policies encourage pollution prevention. In fact, EPA recognizes the environmental benefits of energy efficiency. For example, under EPA's Pollution Prevention Policy,⁴¹ measures that prevent pollution are afforded priority. Pollution prevention is also a mandated national policy: The Pollution Prevention Act of 1990⁴² established the national policy that pollution should be prevented or reduced at the source whenever feasible. Preventing pollution offers important economic benefits, as pollution never created avoids the need for expensive investments in waste management or air pollution abatement.

The Pollution Prevention Act establishes a hierarchy of how pollution is to be addressed. Specifically, the decision pathway is as follows:

- As an overriding first priority, pollution should be avoided and prevented;
- Pollution that cannot be prevented should be minimized;
- Pollution that cannot be minimized should be treated; and
- Only such pollution that remains after prevention, minimization, and treatment can be diluted.

In order to encourage pollution prevention and emissions reductions via energy efficiency, EPA, in 2004, issued its policy entitled *Guidance on State Implementation Plan (SIP) Credits For Emission Reduction From Electric-Sector Energy Efficiency and Renewable Energy Measures*⁴³ (2004 Guidance). That 2004 Guidance not only recognizes that EPA will accept for SIP credit those emissions reductions achieved by energy efficiency measures, but, indeed, that EPA encourages such reductions.

In terms of accepting such emissions reductions, EPA states on page 1:

We have developed this [2004] guidance to provide a readily available procedure to quantify and validate emission reduction from specific energy efficiency and

⁴⁰ Aggregate of four mineral wool companies. One company stated costs were untrackable.

⁴¹ <http://epa.gov/p2/pubs/laws.htm>.

⁴² Pollution Prevention Act of 1990 (Omnibus Budget Reconciliation Act of 1990, Public Law 101-508, 104 Stat. 1388-321 *et seq.* (<http://epw.senate.gov/PPA90.pdf>).

⁴³ EPA Office of Air Quality Planning and Standards, Office of Atmospheric Programs (August 2004) (http://www.epa.gov/ttncaaa1/t1/memoranda/ereserem_gd.pdf).

renewable energy measures and have these reductions applied to SIPs through future rulemaking for purposes of ROP, RFP, attainment demonstrations and maintenance plans.

EPA also states a preference for such energy efficiency measures by noting the following on page 1:

Energy efficiency and renewable energy measures have many benefits. Energy efficiency measures reduce the demand for electricity . . . These measures can save money, have other economic benefits, reduce dependence on foreign sources of fuel, increase the reliability of the electricity grid, enhance energy security, and, most importantly for air quality purposes, reduce air emissions from electric generating power plants. Energy efficiency and renewable energy inherently prevent pollution from occurring. Additionally, in many areas, the peak demand for electricity frequently coincides with periods of poor air quality. **It is therefore important to encourage and reward greater application of energy efficiency and renewable energy measures and incorporate the emission reductions that these measures will accrue into the air quality planning process.**

Emphasis added.

B. Mineral Wool Insulation Products Reduce Air Pollution Emissions Through Energy Efficiency

In prior proposals, EPA stated “that achievement of energy efficiency improvements in homes, buildings, and industry is an important component of achieving emissions reductions from the power sector while minimizing associated compliance costs.”⁴⁴ EPA goes on to acknowledge that by reducing electricity demand, energy efficiency avoids emissions of all pollutants associated with electricity generated.

EPA also identifies energy efficiency improvements in homes, buildings, and industry as an important component of achieving reduction of NO_x and SO₂ emissions.⁴⁵ Indeed, this is critical since buildings are the largest users of energy.

In testimony before the Subcommittee on Energy and Air Quality of the Committee on Energy and Commerce of the U.S. House of Representatives, William Fay, Executive Director of the Energy Efficient Codes Coalition, stated that “homes and commercial buildings are this nation’s largest sector of energy use and – because of the close relationship between greenhouse gases and energy consumption – also the largest US source of anthropogenic greenhouse gases.

⁴⁴ 75 Fed. Reg. 45,352 (August 2, 2010).

⁴⁵ 75 Fed. Reg. 45,352 (August 2, 2010).

Suffice it to say that buildings – and particularly residences – represent one of the last great frontiers of wasted energy.”⁴⁶

Since homes and commercial buildings consume the majority of the nation’s energy, these structures must become an integral part of any successful effort to improve energy efficiency. The U.S. Department of Energy, along with various other federal and state governmental bodies, put installation of insulation at the top or in the top five suggestions for energy savings.

Insulation products also prevent pollution by reducing pollutants, specifically fine particulates, NOx and SO₂ emissions. Reductions of toxic air pollutants can also be achieved, such as mercury, which can be emitted during coal combustion. By reducing the demand for energy, thermal insulation products help conserve non-renewable fuel supplies and reduce the amount of pollutants that are released into the atmosphere through the burning of fossil fuels. That increased use of insulation products can help EPA achieve its reduction of NOx and SO₂ emissions is substantiated by two studies conducted at the Harvard School of Public Health.⁴⁷ These studies are available upon request.

C. Mineral Wool Insulation Products Are High In Recycled Content

Rock and slag wool insulation manufacturers use recycled materials, which is another EPA-recognized environmental benefit. Using recycled materials in the manufacturing of insulation reduces the depletion of natural resources. Today’s slag wool insulation contains approximately 70 percent recycled blast furnace slag, and rock wool insulation contains 10-15 percent recycled blast furnace slag. NAIMA tracks the use of pre-and post-consumer recycled materials in its members’ insulation products. The most recent survey showed that in 2006 and 2007 NAIMA member companies in the U.S. and Canada used almost 5 billion pounds of recycled glass and blast furnace slag in the production of residential, commercial, industrial and air handling thermal and acoustical insulation.

More specifically, the data showed that facilities in the U.S. used nearly 1.3 billion pounds of slag in 2006 and 2007. This represented an increase in reclaimed slag use of 55.6 percent over 2005.

Using materials derived from secondary sources not only reduces the demand on virgin resources, it saves landfill space by diverting blast furnace slag from the solid waste stream. NAIMA’s data shows that U.S. fiber glass and rock and slag wool insulation manufacturers have

⁴⁶ Energy Efficient Codes Coalition, Testimony of William D. Fay Before the Subcommittee on Energy and Air Quality of the Committee on Energy and Commerce, U.S. House of Representatives, Thursday, July 17, 2008.

⁴⁷ Jonathan I. Levy, Yurika Nishioka and John D. Spengler, “The public health benefits of insulation retrofits in existing housing in the United States,” *Environmental Health: A Global Access Science Source*, April 2003, pp.1-16. Yurika Nishioka, Jonathan I. Levy, Gregory A. Norris, Andrew Wilson, Patrick Hofstetter, and John D. Spengler, “Integrating Risk Assessment and Life Cycle Assessment: A Case Study of Insulation,” *Risk Analysis*, Vol. 22, No. 5, 2002, pp. 1003-1017.

diverted over 33 billion pounds of recyclable materials from the solid waste stream since the introduction of an aggressive recycling program in 1992.

D. Mineral Wool Insulation and Fire Proofing Products Have Extraordinary Fire Performance Attributes That Save Lives

Products made from rock and slag wool are non-combustible and do not support the growth of mildew and mold when tested in accordance with the specifications of the American Society for Testing and Materials ("ASTM" C 665). Rock and slag wool fibers are also dimensionally stable and have high tensile strength. In addition to providing insulation, rock and slag wools absorb sound and, with a vapor retarder, help control condensation.

The physical and chemical properties of rock and slag wool are major factors in their utility. Because the fibers are non-combustible and have melting temperatures in excess of 2,000 degrees Fahrenheit, they are widely used to prevent the spread of fire. As a primary constituent of ceiling tiles and sprayed structural fireproofing, rock and slag wool provides fire protection as well as sound control and attenuation. The excellent thermal resistance of these wools also is a major reason for their use as residential and commercial insulation, pipe and process insulation, insulation for ships, domestic cooking appliances, and a wide variety of other applications.

The fire performance of mineral wool products are substantiated by literally thousands of fire-containment and fireproofing tested construction assemblies listed by Underwriters Laboratories, Intertek, and other third-party test labs. Architects, engineers, designers, and contractors have relied upon these independent verifications that mineral wool products will provide enhanced safety and comfort for building occupants as required by U.S. and international building codes. Mineral wool products are specified and installed in numerous buildings across the U.S. like the Willis (Sears) Tower, 7 World Trade Center, high-occupancy hotels, many government buildings, hospitals, universities, and schools. Without these products, significant and costly redesign of common construction practices and changing of codes to permit alternative products would have to be made. These products also save lives.

CONCLUSION

Significant reductions in HAPs have been achieved through implementation of the Mineral Wool MACT Standard and as a result of a massive reduction in the size of the mineral wool industry. As these comments have demonstrated, the 1999 MACT floor was correctly set. Therefore, NAIMA urges EPA to affirm its 2008 decision that no revisions to the national emission standards regulating the Mineral Wool Production Source Category are required at this time.

Sincerely,



Angus E. Crane
Executive Vice President, General Counsel
Attachments

Ms. Susan Fairchild

May 16, 2011

Page 24

cc: Ms. Madeline Barch
Office of Policy, Regulatory Management Division
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1806A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Mr. David Rostker
Office of Interagency Affairs
Office of Advocacy
U.S. Small Business Administration
409 Third Street, S.W., 7th Floor
Washington, D.C. 20416

ATTACHMENT 1

News Release

Wednesday 26 July 2000, 23:15 GMT

Wednesday 26 July 2000
BUSINESS
Celotex

Celotex finalises sale to BPB plc for gypsum wallboard and ceilings business operations

Tampa, Florida - Celotex Corporation, a manufacturer of residential and commercial building materials, has announced the formal closing of its previously announced agreement to sell its gypsum wallboard and ceilings business operations to BPB plc of the United Kingdom.

"Our gypsum wallboard product line, with its ready-made access to the United States market and a thriving production base, will prove to be an excellent fit for BPB," said John P. Borreca, Celotex President and CEO. "Our ceilings business, which has seen steady market growth as the product line developed to include a variety of ceiling panels and a metal grid suspension system, also will strongly position BPB with their entry into this market."

Former Celotex gypsum operations now part of BPB include: Cody, Wyoming; Fort Dodge, Iowa; Jacksonville, Florida; Port Clinton, Ohio; a paper mill in Quincy, Illinois and a new state-of-the-art gypsum production facility in Carrollton, Kentucky, which will come on-stream later this year. Ceiling product manufacturing facilities sold as part of the transaction include: Lagro, Indiana; L'Anse, Michigan; Pittston, Pennsylvania; Meridian, Mississippi; Plymouth, Wisconsin and a new metal grid suspension system production facility in Zelienople, Pennsylvania, which is also scheduled to start up later this year. Approximately 1,400 employees, including all employees located at the manufacturing plants, a domestic and international sales organisation located in key markets and certain employees from the Celotex headquarters and technical center in the Tampa Bay area, became BPB employees upon the closing of the sale today.

BPB will be establishing an administrative office in Tampa. Additionally, Celotex will provide administrative transition services such as finance and information technology support to BPB for at least the next six months.

The sale of Celotex' gypsum wallboard and ceilings business operations, which combined accounted for approximately 50% of the company's fiscal 1999 revenue, is part of a process that began in November 1999, with the announcement that the Asbestos Settlement Trust, Celotex' sole shareholder, was seeking a buyer for the company. In late June, Celotex announced the signing of a definitive agreement to sell its roofing products business operations, accounting for approximately 25% of Celotex' 1999 revenue, to CertainTeed Corporation of Valley Forge, Pennsylvania. The remaining foam insulation and fiberboard business operations of Celotex continue to be marketed to prospective buyers.

BPB plc, headquartered in London, England, is the largest producer of gypsum wallboard in the world outside of the United States.

Celotex Corporation is a major manufacturer of building materials for domestic and international commercial and residential markets. In fiscal year 1999, which ended August 31, 1999, gross sales were approximately US\$600 million.

Distributed by PR Newswire on behalf of Celotex

Contact details for all releases are only available to the media via PR Newswire for Journalists.

PR Newswire Europe Ltd.
209 - 215 Blackfriars Road, London, SE1 8NL
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Fax : +44 (0)20 7490 1255
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ATTACHMENT 2

BPB America Inc.
 5301 West Cypress St.
 Suite 300
 Tampa, Florida 33607

Tel 813 286 3900
 Fax 813 286 3991

ase News Release

News Release

Close This Window

FOR IMMEDIATE RELEASE

BPB Announces Changes in Ceilings Division

TAMPA, Fla., (October 23, 2003) - BPB America Inc., marketer of interior wall and ceiling products, today announced a 3-part refinement in its business strategy to enhance its position in the walls and ceilings markets.

REORGANIZATION

Having successfully incorporated the former Celotex® ceilings business within BPB in North America, it is now appropriate to refine BPB's business strategy for the next phase. The ceilings sales, technical and manufacturing management teams will be aligned with the gypsum board group to better realize the synergies between the businesses.

"We will continue to serve our customers with dedicated gypsum board and ceilings sales teams, but our management teams will be better aligned," says Brent Thomson, President and CEO of BPB America Inc. and BPB Canada Inc. "I believe this change will make it easier for our customers to do business with BPB in North America."

PLANT CLOSING

BPB's cast ceiling tile manufacturing plant near Pittston, PA, operated by BPB America's affiliate, will cease production on Dec. 31, 2003. In operation since 1957, the plant employs 65 full-time people in a 125,000 square foot plant on 80 acres on Route 92 north, near Pittston, PA.

"The Pittston plant has produced our cast ceiling tile line since 1957. Over the past several years customer preferences have shifted, moving away from the look of cast ceiling tiles, toward products with smoother finishes," says Thomson. "This action is being taken to focus our efforts and resources on products meeting the current and evolving needs of our customers for the long term."

"We regret that these changes carry a personal cost for a great team of employees, many with long service to the company. We will do our best to assist with their transition," says Thomson.

INVESTING IN THE FUTURE

In order to continue to enhance our position in the commercial market, BPB announced \$1.6 million in capital investment for the Plymouth, WI plant which produces the Capau® Brand of ceiling tiles, and the Meridian, MS plant which produces the Celotex® Brand of ceiling tiles. This is in addition to the over \$12 million invested in

capital improvements since BPB entered the US market in 2000. "I believe these investments, and the organizational changes I've described, will position BPB in North America as a stronger and more competitive supplier," says Thomson.

CONTACT: **Pamela A. Bush**, Director, Corporate Communications, BPB America, Inc. • 813-286-3932 • Fax 813-286-3991 • pamela.bush@bpb-na.com

BPB in North America, www.bpb-na.com, manufactures and markets wall and ceiling systems for use in residential and commercial buildings. Backed by 80 years of experience and worldwide research and development, the organization serves the domestic and international markets with innovative products and superior customer service.

BPB plc is the world leader in the supply of gypsum wallboard and plasters, and a major supplier of insulation, ceiling tiles and related products for internal linings, serving growing markets for building systems in over 50 countries. For more information, visit www.bpb.com.

CertainTeed Ceilings
750 E. Swedesford Road
Valley Forge, PA 19482
Tel: (610) 341-7000 • Fax: (610) 341-7994
www.certainteeted.com

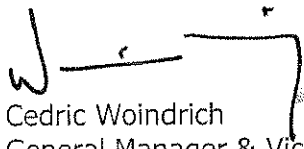
June 22, 2007

Angus E. Crane, Esq.
Vice President, General Counsel
North American Insulation Manufacturers Association
44 Canal Center Plaza, #310
Alexandria, VA 22314

Dear Mr. Crane:

I am writing this letter to confirm the operating status of the former BPB/Celotex mineral wool production facility in Lagro, Indiana. Saint-Gobain, parent company of CertainTeed Corporation, (hereinafter "CertainTeed") purchased the BPB/Celotex facility in Lagro, Indiana in December 2005. At the time of CertainTeed's purchase of BPB, the Lagro facility was no longer manufacturing mineral wool insulation products. CertainTeed does not use the Lagro facility as a manufacturing plant. Specifically, CertainTeed does not now and has never manufactured mineral wool at the Lagro, Indiana facility.

Sincerely,



Cedric Woindrach
General Manager & Vice-President
CertainTeed Ceilings



POST OFFICE BOX 5327 • 3500 35TH AVENUE NORTH
BIRMINGHAM, ALABAMA 35207

June 25, 2007

Angus E. Crane, Esq.
Vice President, General Counsel
North American Insulation Manufacturers Association
44 Canal Center Plaza, #310
Alexandria, VA 22314

Dear Mr. Crane:

I am writing this letter to confirm the operating status of the former Fibrex mineral wool production facility in Alexandria, Indiana. Sloss Industries purchased the Fibrex facility in March 1998. Sloss Industries Corporation ceased operations in Alexandria, Indiana, in 2000. The manufacturing equipment in the Alexandria, Indiana, facility has been scrapped. Therefore, there is no manufacturing capacity in the Alexandria, Indiana facility. Sloss Industries has no plans to restore manufacturing equipment in the Alexandria facility or to resume mineral wool production.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jim Henry', is written over a circular stamp or watermark.

Jim Henry
Manager of Technical Services



United States Attorney's Office Eastern District of Pennsylvania

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UNITED STATES ATTORNEY'S OFFICE NEWS RELEASE

U.S. FILES CIVIL COMPLAINT AGAINST MFS, INC. TO LIMIT EMISSIONS OF HAZARDOUS AIR POLLUTANTS

December 20, 2005 - U.S. Attorney Patrick Meehan and the United States Environmental Protection Agency today announced the filing of a civil complaint in the District Court for the Eastern District of Pennsylvania against **MFS, Inc.**, seeking an injunction and civil penalties for violations of the Clean Air Act standards for the emissions of hazardous air pollutants. MFS is a for-profit mineral wool manufacturer located in Bethlehem, Pennsylvania. Mineral wool is a fibrous material used in the production of insulation and ceiling tiles. It is produced by melting blast furnace slag, silica and bauxite in high temperature "cupola" furnaces and then discharging the molten material onto rapidly rotating wheels converting the molten material to fibers.

The Clean Air Act establishes standards for the control of hazardous air pollutants for many industries including the mineral wool sector. MFS is subject to the Clean Air Act National Emission Standard for Hazardous Air Pollutants (NESHAP) for the Mineral Wool Industry which required performance testing and a limitation of particulate emissions by no later than June 2003. The particulate emission standard in this NESHAP serves to control metallic hazardous air pollutants such as arsenic and lead. To date, MFS has not conducted performance testing and is not in compliance with the NESHAP.

The United States is seeking a Court Order requiring MFS to test its emissions, report the measurement to EPA, control any excess emissions, and substantial civil penalties for past violations.

"The bottom line is that resolving this case will make our air safer for the citizens of Bethlehem and for the environment of the Delaware Valley" said Meehan. "Delay in meeting this protective standard is not acceptable."

EPA Regional Administrator Donald S. Welch remarked that MFS is the only mineral wool manufacturer in the United States that has not yet achieved this standard. "Standards such as this, based on sound science and designed to protect human health and the environment, must be implemented by all."

Special Assistant United States Attorney Christopher A. Day and EPA Assistant Regional Counsel Russell Swan are handling this case for the United States.

**UNITED STATES ATTORNEY'S OFFICE
EASTERN DISTRICT, PENNSYLVANIA
Suite 1250, 615 Chestnut Street
Philadelphia, PA 19106**

**Contact:
RICH MANIERI
Media Contact
215.861.8525**

Last Updated: 02/08/06 (SM)

Department of Justice | First.gov | [Privacy Policy](http://Privacy.Policy) | [Project Safe Neighborhoods](http://Project.Safe.Neighborhoods) | [PSN Grants](http://PSN.Grants) | www.regulations.gov

11. Mescalero National Fish Hatchery, New Mexico.
12. Sequoyah National Wildlife Refuge, Oklahoma.
13. Tishomingo National Wildlife Refuge, Oklahoma.
14. Bandon Marsh National Wildlife Refuge, Washington.
15. Dungeness National Wildlife Refuge, Washington.
16. Makah National Fish Hatchery, Washington.
17. Nisqually National Wildlife Refuge, Washington.
18. Quinalt National Fish Hatchery, Washington.
19. San Juan Islands National Wildlife Refuge, Washington.

V. Programmatic Targets

During Fiscal Year 2007, upon request of a self-governance tribe, the Fish and Wildlife Service will negotiate funding agreements for its eligible programs beyond those already negotiated.

Dated: March 6, 2007.

David Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. E7-5343 Filed 3-22-07; 8:45 am]

BILLING CODE 4310-55-P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[NV-912-07-1220PA-006F]

Cancellation of the BLM Nevada Resource Advisory Council Recreation Subcommittee Meeting

AGENCY: Bureau of Land Management, Interior.

ACTION: Cancellation of the BLM Nevada Resource Advisory Council Recreation Subcommittee Meeting.

SUMMARY: The March 29, 2007, meeting of the Bureau of Land Management's (BLM) Resource Advisory Councils Recreation Subcommittee has been cancelled.

DATE AND TIME: The Recreation Subcommittee was scheduled to meet Thursday, March 29, 2007, from 9 a.m. to 4:30 p.m. at the Bureau of Land Management, Nevada State Office, located at 1340 Financial Boulevard in Reno, Nevada.

FOR FURTHER INFORMATION CONTACT:

Doran Sanchez, Chief, Office of Communications (775) 861-6586, or Barbara Keleher, Outdoor Recreation Planner (775) 861-6628, at the BLM Nevada State Office, 1340 Financial Blvd., Reno, Nevada.

SUPPLEMENTARY INFORMATION: The meeting announced by a notice at 72 FR

9580 Mar. 2, 2007 is cancelled. The public will be notified via **Federal Register** Notice and news release when the meeting is rescheduled.

Dated: March 12, 2007.

Ron Wenker,

Bureau of Land Management, Nevada State Director.

[FR Doc. 07-1288 Filed 3-22-07; 8:45 am]

BILLING CODE 4310-HC-M

DEPARTMENT OF JUSTICE

Notice of Lodging of United States v. MFS, INC., (A/K/A Mineral Fiber Specialists), Civil Action No. 05-6656, (E.D. PA.) Under the Clean Air Act

Notice is hereby given that on *March 9, 2007* a proposed Consent Decree *United States v. MFS, Inc., (a/k/a Mineral Fiber Specialists)*, Civil Action No. 05-6656, (E.D. Pa.) was lodged with the United States District Court for the Eastern District of Pennsylvania.

In this action the United States sought injunctive relief and civil penalties pursuant to Section 113(b) of the Clean Air Act, as amended ("CAA") 42 U.S.C. 7413(b), for alleged violations by Defendant MFS, Inc. of Section 112 of the CAA, 42 U.S.C. 7412, and the applicable requirements of 40 CFR part 63, subpart DDD. Defendant MFS, Inc. owns and operates a mineral wool production plant in the City of Bethlehem, Northampton County, Pennsylvania and is therefore subject to National Emission Standards for Hazardous Air Pollutants ("NESHAP") for mineral wool manufacturers codified at 40 CFR part 63, subpart DDD ("Mineral Wool or MW NESHAP"), specifically §§ 63.1175-63.1196. The Consent Decree requires the performance of injunctive relief including initial performance testing of the MFS facility, stipulated penalties for violations of Decree requirements and the payment of a civil penalty to the United States in the amount of \$109,000. The Decree authorizes MFS to use an alternative test protocol set forth in Appendix A to the Decree to determine compliance with the particulate matter ("PM") emission limits set forth in the Mineral Wool NESHAP, set forth in 40 CFR subpart DDD. If EPA determines that MFS has not complied with the NESHAP, the Decree requires MFS to further submit a plan to achieve compliance with the NESHAP subject to EPA review and approval. The Decree provides for stipulated penalties for noncompliance with the Decree requirements.

The Department of Justice will receive for a period of thirty (30) days from the

date of this publication comments relating to the lodged Consent Decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, and either e-mailed to pubcomment-ees.enrd@usdoj.gov or mailed to P.O. Box 7611, and should refer to *United States v. MFS, Inc. (a/k/a Mineral Fiber Specialists)*, Civil Action No. 05-6656 (E.D. Pa).

The Consent Decree may be examined at the Office of the United States Attorney for the Eastern District of Pennsylvania in Philadelphia, Pennsylvania, and at U.S. EPA Region III in Philadelphia, Pennsylvania. During the public comment period, the Decree may also be examined on the following Department of Justice Web site, http://www.usdoj.gov/enrd/Consent_Decrees.html. A copy of the Decree may also be obtained by mail from the Consent Decree Library, P.O. Box 7611, U.S. Department of Justice, Washington, DC 20044-7611 or by faxing or e-mailing a request to Tonia Fleetwood (tonia.fleetwood@usdoj.gov), fax no. (202) 514-0097, phone confirmation number (202) 514-1547. In requesting a copy from the Consent Decree Library, please enclose a check in the amount of \$9 (5 cents per page reproduction cost) payable to the U.S. Treasury or, if by e-mail or fax, forward a check in that amount to the Consent Decree Library at the stated address.

Virginia Gibson,

Chief, Civil Division, United States Attorney's Office, Eastern District of Pennsylvania.

[FR Doc. 07-1429 Filed 3-22-07; 8:45 am]

BILLING CODE 4410-15-M

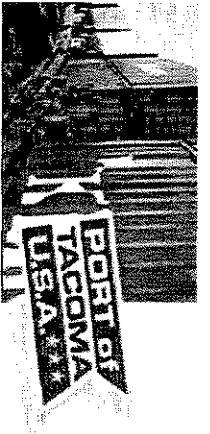
DEPARTMENT OF JUSTICE

Drug Enforcement Administration

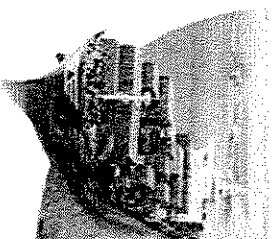
Manufacturer of Controlled Substances; Notice of Registration

By Notice dated November 28, 2006, and published in the **Federal Register** on December 7, 2006, (71 FR 70985), Cayman Chemical Company, 1180 East Ellsworth Road, Ann Arbor, Michigan 48108, made application by renewal to the Drug Enforcement Administration (DEA) to be registered as a bulk manufacturer of the basic classes of controlled substances listed in schedule I:

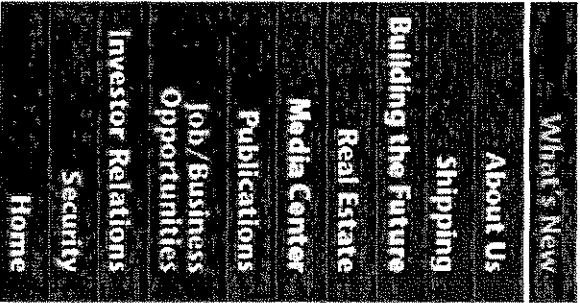
Drug	Schedule
Marihuana (7360)	I
Tetrahydrocannabinols (7370)	I



1:49 PM | May 23 | Tide Chart | Site Map



ATTACHMENT 7



SITE SEARCH

FIND »

REVISED

PORT OF TACOMA

FINAL AGENDA

THURSDAY, OCTOBER 3, 2002
World Trade Center, Room 104
3600 Port of Tacoma Road
Tacoma, Washington

3:00 p.m.: EXECUTIVE SESSION

- 1. Call to order and recess

4:00 p.m.: REGULAR MEETING

- 1. Reconvene
- 2. Flag Salute
- 3. Consider Minutes of September 5, 12, and 17, 2002.

4. Agenda:

A. Request Authorization to Award Purchase Order Contract to Mitchell Humphrey Accounting Software

B. Request Authorization to Purchase Thermafiber Property

- News Releases
- Online Store
- Top Stories
- Calendar
- Commission Meetings
- Cargo Statistics
- Major Trading Partners and Commodities
- Port of Tacoma Road Overpass Project
- Expansion Projects
- Transportation Developments
- FAST Corridor
- State Route 167 Extension
- Are you a Port Authority?
- Disclaimer
- Blair Peninsula
- Emergency Access
- Main

- C. Request Authorization to Increase Base Salary of Executive Director
- 5. General business
- A. Security Briefing
- 6. Public and Commissioner comment
- 7. Adjournment

MEETING MINUTES

Present: Commissioners: Bottiger, Fabulich, Marzano, and Petrich. Also staff members: Andrea Riniker, Bob Goodstein, Anne Muñoz, Tom Mulledy, Jeff Bishop, and Tim Farrell. From the audience, Brian Carpenter, Pierce County Building Trades. Commissioner Bacon was excused from attending.

Meeting was called to order at 3:00 p.m. by President Fabulich and recessed into executive session to discuss seven real estate lease or sale issues, for approximately one hour. No action was taken. At 4:02 p.m. the meeting reconvened.

The flag salute was recited.

Motion was made by Petrich, seconded by Marzano, and carried approving minutes of September 5, 12 and 17, 2002.

Motion was made by Petrich, seconded by Marzano and carried, authorizing purchase of a Mitchell Humphrey Accounting Software Billing System in an amount not to exceed \$305,000. This purchase includes a contingency amount of 10%, or approximately \$26,000. This system will reside on a Microsoft Windows platform, replacing an older system housed on an outdated HP 3000 platform that will no longer be supported. It will provide statistical data used by Port departments, staff and customers. Also included in the motion, the Port intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times, as the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8 (a) (5) of the Income Tax Regulation (26 CFR 1.03-8 (a) (5)).

Motion was made by Bottiger, seconded by Marzano, and carried authorizing execution of a Purchase and Sale Agreement with Thermaber, Inc. for 9.4 acres of real property more commonly known as 2301 Taylor Way. The purchase price is \$2,400,000, with a \$1,000,000 holdback for demolition. This waterfront property is adjacent to current Port-owned property, completing a rectangular shaped parcel of land. Closing is estimated to take place on about December 16, 2002. Also included in the motion, the Port intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times, as the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8 (a) (5) of the Income Tax Regulation (26 CFR 1.03-8 (a) (5)).

Motion was made by Bottiger, seconded by Petrich, and carried authorizing an increase in the Port's Executive Director's base salary by 3%, effective September 1, 2001 (one year ago).

During general business, Tim Farrell presented a security briefing. Several ports have been jointly working on various Maritime Seaport Security initiatives, including the ports of Tacoma, Everett, Seattle, LA, Long Beach, New York and New Jersey. Initiatives involve a Seaport Security Grant Program, and cargo container security initiatives including Operation Safe Commerce, SMART (Secure Maritime Asian Routes for Trade) and SST (Safe and Secure Trade Lanes). Tim Farrell formally acknowledged the work of Port of Tacoma staff, including Lou Paulsen, Jeanmie Beckett, John Jolibois, and others who have been participating in these projects.

Commissioner Fabulich displayed an American Association of Port Authorities award recently presented to the Port at the AAPA annual meeting, the "2002 Communications Award of Excellence" for advertising in categories 1 and 2. The winning ads were part of our recent branding efforts, which Jay Ray Advertising worked on with the Port.

Brian Carpenter, Pierce County Building Trades, speaking during public comment, gave an apprenticeship program update, including statements from Pierce County Ironworkers apprentices.

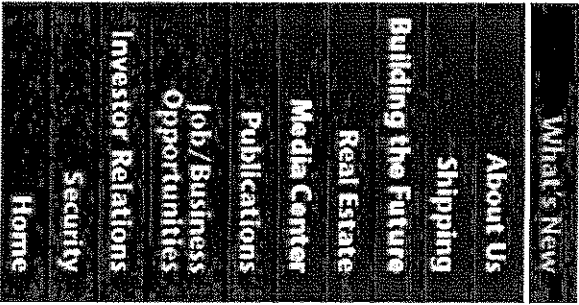
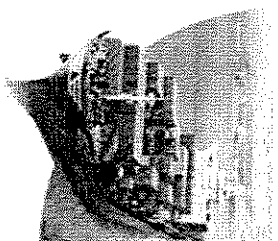
There being no further business, the meeting was adjourned at 4:56 p.m.

Warrant Nos. 126090 through 126929 and wire transfers in the total amount of \$6,526,825.84 were ratified.

- [Notice of Meeting Change to May 29, 2007](#)
- [Port Commission Meeting of May 17, 2007 Rescheduled](#)
- [Study Session Agenda - May 10, 2007](#)
- [Meeting Agenda - May 3, 2007](#)
- [Meeting Agenda & Minutes - April 19, 2007](#)
- [Study Session Agenda & Minutes - April 10, 2007](#)
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- [Meeting Agenda & Minutes - February 1, 2007](#)
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- [Meeting Agenda & Minutes - January 18, 2007](#)
- [Study Session for January 11, 2007 - CANCELLED](#)
- [Study Session Agenda - January 11, 2007 \(meeting cancelled\)](#)
- [Commission Meeting of January 4, 2007 - Cancelled](#)
- [Meeting Agenda & Minutes - December 21, 2006](#)
- [Study Session, December 14, 2006 - Cancelled](#)
- [Meeting Agenda & Minutes - November 30, 2006](#)
- [Notice of Meeting Change for December 7, 2006](#)
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- [Notice of Special Meeting - Sept. 20, 2006](#)
- [Study Session Agenda & Minutes - Sept. 14, 2006](#)
- [Meeting Agenda & Minutes - Sept. 7, 2006](#)
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PORT OF TACOMA

FINAL AGENDA

THURSDAY, AUGUST 21, 2003
World Trade Center, Room 104
3600 Port of Tacoma Road
Tacoma, Washington

3:00 p.m.: EXECUTIVE SESSION

- 1. Call to order and recess

4:00 p.m.: REGULAR MEETING

- 1. Reconvene
- 2. Flag Salute
- 3. Consider Minutes of August 7 and August 13, 2003
- 4. Agenda
 - A. Request Authorization to Extend Contract No. 997482, for Construction Management services on the Marshall Ave. Auto Facility Project.
 - B. Request Authorization to Increase Contract No. 997580 for the Rail Transportation Simulation Modeling Study.
 - C. Request Authorization to Call for Bids Contract No. 998153, for the PCT Yard & Intermodal Project.
 - D. Request Authorization to Increase Contract No. 997191, for PCT Wharf Construction Project.

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- Disclaimer
- Blair Peninsula Emergency Access
- Main

- E. Request Authorization to Call for Bids Contract No. 998154 for the PCT Building Project.
- F. Request Authorization to Issue a Purchase Order for the Pier/Marine Dredge Disposal Project.

- G. Request execution of the 3rd Addendum to the Purchase and Sale Agreement between Thernmaflber, Inc. ("Seller"), and the Port of Tacoma ("Buyer") for the property located at 2301 Taylor Way, Tacoma, WA

- 5. General business
 - A. Q2 2003 Budget Update
- 6. Public and Commissioner comment
- 7. Adjournment

MEETING MINUTES

Present: Commissioners Marzano, Bottiger, Fabulich, Petrich and Bacon. Staff: Andrea Rinker, Timothy Farrell, Bob Goodstein, Charla Skaggs, Jeff Smith, Trevor Thornsley, Frank Davidson, Rob Collins, Scott Bickel, David Myers, Lisa Wadel, Jeff Bishop, and Doug Ljungren. Also Al Gibbs, Tacoma News Tribune, Brian Carpenter, Pierce County Building and Construction Trades Council, and George Osborn, Husky.

Meeting was called to order at 3:00 p.m. by President Marzano, and immediately recessed into Executive Session, where one potential litigation item and two real estate lease or sale issues were discussed. No action was taken.

Meeting was reconvened at 4:10 p.m.

The flag salute was recited.

Motion was made by Bottiger, seconded by Bacon, and carried approving the minutes for August 7 and August 14, 2003.

Motion was made by Petrich, seconded by Bacon, and carried expanding the scope of work and increasing the contract amount for Contract No. 997482 with Parsons Brinckerhoff Construction Services, Inc. for construction management services associated with the Marshall Avenue Auto Facility Site and Building Improvements project. Expanded scope of work includes: review of contract bid documents and site conditions, review of submittals and RFIs and their responses; review of contractor payment requests; coordination with the Port project manager; management

of the construction contracts; conducting weekly construction meetings with minutes; inspection of work including testing; and review of as-built plans and project close-out. Estimated cost for the additional work is not to exceed \$100,000, and revised contract amount is now \$650,000.

Motion was made by Bottiger, seconded by Petrich and carried expanding the scope of work and increasing the contract amount for Contract No. 997580 with Automation Associates for work associated with the Rail Transportation Simulation Modeling Study. Expanded scope of work includes additional program development and testing in the areas of movement logic, asset interactions and data requirements, and analysis scenarios. Estimated cost for the additional work is \$30,000, leaving a revised contract amount of \$130,745.

Motion was made by Petrich, seconded by Bacon and carried authorizing the Call for Bids for Contract No. 998153 for the work associated with the Pierce County Terminal Container Yard and Intermodal Yard. Scope of work for the Container Yard will include converting the existing marine terminal site and auto processing areas to a straddle carrier-operated container terminal including construction of all site drainage, lighting, power supply, water, and sanitary sewer systems, site grading and paving, and other terminal improvements as required. Scope of work for the Intermodal Yard will include modification improvements to existing rail structures and construction of 12 new tracks, 7 back-up tracks, and in-ground compressed air system, and necessary infrastructure improvements. Estimated cost of construction for this contract is \$48,700,000. Schedule is as follows: advertise for bids, August 22, 2003; bid opening, September 29, 2003; contract award, October 2, 2003; and contract completion, September 30, 2004.

Motion was made by Petrich, seconded by Bottiger and carried expanding the scope of work and increasing the contract amount for Contract No. 997191 with Geo Engineers for design engineering services associated with the Pier/Marine Project. Expanded scope of work includes: extending the dredging work through a second construction season; additional engineering related to the handling and disposal of additional dredging materials; consulting for monitoring and documenting excavated materials within the extended berth area, and monitoring and placement of dredge materials on the former Kaiser property; and geotechnical consulting during the implementation of the test pile program, including reviewing the pile drive records and providing a summary report. Estimated cost for the additional work is \$91,000, leaving a

revised contract amount of \$194,607. Work on this contract is scheduled to complete by December 31, 2004.

Motion was made by Fabulich, seconded by Bacon and carried authorizing the expansion of the scope of work for A/E Contract No. 997467, for work associated with the Pierce County Terminal Intermodal Yard and Container Yard. Contract amount was increased by \$42,000, creating a revised total contract amount of \$84,650. Expanded scope of work includes geotechnical design services, contract specifications and drawings, construction support services, data revision and compilation, additional sampling of drums and stockpiles, interim report and final report, meeting attendance, and contingencies.

Motion was made by Petrich, seconded by Fabulich and carried authorizing the Call for Bids for Contract No. 998154 for the work associated with the Pierce County Terminal Buildings. Estimated cost of construction for this project should not exceed \$6,900,000, with an additional \$250,000 for additive alternative bid item at the customer's request. Schedule is planned as follows: advertise for bids, August 22, 2003; Bid Opening, September 29, 2003; Contract Award, October 2, 2003; contract completion, September 31, 2004.

Motion was made by Bacon, seconded by Fabulich and carried authorizing the issue of a purchase order not to exceed \$675,000 to the Department of Natural Resources for the charges resulting from the disposal of dredge spoils at the DNR Commencement Bay disposal site, work associated with the Phase 2 Pierce County Terminal Pier/Marine Dredge and Slip 5 Habitat Construction.

Motion was made by Bottiger, seconded by Bacon and carried authorizing the execution of the Third Addendum to the Purchase and Sale Agreement between Thermafiber, Inc. and Port of Tacoma for the property located at 2301 Taylor Way. Included in the addendum are provisions authorizing the Executive Director to approve releases of escrow funds for satisfactory incremental completion of requirements of the holdback provisions, and authorizing the increase of the purchase price for the property in the amount of \$165,000 to offset the City of Tacoma requirement for oil water separators.

During General Business, Jeff Smith and Doug Ljungren presented the Q2 2003 Budget Update. Andrea Riniker announced the results of several AAPA annual awards, as the Port of Tacoma's Port Relations and Information Technology departments both received awards for overall excellence in their fields. Tim Farrell gave the Commission a briefing on recent activities concerning

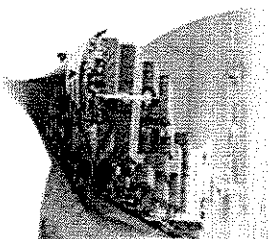
overweight trucks traveling in and around the Port of Tacoma.

There being no further business, the meeting was adjourned at 5:30 p.m.

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- [Study Session Agenda - January 11, 2007 \(meeting cancelled\)](#)
- [Commission Meeting of January 4, 2007 - Cancelled](#)
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PORT OF TACOMA

FINAL AGENDA

THURSDAY, JANUARY 22, 2004

Port Business Center
 Room 104
 3600 Port of Tacoma Road
 Tacoma, Washington

2:00 p.m.: EXECUTIVE SESSION

3:00 p.m.: REGULAR MEETING

1. Reconvene
2. Flag Salute
3. Consider Minutes of January 8, 2004
4. Agenda:
 - A. Request Award of Contract No. 998177 for the Marshall Avenue Auto Facility, Bridge Phase 2 Project.
 - B. Request Award of Contract No. 998169, for the Banana II, 3-Track Expansion.
 - C. Request A/E Increase of Contract No. 997586, for the design work on the AEI Expansion PCT, Autos, Interchange Yard Project.
 - D. Request Call for Bids on Contract No. 998180, for the TSA Grant Security Projects Round II.
 - E. Request Final Acceptance of Contract No. 998141, for the

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- Main

Gog-le-hi-te Habitat Improvement Project.

F. Request A/E Authorization for the Blair Widening Inner Reach and Bridge Reach Projects.

G. Request Authorization to close out escrow for the Thernafiber Property located at 2301 Taylor Way, Tacoma.

5. General Business

A. A resolution concerning the Port of Tacoma's interests in future development and transportation priorities in the Tidelfats including the area east of the Foss Waterway.

B. Strategic Planning Update

C. Recognition of Mazda Motors America for importing its 1 millionth Mazda through the Port of Tacoma.

6. Public and Commissioner comment

7. Adjournment

MEETING MINUTES

Present: Commissioners Bottiger, Bacon, Fabulich, Marzano, and Petrich. Staff: Andrea Riniker, Bob Goodstein, Timothy Farrell, Charla Skaggs, Trevor Thornsley, Policarpo Luis, Sarah Armstrong, Scott Bickel, Jeff Bishop, Kelly Smith, Doug Lungren, Bob Emerson, Julie Collins, Rob Collins, Rod Koon, Jeff Smith. Also Al Gibbs, Tacoma News Tribune; Cheryl Miller and Lyz Kurnitz-Thurlow, League of Women Voters; Ralph Duncan, Art Anderson Association; Jonathan Feste, attorney; Libby Ogard, Tioga Group; Kenneth Rohan, citizen; Conrad Spell and Tim Faker, ILWU; Arun Bhalair, Kennedy Jenks; Tom Jones, Wilbur Smith Associates; The Honorable Gretchen Wilbert, City of Gig Harbor; Councilman Bill Evans, City of Tacoma; Councilwoman Julie Anderson, City of Tacoma; Bill Kittrel, Lakewood Chamber of Commerce; Andrea Elmaleh, Glovis America; Brian Carpenter, Pierce County Building and Trades Council.

Meeting was called to order at 2:00 p.m. by President Petrich, and immediately recessed into Executive Session, where one real estate lease or purchase issue, one litigation issue, and two real estate lease or sale issues were discussed. No action was taken.

Meeting was reconvened at 3:10 p.m.

The flag salute was recited.

Motion was made by Bottiger, seconded by Marzano, and carried approving the minutes for January 8, 2004.

Motion was made by Bottiger, seconded by Fabulich and Marzano, and carried removing the resolution concerning the Port of Tacoma's interests in future development and transportation priorities in the Tideflats including the area east of the Foss Waterway from the agenda.

Motion was made by Bottiger, seconded by Fabulich and carried authorizing the Executive Director to facilitate a joint retreat with the Tacoma City Council, upon determining a mutually agreeable date.

Commissioners agreed to amend the order of business for the today, allowing the remaining items under General Business to be heard prior to the action items.

During General Business, Port of Tacoma staff members briefed the Commissioners on current activities in the following strategic planning opportunities: intermodal logistics; common-user, extended-hours container yard; Frederickson community plan; transitional area adjacent to the Port; air cargo facilities; passenger ferry service; the Port Pavilion webstore; and grant funding.

Also under General Business, Commission President Petrich presented Dan Merryfield of Mazda with a plaque recognizing the import of the one-millionth Mazda through the Port of Tacoma. Mr. Merryfield has worked with the Port of Tacoma as Mazda's representative for 24 years.

At 4:23, President Petrich called a recess.

At 4:30, the meeting was reconvened.

Motion was made by Bacon, seconded by Fabulich, and carried awarding Contract No. 998160 to Robison Construction, Inc., for the work associated with the Marshall Avenue Auto Facility Bridge Phase II. Completion for this contract is scheduled for August 31, 2004. Cost for this work is estimated not to exceed \$3.1 million. Also included in the motion, the Port of Tacoma intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8(a) of the Income Tax Regulation (26 CFR 1.03-8(a)(5)).

Motion was made by Marzano, seconded by Fabulich, and carried awarding Contract No. 998169 to Railworks Track Systems, for work associated with the Tacoma Rail Interchange Yard, 3-Track Rail Expansion project. Construction of this project is scheduled to be completed by June 21, 2004, and cost is estimated not to exceed \$1.38 million. Also included in the motion, the Port of Tacoma intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8(a) of the Income Tax Regulation (26 CFR 1.103-8(a)(5)).

Motion was made by Bacon, seconded by Bottiger, and carried expanding the scope and increasing the value of Contract No. 997586 with NW Utility Consultants, for work associated with the AEI expansion – Pierce County Terminal, Autos, and Interchange Yard. Additional scope of work includes coordinating and splitting out improvements for four separate Port projects in addition to the main AEI construction package. Revised contract value is not to exceed \$55,900. Also included in the motion, the Port of Tacoma intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8(a) of the Income Tax Regulation (26 CFR 1.103-8(a)(5)).

Motion was made by Fabulich, seconded by Bottiger, and carried authorizing the Call for Bids for Contract No. 998180 for work associated with the Transportation Security Administration Grant – Round 2, Perimeter Security Enhancements and Lighting Improvements. Scope of work for this contract includes the supply and installation of labor, materials, and equipment for Project E2285 (TSA Project Number 385) – Perimeter Security Enhancements and Project E2286 (TSA Project Number 387) – Lighting Sign Improvements. Contract is scheduled to be awarded on March 5, 2004, with completion scheduled for July 30, 2004. Cost for the project is estimated at \$647,000, with \$611,000 of that cost provided by TSA grant funds.

Motion was made by Bacon, seconded by Fabulich, and carried

authorizing final acceptance of Contract No. 998141 with Glacier Construction Services, Inc., for work associated with the Gog-Le-Hi-Habitat Improvement Action, in the amount of \$583,880.51. Scope of work for this contract included excavation of approximately 10,000 cubic yards of soil and some debris, placing a clean soil layer over the excavated areas, and installing native vegetation and planting features, as well as restoration of parking lot curbs, striping, gates, and plantings at the entrance. Also included in the motion, the Port of Tacoma intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8(a) of the Income Tax Regulation (26 CFR 1.03-8(a)(5)).

Motion was made by Bacon, seconded by Bottiger, and carried awarding A/E Contract with Berger/Abam, Inc., in a not-to-exceed amount of \$450,000, for work associated with the Blair Waterway Widening for the Bridge Reach, Turning Reach, Inner Reach and Turning Basin Expansion. Scope of work for this contract includes development and implementation of a project plan for 30% design of the work, as well as an alternative analysis of excavating and transporting material for upland disposal. Work also includes geotechnical support for dredging and upland soil management and electrical support for demolition and relocation of existing systems. Work associated with this contract is scheduled to be completed by October 2004. Also included in the motion, the Port of Tacoma intends to issue bonds to finance all or part of this project. The bonds will be sold in such amounts and at such a time or times the Port Commission deems necessary. This is intended to constitute "other similar official action" toward the issuance of debt described in Section 1.103-8(a) of the Income Tax Regulation (26 CFR 1.03-8(a)(5)).

Motion was made by Marzano, seconded by Bacon, and carried authorizing the close-out of escrow and disbursement of remaining funds regarding the Purchase and Sale Agreement between Thermalfiber, Inc., and the Port of Tacoma for the property located at 2301 Taylor Way, Tacoma, Washington. Net financial impact to the Port of Tacoma is \$114,605.00.

During Public Comment, Lyz Kunitz-Thurlow, President of the League of Women Voters, read a statement concerning Port of

Tacoma proposed resolution concerning the Port of Tacoma's interests in future development and transportation priorities in the Tidelands including the area east of the Foss Waterway.

Warrant Nos. 135773 through 136444 and wire transfers in the amount of \$13,733,890.71 were ratified.

There being no further business, the meeting was adjourned at 5:34 p.m.

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- Notice of Special Event - Sept. 20, 2006
- Notice of Special Meeting - Sept. 20, 2006



June 22, 2007

Angus E. Crane, Esq.
Vice President, General Counsel
North American Insulation Manufacturers Association
44 Canal Center Plaza, # 310
Alexandria, VA 22314

Dear Mr. Crane:

I am writing this letter to confirm the operating status of the former Thermafiber mineral wool production facility in Birmingham, Alabama. Thermafiber closed the Birmingham, Alabama, facility on April 13, 2000. The manufacturing plant was dismantled and the remnants were sold as scrap. Therefore, Thermafiber can state unequivocally that this facility will never operate as a mineral wool manufacturing plant again.

Sincerely,

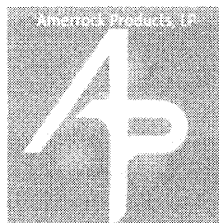
A handwritten signature in black ink, appearing to read "Steve Edris", is written over a horizontal line.

Steve Edris
President

3711 Mill Street, Wabash, IN 46992-7778
Phone: 260-563-2111x214 • Fax: 260-563-8979

Comments Received from SERs following the June 16, 2011 Panel Outreach Meeting

- Lee Houlditch, Amerrock Products
- Tom Lund, Isolatek International
- Angus Crane, NAIMA
- Timothy Scott, Rock Wool Manufacturing
- Steve Edris, Thermafiber, Inc.



PRODUCING PRODUCTS WITH THE ENVIRONMENT IN MIND...

June 30, 2011

Sent Via Email

Ms Madeline Barch
Office of Policy
Regulatory Management Division
U.S. Environmental Protection Agency
Washington, D.C. 20460

Re: Mineral Wool SBAR Panel – Proposed Environmental Regulation Changes

Dear Ms. Barch:

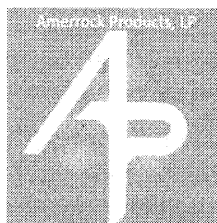
I am writing this letter to make additional comments to those I made in the June 15, 2011 SBAR Panel meeting regarding the potential effects the proposed changes in environmental regulations will have on the Amerrock plant located in Nolanville, Texas. I am also doing this to provide some of the history and additional information regarding the plant and the plant operations and the severe economic conditions we have been and are currently facing.

I have been involved with the mineral wool industry for over 30 years. During my career I have worked for several of the mineral wool companies. While I was President of Sloss Industries, the company had two mineral wool plants, both of which are now shut down and de-commissioned. While President of Thermafiber, the company operated four mineral wool plants and owned another that had been shut down before I joined the company. While I was with Thermafiber the company shut down two of the plants. With financing help from Thermafiber, some personal funds, and some significant bank financing I was able to acquire the other plant located in Nolanville, Texas in 2006, which now operates as Amerrock Products, LP.

One of the main reasons I wanted to acquire the plant in Texas was the fact that I know from many years in the industry that mineral wool is a unique product with a combination of superior thermal, acoustical, and fire proofing qualities that are not available from any other insulation material. Also, having been involved in NAIMA I am very aware of the significant health studies that the industry sponsored through NAIMA over many years to ensure that the product does not impose adverse health effects for plant workers or those installing the products.

Amerrock Products
440 Jackrabbit Rd.
Nolanville, TX 76559

(205) 516-9164
lshoulditch@amerrock.com
www.amerrock.com



PRODUCING PRODUCTS WITH THE ENVIRONMENT IN MIND...

Another reason I felt comfortable acquiring the Nolanville Plant was that the 1999 MACT had been promulgated and knowing that the plant operations are efficient, the plant performs stack testing every year, the plant has an emission stack that is 195 feet high, and the plant produces only loose fiber so there are no binders involved, I believed that the residual risk review would result with a finding of minimal risk and no additional controls would be necessary.

The Amerrock plant is the only plant in the United States producing loose rock wool for the residential insulation market. When I acquired the plant in January 2006 the home construction market was robust and the plant operated 5-6 days per week. At the time I acquired the plant I anticipated that there would be a downturn in housing starts due to the long upward cycle the market had experienced. I factored in a 20% downturn where in actuality we have experienced an almost 70% downturn. The plant has operated at a loss for 3 ½ years with the loss in 2010 exceeding \$1 million. The company has been placed in the special assets division of the bank carrying the note and the company credit line has been frozen leaving the company with no ability to borrow any funds.

And as I mentioned in my comments at the SBAR meeting, if an incinerator were required there is not a natural gas line in the vicinity of the plant and I don't know that there are other viable options for incineration. In actuality this is merely academic because if new regulations require a capital investment of any magnitude the company will have to close resulting in the loss of 33 jobs and the possibility that there will no longer be an insulation product that brings to the market the superior attributes of rock wool.

I respectfully plead that you consider the impact that new regulations will have on the mineral wool industry and this company in particular.

Sincerely;

Lee Houlditch – CEO

Additional copies sent via email to: Mr. David Rostker; Ms. Courtney Higgins; Mr. Alex Cristofaro; Ms. Susan Fairchild

Amerrock Products
440 Jackrabbit Rd.
Nolanville, TX 76559

(205) 516-9164
lhoulditch@amerrock.com
www.amerrock.com



Submitted via Electronic Mail

July 1, 2011

Ms. Madeline Barch barch.madeline@epamail.epa.gov
Office of Policy, Office of Regulatory Policy and Management
Regulatory Management Division
U. S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1806A
1200 Pennsylvania Avenue, N. W.
Washington, D. C. 20460

Re: Isolatek International's Comments on Mineral Wool SBAR Panel Process

Dear Ms. Barch:

The United States Mineral Products Company d.b.a. Isolatek International welcomes the opportunity to add additional comments to the United States Environmental Protection Agency (US EPA), the Small Business Administration (SBA), and the Office of Management and Budget (OMB) representatives of the panel convened to assess the economic impact of the Risk and Technology Review for Mineral Wool Production. Isolatek International is a private Company organized by the US Bankruptcy Court and operates for the benefit of those injured by exposure to asbestos. The Company is controlled by Trustees appointed by the Court.

Isolatek International continues to work through the North American Insulation Manufacturers Association (NAIMA) and is in agreement and supports the comments that NAIMA has filed with the SBAR Panel, including the most recent comments submitted June 30, 2011. We take note that our oral comments made at the face to face meeting held June 16, 2011 have been included and accurately reflect what was conveyed. However, we feel compelled to add make additional comments to be sure that the SBAR Panel has a more complete picture of the issues from our perspective.

Isolatek International operates two small (< 5 tons of melt per hour, each) coke-fired cupolas in Huntington, Indiana. We manufacture loose mineral wool as the primary high temperature insulation ingredient in our Blaze-Shield® products. Blaze-Shield® is a fire resistive material applied to steel columns and beams in commercial and industrial buildings to protect the steel from failure if exposed directly to flame. As a life safety product, Blaze-Shield® is tested by Underwriter Laboratory and other code bodies to meet approved design and safety standards.

We operate our Huntington Plant within the requirements of the current MACT standard. While we understand the burden placed upon EPA by the courts to set an emissions limit for Carbonyl Sulfide (COS), we do not understand the need to set an emission limit so low that substantial investment in control equipment would be required. No one has presented a case that COS, a byproduct of using coke as a fuel, presents any risk to our neighbors or to our employees. We acknowledge that there are five cupolas (and only five) in our industry that have the ability to destruct COS through incineration. To our knowledge, no one in the industry was required to install an incinerator for the sole purpose of destructing COS. The five cupolas indicated are of differing sizes and capacities, and the mineral wool produced is used for differing products. Three of the five cupolas that have incinerators are from the sole large business entity operating in our industry today, and the two small businesses that have incinerators operate bonded product lines.

Should the EPA set the emission limit they have proposed for COS (0.02 – 0.5 lbs per ton of melt) for all mineral wool cupolas regardless of size or use Isolatek International will be one of three



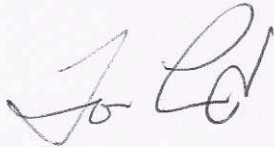
701 North Broadway • P.O. Box 5006 • Huntington • Indiana 46750
Tel 260.356.2040 • Fax 260.356.2337 • E-Mail cafco@isolatek.com

Companies that will be forced to install incineration, as this is the only proven method to-date for destructing COS. We will be forced to do so for the sole purpose of destructing COS even though no case has been made that COS emissions create health risks. We understand that a fourth Company will be required to modify their process even though they already have an incinerator.

Isolatek International can only speak to the impact on our business should this happen. We have researched the costs of installing and operating incinerator systems. Our information comes from information shared by others in the industry and from our consultants. Isolatek International would be required to invest a minimum of \$1.5 million per cupola to capture the exhaust stream, pass it through an incinerator/ heat recuperation system prior to final emissions control. An additional \$0.5 million per cupola would be required to make the necessary modifications to the current process and buildings. The \$4+ million total investment does not contain any provisions for controlling the increase in SO₂ and NO_x emissions that would occur as a result of using natural gas as the fuel for destructing COS. The cost of the natural gas will be mostly offset by savings in coke from the recuperation process, but the cost to maintain the incinerator, particle cyclones, fans, ductwork, and electrical requirements would create additional operating costs over and above the initial investment. We can estimate a cost of \$0.8 - \$1 million per year in additional costs over the projected useful life of this equipment. This represents a 10%+ increase in operating costs. Our main competitors do not use mineral wool in their formulations, so we view a 10%+ increase in cost as a 10%+ loss in margin in our extremely competitive market. Given this scenario, it is doubtful that adding the necessary control equipment will be viewed as a viable investment by the Trustees that have the responsibility for overseeing our Company. It is more likely that the Huntington Plant would cease operations and 50 families would lose their primary source of income.

Isolatek International asks that you consider these additional comments, and that practical and reasonable regulatory requirements are enacted.

Respectfully Submitted,



Tom Lund
Operations Manager

cc: Mr. Alexander Christofaro, US EPA
Ms. Susan Fairchild, US EPA
Ms. Courtney Higgins, OMB
Mr. David Rostker, SBA

christofaro.alexander@epa.gov
susan.fairchild@epa.gov
courtney_higgins@omb.gov
david.rostker@sba.gov



*Celebrating 75 Years
of Energy Efficiency*



VIA E-MAIL

June 30, 2011

Ms. Madeline Barch
Office of Policy, Office of Regulatory Policy and Management
Regulatory Management Division
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1806A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: NAIMA's Comments on Mineral Wool SBAR Panel Meeting

Dear Ms. Barch:

J. INTRODUCTION

The North American Insulation Manufacturers Association ("NAIMA") has appreciated the ongoing dialogue with the Environmental Protection Agency ("EPA"), the Small Business Administration ("SBA"), and the Office of Management and Budget ("OMB") on the economic impact to small businesses from the Risk and Technology Review for Mineral Wool Production. The comments set forth in this letter augment earlier submissions by NAIMA, specifically NAIMA's May 16, 2011 letter to Susan Fairchild and NAIMA's presentation at the SBAR Panel meeting on June 16, 2011. NAIMA requests that this letter, the May 16, 2011 letter, and the June 16, 2011 presentation be included in the public docket for this matter.

NAIMA is the trade association of North American manufacturers of rock and slag wool insulation. The rock and slag wool insulation manufacturing process is subject to the Mineral Wool MACT Standard. NAIMA represents all rock and slag wool manufacturers operating in the United States. However, this letter's discussion on carbonyl sulfide does not reflect the opinions of Industrial Insulation Group, LLC.

These comments set forth herein depict an industry that has suffered a significant and near devastating impact from regulatory requirements and other factors. NAIMA sees the recent proposals considered by EPA as having the potential to strike a fatal blow to more than half of the remaining members of the domestic mineral wool industry. The industry's foreign competitors (Canada, Europe, Australia, and China) would be the beneficiaries if such a scenario is played out. NAIMA is genuinely concerned about the viability of the U.S. mineral wool industry if the proposals suggested are implemented. These comments explain and demonstrate the vulnerability of the five small businesses that make up the mineral wool industry.

More importantly, these comments present alternatives that enable EPA to address risk and lower emissions without threatening the very survival of the small businesses that constitute the majority of the mineral wool industry.

II. SMALL BUSINESS STATUS

NAIMA confirms that five of the six U.S. companies currently operating in the mineral wool industry are small businesses, defined by the SBA (and incorporated by statute) for the mineral wool SIC code (3296) as a company with less than 750 employees (13 C.F.R. § 121.601). The mineral wool companies that are small businesses are Amerrock Products LP; Industrial Insulation Group, LLC; Isolatek International; Rock Wool Manufacturing; and Thermafiber, Inc.

III. MINERAL WOOL INDUSTRY EMISSIONS HAVE DROPPED SIGNIFICANTLY

a. The 1999 MACT Floor Emission Limit Was Calculated Correctly

In EPA's "SBAR Panel Briefing," the Agency specifically requested information that could demonstrate that the MACT floor emission limit was calculated correctly. NAIMA volunteered to provide 2002 and 2005 emissions data to demonstrate that the MACT had reduced emissions. This data was provided to EPA in 2007. To put the data into perspective, it is important to note the following: The 2002 NEI data does not reflect industry-wide implementation of the Mineral Wool MACT Standard nor the reduced number of production facilities currently operating. The 2005 emissions data can be again provided to EPA in facility-specific spreadsheets.

The Mineral Wool MACT went into effect in June 2002, but a few facilities received from EPA one-year extensions of the compliance deadline. The 2005 data represents an industry-wide compliance with the MACT Standard.

The difference in aggregate, industry-wide emissions between 2002 and 2005 was significant as major emission reductions were achieved between 2002 and 2005. These reductions were as follows:

Hazardous Air Pollutant	2002 NEI (Aggregate) (TPY)	2005 Emissions (Aggregate) (TPY)	Percent Reduction (%)
Carbonyl Sulfide	428.321	382.779	10.63
Formaldehyde	30.223	17.826	41.02
Triethylamine	25.903	19.010	26.61
Phenol	18.237	14.592	19.99
Methanol	4.000	3.113	22.18
Hydrogen Fluoride	1.331	0.610	54.18
Benzene	1.000	0.510	49.00
Ethylene Glycol	0.025	0.000	100.00
Manganese & Compounds	0.0158	0.0003	98.10
Chromium & Compounds	0.3172	0.0005	99.84
Selenium & Compounds	0.0008	None Reported	N/A
Nickel & Compounds	0.0004	0.0001	74.26
Arsenic & Compounds (Inorganic Including Arsine)	0.0004	None Reported	N/A
Lead & Compounds	0.0003	0.0001	64.32
Cobalt & Compounds	0.0000496	None Reported	N/A
Beryllium & Compounds	0.0000483	None Reported	N/A
Mercury & Compounds	0.0000088	None Reported	N/A
Cadmium	0.0000034	None Reported	N/A
Cadmium Oxide	0.0000019	None Reported	N/A
Cadmium & Compounds	0.0000005	None Reported	N/A

b. U.S. Mineral Wool Production Facilities Have Significantly Declined, Further Reducing Emissions

As explained in greater detail below, during the last 12 years since the MACT standard was issued, mineral wool companies have liquidated or dramatically restructured before emerging from bankruptcy. No new plants or production lines have been introduced since 1990. As a result, the number of manufacturing plants is less than half the number it was in 1999. In addition, many of the surviving plants have reduced the number of operating cupolas or production lines.

The reduced number of cupolas, which are specialized furnaces that melt the raw materials, similarly illustrates the industry's economic hardship. These furnaces are at the heart of the manufacturing process. When the Mineral Wool MACT Standard was promulgated in 1999, 31 mineral wool cupolas were operating throughout the United States, as follows:

Mineral Wool Production Lines – 1999

Company	Location	Bonded-Product Production Lines	Nonbonded- Product Production Lines	Date of Installation
American Rockwool	Spring Hope, NC	0	2	1978
American Rockwool	Nolanville, TX	0	2	1986
Celotex	Pittston, PA	0	1	1957
Celotex	Lagro, IN	0	2	1946
Fibrex	Alexandria, IN	0	2	1970
Isolatek	Huntington, IN	0	2	1929
MFS Inc.	Bethlehem, PA	0	2	1970
Owens Corning	Phenix City, AL	1	1	1990
Rock Wool Mfring.	Leeds, AL	1	1	1970
Sloss	Birmingham, AL	0	5	1947
Thermafiber	Wabash, IN	1	1	1935
Thermafiber	Tacoma, WA	1	1	1946
Thermafiber	Birmingham, AL	1	1	1959
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ¹ 1979 ²
TOTAL		5	26	

No new mineral wool production facilities have started operations since the issuance of the Mineral Wool MACT Standard, and two companies have changed owners. The following is a list of the operating mineral wool facilities when EPA went through the first residual risk analysis in 2007 and 2008 and the number of production lines:

¹ Cupola 1 was added to USG's Red Wing, Minnesota facility in 1973.

² Cupola 2 was added to USG's Red Wing, Minnesota facility in 1979.

Company	Location	Bonded-Product Production Lines	Nonbonded- Product Production Lines	Date of Installation
Amerrock	Nolanville, TX	0	2 ³	1986
Isolatek	Huntington, IN	0	2	1929
IIG	Phenix City, AL	1 ⁴	1	1990
Rock Wool Mfring	Leeds, AL	1 ⁵	1	1970
Sloss	Birmingham, AL	0	5	1947
Thermafiber	Wabash, IN	1	1	1935
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ⁶ 1979 ⁷
TOTAL		3	15	

As described in greater detail below, the mineral wool industry already responded to one Advanced Notice of Proposed Rulemaking and a Notice of Proposed Rulemaking (October 10, 2008) on residual risk and provided EPA extensive emissions data. EPA concluded in the Proposed Rulemaking in 2007 that additional controls or requirements were not necessary.

Now, yet another residual risk analysis is underway. At the commencement of this second residual risk analysis, the industry is even smaller.

³ Amerrock has two operational lines, but due to a consent order with Texas Commission on Environmental Quality ("TCEQ"), Amerrock is only permitted to operate one line at a time.

⁴ IIG continues to operate both an unbonded and bonded line at the former Owens Corning facility in Phenix City, Alabama, but those lines are not operated simultaneously. In other words, only one cupola is in operation at IIG at any time.

⁵ Rock Wool Manufacturing has permits to operate both an unbonded and bonded line, but because the market for unbonded product used in manufactured housing has been largely taken over by cellulose insulation, only the bonded line currently is operating.

⁶ Cupola 1 was added to USG's Red Wing, Minnesota facility in 1973.

⁷ Cupola 2 was added to USG's Red Wing, Minnesota facility in 1979.

Company	Location	Bonded-Product Production Lines	Nonbonded- Product Production Lines	Date of Installation
Amerrock	Nolanville, TX	0	2 ⁸	1986
Isolatek	Huntington, IN	0	2	1929
IIG	Phenix City, AL	1 ⁹	1	1990
Rock Wool Mfring	Leeds, AL	1 ¹⁰	1	1970
Thermafiber	Wabash, IN	1	1	1935
USG	Walworth, WI	0	1	1969
USG	Red Wing, MN	0	2	1973 ¹¹ 1979 ¹²
TOTAL		3	10	

Please note that the closure of Sloss in 2009 was a particularly significant reduction for mineral wool production. Sloss operated five lines of non-bonded product. Its closure reduced the total production lines from 18 to 13.

To NAIMA's knowledge, there are no other mineral wool manufacturing plants operating in the United States. NAIMA has been informed that Armstrong is constructing a new facility to compensate for the loss of Sloss's Fiber Production Division. Sloss provided Armstrong a large share of its fiber used in its ceiling tile. Given the size of the industry and the economic barriers to entry, it is highly unlikely that competitors could be operating in the U.S. without the knowledge of NAIMA or the industry.

As the above charts illustrate, since 1999, eight mineral wool production facilities have ceased operations and three facilities have reduced the number of operating lines. The following eight facilities have closed and have ceased operations since 1999: American Rockwool, Spring Hope, North Carolina; Celotex, Pittston, Pennsylvania; Celotex, Lagro, Indiana; Fibrex, Alexandria, Indiana; MFS, Bethlehem, Pennsylvania; Thermafiber, Tacoma, Washington; Thermafiber, Birmingham, Alabama; and Sloss Industries, Birmingham, Alabama.

⁸ Amerrock has two operational lines, but due to a consent order with Texas Commission on Environmental Quality ("TCEQ"), Amerrock is only permitted to operate one line at a time.

⁹ IIG continues to operate both an unbonded and bonded line at the former Owens Corning facility in Phenix City, Alabama, but those lines are not operated simultaneously. In other words, only one cupola is in operation at IIG at any time.

¹⁰ Rock Wool Manufacturing has permits to operate both an unbonded and bonded line, but because the market for unbonded product used in manufactured housing has been largely taken over by cellulose insulation, only the bonded line currently is operating.

¹¹ Cupola 1 was added to USG's Red Wing, Minnesota facility in 1973.

¹² Cupola 2 was added to USG's Red Wing, Minnesota facility in 1979.

The following facilities have reduced the number of operating lines: Amerrock Products LP; Industrial Insulation Group, LLC (“IIG”); and Rock Wool Manufacturing. The former American Rockwool facility in Nolanville, Texas is now owned by Amerrock, and the former Owens Corning facility in Phenix City, Alabama is now owned by IIG. It is important to recognize that total closures have more impact than reduction of production lines.

In NAIMA’s May 16, 2011 letter (referenced above), NAIMA provided documentation that the closed facilities would not reopen (see pp. 8-10 of NAIMA’s letter to EPA, May 16, 2011.)

IV. EPA’S PROPOSED AMENDMENTS ARE COST PROHIBITIVE AND THREATEN THE VIABILITY OF THE MINERAL WOOL INDUSTRY

NAIMA and its mineral wool small businesses are concerned about preservation of their ability to continue to manufacture and operate their plants. Additional discussion of economic impact is set forth in NAIMA’s May 16, 2011 letter to EPA. Imposition of the specific emission limits being proposed would likely mandate technological equipment that is so costly that the expenditure would result in at least three of the small businesses being forced out of business. Representatives of each of the five small businesses presented a statement at the SBAR Panel Meeting on June 16, 2011 addressing financial issues. These statements were effective in establishing the financial vulnerability of most of these companies. Therefore, statements from the following companies are attached hereto:

- Amerrock Products LP (Attachment 1)
- Industrial Insulation Group, LLC (Attachment 2)
- Isolatek International (Attachment 3)
- Rock Wool Manufacturing (Attachment 4)
- Thermafiber, Inc. (Attachment 5)

V. RECOMMENDED LIMITS AND ALTERNATIVES FOR CURING OVENS

EPA proposes a significant change to curing oven limits from the original MACT Standard. For existing curing oven sources, EPA proposes no change in the current formaldehyde limit, but EPA also recommends the addition of two new pollutants – phenol (with a limit of 0.0000762 to 0.0004 pounds per ton of melt) and methanol (with a limit of 0.000157 to 0.000474 pounds per ton of melt). Under the existing MACT Standard, formaldehyde is the only HAP that is measured, and formaldehyde is used as a surrogate for phenol and methanol. For a number of reasons, NAIMA and its members urge EPA to not amend the MACT Standard for formaldehyde.

First, EPA has stated that “The risks due to the mineral wool industry are low, and do not compel us to amend the MACT.”¹³ NAIMA concurs with this conclusion and asks that EPA take regulatory action in a manner consistent with this technical conclusion and not amend the MACT

¹³ EPA presentation, “Mineral Wool Information Update, Addendum to the April 2011 SBAR Panel Briefing, June 2011,” June 2, 2011, slide 4.

standard for curing ovens. Second, the limits recommended for phenol and methanol will likely lower the formaldehyde limit, which, again, is essentially amending the Mineral Wool MACT. Based on conversations with NAIMA's mineral wool members producing bonded products, formaldehyde emissions are traditionally higher than phenol and methanol because of the simple fact that the ratio of formaldehyde to phenol is thought to be in the 2:1 to 3:1 range.¹⁴ A similar ratio exists for formaldehyde to methanol.

There are conditions, such as temperature and mixing procedure that may cause variations in the co-relationship between these compounds. In fact, during the SBAR Panel meeting, EPA expressed doubt as to the accuracy of that ratio because some formaldehyde data was actually lower than phenol and methanol data. The specific mineral wool companies have explained to NAIMA that the seeming disparity is actually a result of a data set that comprises numerous data points for formaldehyde, but only one data point for both phenol and methanol. The disparity may also be explained by the curing process. During the curing process, the higher amount of formaldehyde is reduced through a reaction with ammonia and nitrogen, but the phenol and methanol remains stable. The variability of the co-relationship between formaldehyde, phenol, and methanol illustrates the advisability of retaining formaldehyde as a surrogate for all these compounds.¹⁵ This variability also makes NAIMA uncomfortable basing emission limits on such a limited field of data. Arclin, the mineral wool industry binder provider, has stated that EPA's proposed phenol and methanol limits for the curing oven would be impossible for the mineral wool industry to meet consistently.

Therefore, NAIMA recommends that EPA adopt the following alternatives to EPA's proposed emission limits for the curing oven:

Alternative 1

- Formaldehyde – 0.06 lbs. per ton of melt – this is the existing MACT Standard for formaldehyde.
- Phenol – 0.04 lbs. per ton of melt – this or some other similar limit that would reflect the natural ratio between formaldehyde and phenol.
- Methanol – 0.04 lbs. per ton of melt – this or some other similar limit that would reflect the natural ratio between formaldehyde and methanol.

This alternative enables the mineral wool industry to retain the existing formaldehyde limit – no change to the MACT standard for formaldehyde – and provides a phenol and methanol limit that realistically corresponds with the formaldehyde limit. This alternative would give EPA the three separate limits it advocates.

¹⁴ James B. Wilson, "Life-Cycle Inventory of Formaldehyde-Based Resins Used in Wood Composites in Terms of Resources, Emissions, Energy and Carbon," *Wood and Fiber Science*, 42 (CORRIM Special Issue), 2010, p. 130. www.freepatentsonline.com/6214964.html.

¹⁵ "Although phenolic resins have been known and widely utilized for over 60 years, their detailed chemical structure remains to be established. It is now well known that the resins are very complex and that the various structures present will depend on the ratio of phenol to formaldehyde employed, the pH of the reaction mixture and the temperature of the reaction." Brydson, J.A., *Plastic Materials*, 7th Edition, p. 639 (1999).

Alternative 2

- Formaldehyde – 0.06 lbs. per ton of melt – this is the existing MACT Standard for formaldehyde.
- Formaldehyde would serve as a surrogate for phenol and methanol without any specific limits for phenol or methanol.

This alternative enables the mineral wool industry to retain a single emission limit. This alternative also avoids an amendment to the existing MACT standard, which is consistent with EPA's statement: "The risks due to the mineral wool industry are low, and do not compel us to amend the MACT."¹⁶

VI. RECOMMENDED LIMITS AND ALTERNATIVES FOR COLLECTION

EPA proposes imposing new emission limits on the collection chamber. This is an amendment to the MACT standard, and as noted above, EPA has indicated that "The risks due to the mineral wool industry are low, and do not compel us to amend the MACT."¹⁷ Based on this technical conclusion by the Agency, NAIMA strongly urges EPA to forego the imposition of emission limits on the collection chamber.

Historically, both mineral wool and fiber glass manufacturers have not had controls on the collection chamber other than for particulate matter control. This is because: 1) the VOC emissions are low; 2) the design of the manufacturing equipment makes installation of control equipment impractical and, in some cases, impossible; and 3) the cost of control technology on the collection chamber is cost prohibitive.

A cost estimate for an incinerator on one collection chamber resulted in the following:

- Incinerator – \$1.77 million
- Pre-filter – \$0.3 million
- Exhaust Stack – \$0.1 million
- Annual operating and maintenance – \$1.043 to \$1.084 million

This enormous expenditure will result in a cost approaching \$600,000 per ton of pollutant reduction. In contrast, consider that in the settlement between Duke Energy and EPA, Duke Energy expended \$85 million to cut 35,000 tons of SO₂; this is \$2,286 per ton of reduction. NAIMA recognizes that SO₂ is a criteria pollutant, not a hazardous air pollutant, but the principle

¹⁶ EPA presentation, "Mineral Wool Information Update, Addendum to the April 2011 SBAR Panel Briefing, June 2011," June 2, 2011, slide 4.

¹⁷ EPA presentation, "Mineral Wool Information Update, Addendum to the April 2011 SBAR Panel Briefing, June 2011," June 2, 2011, slide 4.

is the same – a reasonable balance between cost and reduction of pollutant. Even BACT standards typically establish a \$5,000 - \$10,000 per ton range.¹⁸

NAIMA urges EPA to place in perspective the low emissions and limited risk from the collection chamber and contrast that with the potentially devastating costs of control equipment. The mineral wool industry exists to produce products that save energy, act as fire proofing, and reduce pollution. The industry needs technically and economically feasible standards to perform this function. The costs of attempting to control the emissions from the collection chamber will result in such invasive pollution control equipment that it will eliminate the economic feasibility of manufacturing mineral wool competitively. The economic and employment hardship that results would be far out of proportion to the minimal environmental benefit.

To avoid such an undesirable outcome, NAIMA urges EPA to consider the following alternatives:

Alternative 1

NAIMA urges EPA to forego imposing any emission limits on the collection chamber.

Alternative 2

As an alternative to EPA's stringent emission limits, NAIMA recommends the following:

- Formaldehyde – 1.5 lbs. per ton of melt
- Formaldehyde would serve as a surrogate for phenol and methanol

This alternative is based on available industry data and preserves the use of surrogates as exists in the current Mineral Wool MACT.

Alternative 3

NAIMA recommends the following:

- Formaldehyde – 1.5 lbs. per ton of melt
- Phenol – 0.75 lbs. per ton of melt
- Methanol – 0.75 lbs. per ton of melt

This alternative, again, bases the emissions on available industry data and gives EPA three pollutant limits. The phenol and methanol limits correspond with the typical formaldehyde and phenol/methanol ratio.

¹⁸ www.epa.gov/oms/regs/fuels/rfg/58-17175.txt.

Alternative 4

NAIMA urges EPA to subcategorize the bonded collection chambers. Section 112 of the Clean Air Act (“CAA”) authorizes EPA to “distinguish among classes, types, and sizes of sources within a category” in establishing MACT standards (CAA § 112 (d)(1)). EPA retains discretion in important respects in setting floors for MACT standards within the statutory framework to promulgate MACT standards that best serve the public interest. Specifically, Congress authorized EPA to subcategorize source categories based on classes, types, and sizes of sources, which will result in different floors for different categories. 59 Fed. Reg. 29,196, 29,200 (June 6, 1994).

In other words, EPA’s authority to subcategorize is broad and discretionary. EPA’s criteria for subcategorization includes “air pollution control differences, process operation . . ., emissions characteristics, control device applicability and costs, safety, and opportunities for pollution prevention.”¹⁹ Therefore, NAIMA urges EPA to subcategorize the three bonded collection chambers based on variation in pollution control equipment. The subcategories would be arranged as follows:

- Baghouse
 - Industrial Insulation Group
- Scrubber
 - Rock Wool Manufacturing
- Screenhouse
 - Thermafiber

Alternative 5

Based on the ability of EPA to subcategorize as discussed above, NAIMA urges EPA to subcategorize the three bonded collection chambers based on collection chamber design. Collection chamber design relates directly to possible binder emissions and control of the formaldehyde emissions. In fact, EPA has subcategorized when sources exhibit differences in operation, design, and size.²⁰ Therefore, based on collection chamber design, NAIMA recommends the following subcategories:

- Drum
 - Industrial Insulation Group
- Horizontal Screen
 - Rock Wool Manufacturing
- Vertical Screen
 - Thermafiber

¹⁹ 59 Fed. Reg. 26,429, 26,444 (May 20, 1994).

²⁰ RTI International, Memorandum to EPA on MACT Floor Analysis, December 2003, p. 13.

Alternative 6

NAIMA urges EPA to subcategorize the collection chambers based on fiberization or spinner differences. When natural rock or iron ore blast furnace slag is melted in a cupola furnace or pot, this hot, viscous material is poured in a narrow stream onto one or more rapidly spinning wheels, which cast off droplets of molten material and creates fibers. As the material fiberizes, its surface may be coated with a binder material and/or de-dusting agent (*e.g.* mineral oil). The fiber then is collected and formed and deposited into the collection chamber. In the collection chamber, air, and in some cases a binder, is sprayed over the fibers. There are vertical and horizontal spinners which vary the velocity and direction in which the fiberized wool is deposited into the collection chamber, which, naturally, impact the emissions of formaldehyde. Based on the fiberization/spinner design, NAIMA recommends the following subcategories:

- Horizontal Spinner
 - Rock Wool Manufacturing
 - Thermafiber
- Vertical Spinners
 - Industrial Insulation Group

VII. RECOMMENDED LIMITS AND ALTERNATIVES FOR CARBONYL SULFIDE

NAIMA urges EPA to forego imposing any emission limits on carbonyl sulfide (“COS”) from cupola furnaces. First, NAIMA questions whether the Brick MACT decision requires imposition of these new requirements. Second, the range of emission limits proposed by EPA – 0.02 - 0.05 lbs. per ton of melt – cannot be achieved by the majority of the industry, including even one facility that already operates an incinerator. Based on data available to NAIMA, the average COS emissions is 1.79 lbs. per ton of melt. Based on NAIMA’s data, the average COS emissions of the top five performing sources is 0.076 lbs. per ton of melt.

To achieve the emission limits recommended by EPA, companies would be required to install an incinerator. Based on mineral wool manufacturers’ experience and cost estimates, each incinerator could cost between \$3 to \$6 million. This cost seems excessive in a number of ways, but its excessiveness appears most inappropriate when viewed in light of the pollutant that is being regulated – carbonyl sulfide. As set forth more fully below, it seems imprudent to expend enormous sums of money to incinerate a pollutant that occurs in large measures – 80 percent of atmospheric COS – within nature itself. Moreover, there is limited data on risk arising from COS, whether it comes from nature or is a by-product of a manufacturing process.

The available data on carbonyl sulfide do not indicate that carbonyl sulfide emissions from mineral wool manufacturing facilities present any significant risk to workers or surrounding communities. Carbonyl sulfide is naturally prevalent in the atmosphere at relatively high concentrations and is the most abundant sulfide compound in the earth’s atmosphere.²¹ Most sources of atmospheric carbonyl sulfide are natural, with anthropogenic emissions making only a small contribution to overall atmospheric levels. Approximately 43 percent of atmospheric

²¹ P. Wernick, *Chemistry of the Natural Atmosphere* (Academic Press, 1988).

carbonyl sulfide is directly emitted from natural sources such as oceans, marshes, and volcanoes.²² An additional 35 percent derives from atmospheric transformation of carbon disulfide to carbonyl sulfide.²³ Thus, almost 80 percent of atmospheric carbonyl sulfide results from natural sources. Biomass burning and coal-fired power plants are by far the largest two anthropogenic sources, accounting for 12 and 5 percent respectively, of total carbonyl sulfide releases to the atmosphere.²⁴ All other worldwide anthropogenic sources of carbonyl sulfide – including titanium dioxide manufacturing, carbon black manufacturing, petroleum refining, aluminum producing, and mineral wool manufacturing in the United States and elsewhere – account collectively for only approximately 4 percent of total carbonyl sulfide levels.²⁵

Representing only a small fraction of this 4 percent of global emissions, U.S. mineral wool manufacturing facilities thus contribute a negligible share of the overall atmospheric levels of carbonyl sulfide.²⁶ No adverse health effects have ever been attributed to the relatively high concentrations of carbonyl sulfide that naturally occur in the atmosphere. The negligible addition to atmospheric carbonyl sulfide levels that results from mineral wool manufacturing would therefore not be expected to have any discernible impact on human health. The limited health data available on carbonyl sulfide do not indicate any carcinogenicity or other chronic toxicity, with known adverse health effects limited to acute toxicity at very high concentrations. These data indicate that carbonyl sulfide is unlikely to cause any significant health risks at ambient levels surrounding mineral wool manufacturing plants.

During the mineral wool manufacturing process, COS is emitted as a by-product. The COS emissions originate from the coke used as the heat source that melts the slag or natural rock. COS is produced via the incomplete combustion of sulfur and carbon from coke in a reduced atmosphere. Thus, COS is not manufactured or used as an additive to the mineral wool manufacturing process, but is found only as an unwanted by-product.

In addition, incineration of certain pollutants – COS – would increase secondary emissions of NO_x and SO₂. Given that a cupola incinerator would be intended to control carbonyl sulfide, which, based on the above description, appears to be one of, if not the least toxic hazardous air pollutants listed in section 112 (b), EPA should not set COS limits or go above the MACT floor when incineration would result in increased levels of pollutants and likely result in the termination of operations and a loss of employment for these existing small businesses.

²² Khalil, M.A.K. and Rasmussen, R.A. (1984). "Global Sources, Lifetimes, and Mass Balances of Carbonyl Sulfide (COS) and Carbon Disulfide (CS₂) in the Earth's Atmosphere," *Atmospheric Environ.* 18:1805-1813.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ Chin, M. and Davis, D.D. (1993), "Global Sources and Sinks of OCS and CS₂ and Their Distributions," *Global Biogeochem. Cycles*, 7:321-338.

²⁶ EPA has long recognized the importance of considering risk in context when making risk management decisions and to evaluate, for example, the relative contribution to total exposure levels from the particular source or sources being regulated. See, e.g. EPA, *Reducing Risk: Setting Priorities and Strategies for Environmental Protection* (1990); Memorandum from Robert Sussman, Chair, EPA Science Policy Council, to EPA Administrator Carol Browner re: Science and Policy in Risk Assessment (May 31, 1994).

Given the important environmental benefits of mineral wool insulation products, EPA should avoid directly imposing overly stringent or unnecessary emission limits or indirectly imposing technological requirements that will threaten the viability of companies that impart such significant environmental benefits. For example, if the mineral wool industries consumption of blast furnace slag were decreased because additional companies were forced out of business due to COS limits, most of that slag would have to be disposed of as waste material. Moreover, mineral wool insulation increases energy efficiency.

Energy efficiency is an effective mechanism to reduce emissions, and EPA's policies encourage pollution prevention. In fact, EPA recognizes the environmental benefits of energy efficiency. For example, under EPA's Pollution Prevention Policy,²⁷ measures that prevent pollution are afforded priority. Pollution prevention is also a mandated national policy: The Pollution Prevention Act of 1990²⁸ established the national policy that pollution should be prevented or reduced at the source whenever feasible. Preventing pollution offers important economic benefits, as pollution never created avoids the need for expensive investments in waste management or air pollution abatement.

Therefore, it would be counterproductive to establish a MACT limit to control a substance – carbonyl sulfide – for which no health risk has been established. This would be particularly irrational if the imposition of that same MACT limit could financially ruin an industry and certainly put at least three small entities that produce environmentally beneficial products out of business. Therefore, NAIMA strongly urges EPA's careful consideration of the following alternatives to imposition of a COS MACT limit.

Alternative 1

Given the limited risk data and the fact that over 80 percent of atmospheric COS comes from nature, NAIMA recommends an emission limit for carbonyl sulfide of 5 lbs. per ton of melt.

Alternative 2

Pursuant to 42 U.S.C. § 112 (b) (3)(c), either the EPA Administrator or NAIMA should petition to delete carbonyl sulfide from "the list" of hazardous air pollutants.

Alternative 3

NAIMA urges EPA to subcategorize the industry based on permitted maximum melt rate:

- Greater than 9 tons per hour
 - USG – Red Wing
 - USG – Walworth

²⁷ <http://epa.gov/p2/pubs/laws.htm>.

²⁸ Pollution Prevention Act of 1990 (Omnibus Budget Reconciliation Act of 1990, Public Law 101-508, 104 Stat. 1388-321 *et seq.* (<http://epw.senate.gov/PPA90.pdf>).

- 6 to 9 tons per hour
 - Industrial Insulation Group
 - Rock Wool Manufacturing
 - Thermafiber
- Less than 6 tons per hour
 - Amerrock
 - Isolatek International

The CAA grants the Administrator authority to “distinguish among classes, types, and sizes of sources within a category or sub-category.” Obviously, melt rate has important relevance to the size of the source and the economic feasibility of imposing additional costly controls. Therefore, melt rate provides a useful indication of the required difference among plants to justify subcategorization. The melt rate can effectively predict the level of emissions. In fact, the current Mineral Wool MACT Standard uses the hourly melt rate to determine compliance with the MACT standard. 64 Fed. Reg. 31,695, 31,698 (June 14, 1999). Therefore, NAIMA urges EPA to subcategorize the industry based on melt rate as indicated above.

Alternative 4

NAIMA urges EPA to subcategorize the industry based on bonded and unbonded.

During promulgation of the original MACT, the mineral wool industry was subcategorized into two groups: bonded and unbonded. In that the bonded and unbonded subcategories are already established by EPA, NAIMA will not go into detailed analysis of the difference between bonded and unbonded. NAIMA requests that these subcategories be retained. Although the differences between bonded and unbonded lines apply principally to the non-cupola portions of the line, EPA usually subcategorizes two or more sources within a category at the level of the entire source even though the sources may have some emission points in common. There is precedent for different subcategories for various production processes that have some emission points in common but are different with respect to other emission points.²⁹ Therefore, subcategorizing the entire mineral wool industry into bonded and unbonded subcategories is totally appropriate. The subcategories would be the following:

- Bonded
 - Industrial Insulation Group
 - Rock Wool Manufacturing
 - Thermafiber
- Unbonded
 - Amerrock
 - Isolatek International
 - USG – Red Wing
 - USG – Walworth

²⁹ EPA subdivided the source category for acrylonitrile butadiene styrene (“ABS”) into 5 subcategories based on different processes even though all had common emission points (60 Fed. Reg. 16,090-16,111 (March 29, 1995)).

Alternative 5

NAIMA urges EPA to subcategorize the industry to reflect the diversity of the industry and the primary products it manufactures:

- Residential Loose-Fill
 - Amerrock
- Ceiling Tiles
 - USG – Red Wing
 - USG – Walworth
- Fireproofing
 - Isolatek International
- Commercial and Industrial
 - Industrial Insulation Group
 - Rock Wool Manufacturing
 - Thermafiber

The CAA allows grouping of facilities based on such broad terms as “class” and “type.” EPA specifically created different subcategories in the leather industry based on “types of leather products produced.”³⁰

As suggested above, the subcategories based on product types also display a variety of differences. For example, the residential blowing wool produced by Amerrock uses no binder. Therefore, there are no formaldehyde emissions. Amerrock products are produced for the residential building market. Similarly, USG’s two plants are making unbonded products to produce ceiling tiles. While this product is ultimately bonded with non-phenolic binders, the binder is not applied at the manufacturing site. Ceiling tiles are produced largely for the commercial market.

Isolatek produces mineral wool for fire proofing products. The mineral wool is combined with other ingredients to create a spray applied for fire proofing of commercial and industrial facilities. Again, Isolatek uses no formaldehyde binders.

Commercial and industrial insulation is produced by Thermafiber, Industrial Insulation Group, and Rock Wool Manufacturing using formaldehyde binders.

Alternative 6

NAIMA urges EPA to subcategorize the industry based on raw material. This subcategorization would be based on predominant use of rock or slag. More than fifty percent use of rock or slag material would place the manufacturer in a particular subcategory. This subcategory could also

³⁰ J. Michael Geers and Claudia M. O’Brien, “Basis and Rationale for Potential Subcategorization of Coal-fired Electric Utility Steam Generating Units,” March 8, 2002, p. 10 (<http://www.epa.gov/ttn/atw/combust/utiltox/9brh04.pdf>).

be characterized as recycled (slag) and non-recycled (rock) plants. There are important differences between recycled and non-recycled plants with respect to raw materials, emissions, and products. The distinction between rock and slag plants is well recognized within the industry and in the scientific and technical literature, and therefore, subcategorization of rock and slag (recycled or non-recycled) plants would not be breaking new ground. The subcategorization would be as follows:

- Rock (Non-Recycled)
 - Amerrock
 - Industrial Insulation Group
- Slag (Recycled)
 - Isolatek International
 - Rock Wool Manufacturing
 - Thermafiber
 - USG – Red Wing
 - USG – Walworth

Alternative 7

NAIMA urges EPA to subcategorize the industry based on use of air pollution control differences, specifically, use of an incinerator. EPA's criteria for subcategorization includes "air pollution control differences, process operation . . ., emissions characteristics, control device applicability and costs, safety, and opportunities for pollution prevention."³¹ Subcategorization based on existence of cupola incinerator controls and non-incinerator controls would be as follows:

- With Incinerator
 - Industrial Insulation Group
 - Thermafiber
 - USG – Red Wing
 - USG – Walworth
- Without Incinerator
 - Amerrock
 - Isolatek International
 - Rock Wool Manufacturing

Alternative 8

NAIMA urges EPA to subcategorize the industry based on the age of the facility/cupola. The subcategories would be as follows:

³¹ 59 Fed. Reg. 26,429-26,444 (May 20, 1994).

- Prior to 1950
 - Isolatek International
 - Thermafiber
- 1951 – 1975
 - Rock Wool Manufacturing
 - USG – Walworth
- 1976 – Present
 - Amerrock
 - Industrial Insulation Group
 - USG – Red Wing

Alternative 9

NAIMA urges EPA to subcategorize the industry based on cupola stack heights. The subcategories would be as follows:

- 150 feet and above
 - Amerrock
 - Industrial Insulation Group
 - USG – Red Wing
- 100 to 150 feet
 - Rock Wool Manufacturing
 - USG – Walworth
- Below 100 Feet
 - Isolatek International
 - Thermafiber

Alternative 10

NAIMA advocates use of an alternative health based limit under § 112 (d)(4) of the Clean Air Act for the collection chamber. As noted above and affirmed by EPA, emissions are low and the risk is low. Therefore, to avoid unnecessarily stringent emission limits, NAIMA urges EPA to create health based limits.³²

Section 112 (d)(4) is designed to prevent the promulgation of unduly stringent emission limits simply for the sake of regulation. Section 112 (d)(4) allows EPA to set health based limits for certain HAPs based on established health thresholds as an alternative to promulgating specific limits. Human exposures to a HAP at levels below its reference concentrations (“RfC”) or reference dose are considered safe.

NAIMA strongly urges EPA to set health based standards under § 112 (d)(4) when facts support its use, such as carbonyl sulfide which is created in abundance by nature itself.

³² Section 112 (d)(4) applies to non-carcinogenic HAPs; carbonyl sulfide is not a carcinogen.

Alternative 11

EPA could establish a threshold limit that would narrow the scope of applicability to only those facilities exceeding a specified threshold amount. NAIMA recommends a threshold of 250 tons of COS per year.

Alternative 12

EPA could establish a grandfather clause and exempt those cupolas installed prior to the 1999 implementation of the Mineral Wool MACT Standard.

Alternative 13

Use the combined statistical-technical procedure in establishing the COS emission limit, which considers all the emissions data and eliminates outliers and questionable data to come up with an industry average.

Alternative 14

Offset/Credit – EPA recognizes that improved energy efficiency reduces pollutants. Insulation products increase energy efficiency. EPA could establish the COS emissions limit based on accurate data of the best performing five sources, but allow mineral wool companies to offset those emissions based on pounds of products produced.

VIII. RECOMMENDED LIMITS AND ALTERNATIVES FOR HYDROGEN FLUORIDE AND HYDROCHLORIC ACID

NAIMA urges EPA to forego establishing emission limits for hydrogen fluoride (“HF”) and hydrochloric acid (“HCl”) for the Mineral Wool MACT. As noted during NAIMA’s presentation, this would be new pollutants and new emission limits to the Mineral Wool MACT Standard. As stated above, NAIMA questions whether the Brick MACT decision requires imposition of these new requirements.

The mineral wool industry emissions for hydrogen fluoride are low. Based on BTEC data, the industry average is 0.0945 lbs. per ton of melt. The average emissions for the top five performing sources is 0.04131 lbs. per ton of melt. Similarly, the emissions for hydrogen chloride are low. Based on BTEC data, the industry average is 0.072 lbs. per ton of melt. The average for the top five performing sources is 0.04611 lbs. per ton of melt.

Given the low emissions for both hydrogen fluoride and hydrogen chloride, the industry is concerned that EPA’s proposed emission limits, which the majority of the mineral wool industry will not be able to meet, will require installation of costly pollution control equipment. This cost is troublesome because the benefit achieved seems negligible in the midst of the major

economic downstream for building related industries and an already costly process to respond to EPA's inquiry.³³

Specifically, the industry has investigated the cost of wet scrubbers needed to reduce HF and HCl from mineral wool facilities. Based on this investigation, the mineral wool companies have cost estimates ranging \$1 to \$4 million for wet scrubber equipment costs. Wet scrubber operating and maintenance costs are expected to exceed \$0.5 to \$2 million annually. Wet scrubbers will produce a wastewater discharge that is subject to federal regulations. The majority of mineral wool companies are not currently subject to waste water regulations.

Therefore, the mineral wool industry is faced with a situation in which the industry has significantly reduced emission levels over the last decade and now has very low overall emissions, but is now faced with proposed emission limits which are extremely stringent and therefore costly to control a negligible amount of HF and HCl. This will impose additional financial burdens on an already beleaguered industry. Moreover, the majority of mineral wool companies cannot meet the proposed limits without having to install cost prohibitive control equipment. The situation is very similar to the one discussed above related to carbonyl sulfide. NAIMA requests EPA to consider the following alternatives to EPA's presently stringent emission limits.

Alternative 1

As requested above, NAIMA urges EPA to forego setting HF and HCl limits for the Mineral Wool MACT. This is an amendment to the existing MACT standard to which EPA has acknowledged that the risks are low. In addition, NAIMA questions whether the Brick MACT decision requires EPA to impose new HF and HCl limits on the Mineral Wool MACT.

Alternative 2

NAIMA urges EPA to establish a threshold limit to narrow the scope of applicability to the emission limits proposed for HF and HCl. For example, any facility emitting 100 or more tons of HF per year would be subject to EPA's proposed emission limits. Similarly, any facility emitting 100 or more tons of HCl per year would be subject to EPA's proposed emission limits. Threshold limits for HF and HCL would lessen the regulatory burdens of an amended Mineral Wool MACT.

Alternative 3

If the first two alternatives are not implemented, NAIMA urges EPA to establish a feasible and achievable limit based on actual mineral wool emissions data. Because mineral wool emissions data is limited and based solely on BTEC data collected last year, NAIMA recommends the following emissions limits for the Mineral Wool MACT Standard:

³³ See description of economic burden set forth on pages 10-11 of NAIMA's May 16, 2011 letter to EPA regarding the SBAR process.

- Hydrogen Fluoride – 1.0 lbs. per ton of melt
- Hydrochloric Acid – 1.0 lbs. per ton of melt

Alternative 4

NAIMA has recommended a variety of subcategorization options, including application of the existing bonded and unbonded subcategories to the entire source. If EPA sets a HF and HCl limit, NAIMA urges EPA to extend the bonded and unbonded subcategorization to the regulation of HF and HCl. Similarly, if any other subcategorizations are established for the mineral wool industry, NAIMA urges EPA to apply the subcategorization to the entire source, which would include the regulation of HF and HCl emissions.

IX. MISCELLANEOUS ISSUES

NAIMA incorporates by reference herein the information, positions, and arguments in the previous correspondence, papers, presentations, supporting documentation, and other materials provided to EPA during the preparation for and the convening of the SBAR Panel briefings and meetings for the Risk and Technology Review for Mineral Wool Production.

a. Compliance Deadline

NAIMA recommends a seven (7) year compliance deadline.

b. Start-Up and Shutdown Issues

The unique features of mineral wool production defuse the typical concerns surrounding startup, shutdown, and malfunction. Mineral wool production emissions are measured by tons of melt pulled. During shutdown or startup, there is no melt being pulled. Moreover, a mineral wool production startup is not like a fiber glass furnace startup where melting a batch of glass that can be pulled could take a significant amount of time. Instead, the mineral wool process startup is of a short duration – typically two hours. Similarly, a shutdown – typically once per week – shuts down the melting process. The power system that drives the melting and fiberization process is tied to the control systems. Therefore, in most malfunctions or shutdowns, the entire system is down. There may be, at most, only a temporary exceedance of the emission limit for a very short duration. EPA should allow flexibility during startup, shutdown, or malfunction as long as the company is following its startup, shutdown, malfunction plan.

Sincerely,



Angus E. Crane
Executive Vice President, General Counsel
Attachments

Ms. Madeline Barch

June 30, 2011

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cc: Mr. David Rostker
Office of Interagency Affairs
Office of Advocacy
U.S. Small Business Administration
409 Third Street, S.W., 7th Floor
Washington, D.C. 20416

Ms. Cortney Higgins
Office of Information and Regulatory Affairs
Office of Management and Budget
725 17th Street, N.W.
Washington, D.C. 20503

Mr. Alexander Cristofaro, SBAC
Office of Policy
Director, Office of Regulatory Policy and Management
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1803A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Ms. Susan Fairchild
Sector Policies and Programs Division
Metals and Minerals Group (D243-02)
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
109 T.W. Alexander Drive
Research Triangle Park, NC 27711

ATTACHMENT 1

My name is Lee Houlditch, in addition to being the Chief Executive Officer of Amerrock Products located in Nolanville, Tx , a town with a population slightly over 2,000, I am the Owner. Amerrock produces loose rock wool, no bonded products, and is the only rock wool manufacturer in the US whose primary market is housing and in particular new home construction.

We all know that the housing market is terribly depressed, but I want to share with you specific effects this has had on Amerrock's operations. In 2006, the last year before the housing downturn started, the Amerrock plant produced rock wool on average 24 days each month, a little over 5 ½ days per week. In 2007 the operating days fell to 17 days per month (down 29%), in 2008 production fell to 14 days per month (down another 13%), in 2009 production fell further to 10 days per month (down another 17%), in 2010 production fell to 8 days per month, (down another 8 %). We are continuing to operate at that level on average so far in 2011. That's puts our production levels, and coincidentally emission levels, down a total of 67% from 2006.

With our current situation Amerrock is operating in survival mode. Even though we produce product only 2 days per week on average I still have employees on site 5 days per week to handle taking what orders we get and getting product shipped and I provide some additional time for my employees by letting them perform security which is necessary 24 hours per day 7 days per week.

With our situation there is no way this company can fund any type of major capital project such as an incinerator or the associated operating cost. And, since there is not a natural gas pipe line in the immediate vicinity of the plant I do not know what the reasonable incinerator options would be.

Even if the housing market rebounds soon, which appears doubtful with talk of the housing market experiencing a double dip recession, if the business is fortunate enough to survive it is going to take years for Amerrock to recover from the losses it has already incurred.



Industrial Insulation Group, LLC

A Cabot/Johns Manville Joint Venture

June 15, 2011

While IIG does not dispute the EPA's position that the Residual Risk associated with Formaldehyde, Phenol, Methanol, and Carbonyl Sulfide needs to be examined; the methods taken and the inclusion of Hydrogen Fluoride and Hydrogen Chloride cause us some concern. While we completely agree that our industry should not be afraid to invest in new technologies for efficiency advancements, product improvement, and current compliance; forcing this industry to do so in one single mandate will create an unfair business advantage to our major competition in Canada as they are not subject to these proposed restrictions (for example Collection Chambers-Formaldehyde). Statistics have shown the Residual Risk within our industry is already diminishing because the companies unwilling to embrace new source technologies are being driven out of business, however at a substantial cost to those companies willing to do so.

ATTACHMENT 3

While we do business under the name Isolatek International, our legal name is the United States Mineral Products Company. We have been committed to the production and use of mineral wool in our products for 135 years. I have personally worked in this industry for the past 28 years of my career in manufacturing. I have spent the last 15 years with Isolatek, and prior to that I spent 13 years with the Celotex Corporation. I personally witnessed the closing of the two Celotex mineral wool plants due in large part to the passage of the original MACT standard.

There are two primary reasons why Isolatek International, and more specifically our Huntington, Indiana Plant will suffer severe economic damage if the MACT standard is changed in a manner that would require millions to be spent on control equipment.

First, Isolatek uses mineral wool to make a passive fire resistive material that is spray-applied to structural steel as buildings are constructed. Our Blaze-Shield line of products will protect the steel in the event of a fire, even if active systems such as sprinklers fail. Blaze-Shield is a life safety product. Occupants of buildings are provided more time to exit during a fire, and life-safety professionals such as firefighters, EMTs, and police are provided protection as they enter the buildings. As with most life safety products they are manufactured to very stringent guidelines, and Isolatek International has spent millions in testing and follow-up service with Underwriters Laboratories and other certifying agencies around the world. Because of this investment we are committed to mineral wool. However, we compete with other others that do not use mineral wool. If Isolatek is required to destruct COS to the level being discussed by the US EPA, the installation of incinerators would be required on our two small cupolas. The millions Isolatek would have to spend could not be recouped in our very competitive marketplace.

Second, Isolatek has been operated in trust since 2007 "for the benefit of victims of asbestos" as established by the US Bankruptcy Court. The Trustees, through the Company's senior management, continue to operate the business to generate additional funds for this purpose. Our trustees take their fiduciary responsibilities very seriously, and as such are very conservative in their management style. It is unlikely that capital would be made available for adding control equipment, as this would be viewed as an extra cost with little or no return on investment. This would put our employees at our Huntington Plant in jeopardy of losing their jobs.

ATTACHMENT 4

Thank you for the opportunity to address this group today.

On behalf of Rock Wool Manufacturing Company I would like to state that we are a business with operations in Alabama and Texas. Although our company is small compared to others we are a significant employer from a very small town with employees in several states.

The industry group represented here today is just a small fraction of the group represented a decade ago when the existing MACT was published. Having been in business since 1942, with only 69 years in the market, the decline in Mineral Wool Manufacturers numbers is a direct result of the increased regulatory and economic stress placed on the group.

One would suspicion, that an industry whose product serves only to enhance energy conservation, and produces the product substantially from recycled waste raw material, would find favorable consideration as a necessary and vital entity in today's business environment.

Gerald Miller

Rock Wool Manufacturing Company

Leeds, Alabama

ATTACHMENT 5

On behalf of the 140 employees of Thermafiber, I thank the participants from the SBAR panel for giving the small businesses an opportunity to be heard. As a former engineer and now CEO of my company, I have been working in some form or fashion with the mineral wool industry for over 25 years and have seen tremendous changes. My company began operating at the Wabash, Indiana site 77 years ago.

At the beginning of the last decade when the first MACT standard was promulgated, my company was operating 5 mineral wool plants in states of Texas, North Carolina, Alabama, Washington, and Indiana. Three of the plants were closed by the end of the 3 year MACT implementation period and the fourth was sold shortly thereafter and is now operating as Amerrock Products. Only the Indiana plant remains. We have seen 5 different ownership groups within the past 15 years. Needless to say, maximizing profitability and providing returns in the ever-changing environment has been a challenge.

Within the last 10 years, my company invested more than \$10 million to comply with new regulations. For a company with annual sales below \$50 million and earnings substantially below that, this has been quite difficult. Don't misunderstand me. We are proud of the thousands of tons of pollutants we've reduced and our ability to survive. It's just getting tougher and tougher to become the zero-emitting company it appears some desire.

We anticipate having to spend an additional \$12 – 17 million in emissions compliance expenses in the next decade because of these proposed regulations just to eliminate less than 34 tons of pollutants. For a small business to spend an additional \$1.2 -1.7 million annually or in another way, to spend \$500,000 per ton of emissions, will have devastating consequences on our ability to profitably survive the next 10 years.

From the 140 employees, their families, the shareholders, the customers, and the community, I urge you to reconsider the stringency of these regulations.

ROCK WOOL Manufacturing Company™

Corporate Office: 205.699.6121
TeleFax: 205.699.3132

P. O. Box 506
Leeds, Alabama 35094-0506 U.S.A.

Sales Office: 205.699.6513
TeleFax: 205.699.3132

July 6, 2011

Ms. Madeline Barch
Office of Policy, Office of Regulatory Policy and Management
Regulatory Management Division
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1806A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Barch:

First I would like to thank you for taking the time to read this letter on behalf of Rock Wool Manufacturing Company™. It means a lot to Rock Wool Manufacturing Company™ that the Environmental Protection Agency "EPA" is weighing the effects of the rules on small business before moving forward. Rock Wool Manufacturing Company™ was started in 1943 and is the oldest bonded operating line in the United States. I have been with the company almost three years and have watched the company, in that short time, decline from a 3-shift, 24-hour-a-day, 5-6 days a week to a 1-2 shifts (depending on business) 8-10 hours a day, and 3-4 days a week. We have been in a survival mode since 2009 just hoping to break even. We watch the market and its trends and I fear the worst is yet to come with the upcoming elections and possible double dip recession.

Rock Wool Manufacturing Company's™ average employee has served our company for 20 plus years and has 2nd and, in some cases, 3rd generations of family working in our plant. We have had 2 employees this year who reached the 40 year milestone with our Company. Rock Wool Manufacturing Company™ is located in the small town of Leeds, Alabama just northeast of Birmingham Alabama.

Rock Wool Manufacturing Company was owned by the Cusick and Nelson families from 1943 to 1999. The company filed bankruptcy in 1996 and was then taken over in 1999 by the Rock Wool Manufacturing Company Asbestos Trust. The sole purpose of the Trust and Rock Wool Manufacturing Company™ is to pay back the 600,000 plaintiffs which have personal injury from asbestos.

Being the only Bonded Mineral Wool line that does not have an existing Incinerator, Rock Wool Manufacturing Company™ stands the most vulnerable out of the three. Meeting the new criteria that the EPA is looking at imposing on the mineral wool

industry would have a very negative impact on Rock Wool Manufacturing Company™ causing us to spend \$100's of thousands on engineering, \$5-6 million for the Incinerator, along with operational cost per year. In a great economy this would be hard stretched for Rock Wool Manufacturing Company™ to come up with that kind of money; add in a decline in business and a failing unpredictable market with the banking institution that has gotten tighter on its lending criteria, where are we to go for the money?

If made to conform to the new regulations EPA is imposing, Rock Wool Manufacturing Company™ would have no other alternative but to close its doors, sending our work force-- generations of hard working Americans--to the unemployment lines and closing a true American Industry forcing it out of our country.

I compel you to strongly reconsider your actions on our industry, and the rest of the NAIMA committee representatives. Rock Wool Manufacturing Company™ is a proud active member and strongly supports NAIMA's efforts on our industry's behalf. NAIMA has done a wonderful job telling the industry's story, but sometimes it is easy to overlook every company's unique story on how it came to be. Rock Wool Manufacturing Company™ is the story of an American dream--of a family starting its own company based off hard work and doing the right thing. We are the smallest out of the three bonded lines, and second smallest in the industry. I have hopes of helping this company grow to give back to the next generation and continue serving our customers who include the US Coast Guard, Navy, Army, Marines, Power Plants and many other great customers who value our product.

I respectfully plead to you to consider the impact that the new regulations will have on the mineral wool industry and Rock Wool Manufacturing Company™. Thank you again for your time.

Yours truly,



Timothy F. Scott
President
Rock Wool Manufacturing Company™
Leeds, Alabama 35094
1-205-699-6124 Office
1-205-937-7065 Cell

TS/jg



VIA EMAIL

June 30, 2011

Ms. Madeline Barch
Office of Policy
Regulatory Management Division
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1806A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: SBAR Panel – Economic Impact of Draft Proposed Regulation Changes to Thermafiber

Dear Ms. Barch:

Thank you again for allowing me to speak at the June 16, 2011 SBAR Panel meeting and to convey my concern regarding the draft proposed regulation changes recently presented to us by EPA. This letter expands upon my presentation and provides more details specific to Thermafiber with regards to the financial burden that will increase as we attempt to meet the proposed emission limits.

Thermafiber, the company, was formed in 1996 when the assets of three mineral wool plants (i.e. Wabash, IN; Birmingham, AL; and Tacoma, WA) were sold from USG Interiors, Inc. to private investors. This was done in advance of the original MACT promulgation in 1999. The Birmingham plant closed in 2000 and the Tacoma plant closed in 2002. Only the Wabash plant remains in operation and has been since its original start date in 1935.

Four private equity groups have owned Thermafiber within the last 15 years. From 1998 until 2002, Thermafiber operated in conjunction with American Rockwool, Inc., a privately held company with mineral wool plants in Spring Hope, NC and Nolanville, TX. The Spring Hope plant was closed in 2002 and eventually the property was sold in 2009. The Nolanville plant was sold in 2005 and became Amerrock Products. Needless to say, navigating these changes and downsizings has been challenging.

In 2009 and 2010, gross sales for Thermafiber were \$38.6 and \$39.4 million. After 5 months 2011, gross sales sit at \$18.6 million for an annualized projection of \$46.1 million. The gain in sales can be largely attributed to two mineral wool competitors ceasing operations. Walter Fiber (formerly Sloss of Birmingham, AL) closed in 2009. Fibrex Insulations of Sarnia, Ontario closed in January 2011.

Once freight and sales adjustments have been factored out, net sales for the prior two years were \$33.5 and \$34.4 million. Net sales are projected to be \$39.8 million for 2011.

Profitability has been dramatically impacted with the drastic decline in insulation demand and the steep increases in raw materials and fuel. As a percent of net sales, gross margin for the company declined from 27.8% to 20.5% from 2009 to 2010 and currently sits at 17.9%. Net income declined from 1.9% to

(1.4%) from 2009 to 2010 and currently sits at (3.2%). This means the projected net income for 2011 will be (\$1.25 million). Steps continue to be made to regain profitability in a down economy with material costs trending upward and fierce competition vying for any available business.

Over the last 10 years, Thermafiber has invested more than \$10 million to comply with new regulations and to curb emissions. Several thousand tons of pollutants each year have been reduced as a result of these improvements. Most recently in 2009, Thermafiber invested over \$5 million to install incinerators on each of the two cupolas. Special waivers from our existing lenders to spend more than 5 times the annual capital investment limit for the whole company as spelled out in loan documents had to be secured. Also, additional equity investment from current shareholders had to be raised to help fund the project. This single investment was the largest seen for the company since the late 1970's. Duplicating that effort for any further control equipment will be a challenge.

We have digested EPA's proposal and obtained budgetary capital and operating funds required to meet the emission reductions.

- Curing Oven – Thermafiber installed an incinerator (Recuperative Thermal Oxidizer or RTO) as part of the original MACT and got it running in 2003. No changes to Formaldehyde emission limits have been proposed and Thermafiber currently meets that limit. For Phenol, Thermafiber needs to reduce between 0.86 – 0.87 tons per year to achieve the proposed limits. Thermafiber has very limited stack test data for Phenol as it has never been a pollutant on the radar. To put the reduction another way, EPA is proposing that Thermafiber reduce emissions to 5.67 – 29.78 pounds per year assuming full melt rate and a maximum of 8,760 hours per year. These are exceptionally low levels to even measure. I suspect one upset condition could ruin compliance for the year. For Methanol, again Thermafiber has very limited stack test data. Based upon that data, Thermafiber needs to reduce between 0.26 – 0.27 tons per year to achieve the proposed limits. To put the reduction another way, EPA is proposing that Thermafiber reduce emissions to 11.69 – 35.29 pounds per year assuming full melt rate and a maximum of 8,760 hours per year. Again this is an exceptionally low amount. It is unsure whether additional temperature within the oxidizer is enough to achieve these reductions. Even so, operating costs would increase as natural gas feed increases. The capability of existing equipment and the associated operating cost increases have not been quantified.
- Collection Chamber – Thermafiber presently controls particulate emissions from the chamber by use of a mechanical filter (screen house). Based upon limited stack testing, Thermafiber would have to reduce up to 7.59 tons per year of Formaldehyde to meet the proposed lower limit. For Phenol, Thermafiber would have to reduce 17.24 – 22.57 tons per year. For Methanol, Thermafiber would have to reduce 16.32 – 16.97 tons per year to achieve the proposed limits. Collectively, this means between 33.56 and 47.14 tons per year must be reduced. A budgetary quotation obtained last month from a company skilled in pollution control devices for a large enough incinerator to handle the high volume of exhaust air was \$1.772 million. This was strictly for the incinerator. An additional \$0.400 million is estimated for a pre-filter and exhaust stack. Annual operating and maintenance expenses were estimated at \$1.043 - \$1.084 million. The equipment costs equate to \$37,585 - \$52,794 per ton reduced. Funding the capital will be challenging and the annual impact to the financials will further drive profitability in the red.

- Cupola – Thermafiber installed bag houses for particulate control as part of the original MACT. As previously mentioned, Thermafiber voluntarily installed two incinerators in 2009 to further reduce emissions and cut operating costs. Based upon the proposed emission limits for COS, Thermafiber would have to cut emissions on one cupola by 4.10 tons per year and on the other by 4.58 tons per year assuming full melt rates and maximum operating hours per year of 8,760. Whether or not the incinerators have the capability to further destroy this pollutant is unknown. EPA is also proposing that Hydrogen Fluoride emissions be reduced. Based upon limited stack testing, Thermafiber would have to reduce 5.63 – 5.95 tons per year of HF. EPA is also proposing that Hydrochloric Acid emissions be reduced. To meet the proposed levels Thermafiber would have to reduce 9.97 – 10.27 tons per year of HCl. On EPA’s website, they list the optimum control technology for HF and HCl as a wet scrubber. To add a wet scrubber on the current pollution control train if incinerators, flue gas desulfurization systems, and bag houses is estimated to cost \$1.0 - \$4.0 million. Annual operating expenses are anticipated to be \$0.5 - \$2.0 million. The equipment costs equate to \$64,103 - \$246,609 per combined ton reduced. Funding the capital will be challenging and the annual impact to the financials will further drive profitability in the red.

On behalf of the 140 employees of Thermafiber, the shareholders, the customers, and the community, I urge you to reconsider the stringency of these regulations. Should you want to speak with me, I can be reached at (260)563-2111 extension 214 or via email at sedris@thermafiber.com.

Best regards,



Steve Edris
President & CEO

Cc: Mr. David Rostker
Office of Interagency Affairs
Office of Advocacy
U.S. Small Business Administration
409 Third Street, S.W., 7th Floor
Washington, D.C. 20416



Ms. Cortney Higgins
Office of Information and Regulatory Affairs
Office of Management and Budget
725 17th Street, N.W.
Washington, D.C. 20503

Mr. Alex Cristofaro
Director
Office of Regulatory Policy and Management
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1803A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Ms. Susan Fairchild
Sector Policies and Programs Division
Metals and Minerals Group (D243-02)
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
109 T.W. Alexander Drive
Research Triangle Park, NC 27711