# Joint Industry Perspectives on Prospective Beryllium Rule

*Presentation to OMB*

**May 10, 2017**

# Presenting Parties

## Strategic Materials, Inc.

- **Paul J. Mellon, Jr.**
  *Director of Sales/Business Development*
- **Scott Trom**
  *General Manager, Specialty Products*

## GMA Garnet Group

- **Pete Mitchell**
  *Vice President, Sales*

## EHS Abrasives LLC

- **Bronce Henderson** *Manager*
- **Dr. Ruth Ann Bradow**
  *Managing Member and Internal Medicine MD*

# Presenting Parties (cont.'d)

## Strategic Materials, Inc.

- *Largest glass recycler in North America*
- *Recycles 3 million of the 13 million tons of waste glass generated each year*

- HQ: Houston, TX
- Founded in 1896
- Nearly 50 locations
- Nearly 700 employees in N. America

## GMA Garnet Abrasives

- *World's leading integrated supplier of industrial garnet*
- *Operations include mining, processing, distribution, sales and recycling*

- US HQ: Houston, TX
- 5 US locations, with global operations
- Founded in 1983
- In USA since 2005
- 138 USA employees

## EHS Abrasives LLC

- *Glass product and recycling leader*
- *Acquired largest coal slag abrasive producer in region and converted it to glass.*

- HQ: Norfolk, VA
- Founded in 2010

# Introduction to Abrasives Blasting Industry

***Abrasive Blasting:***

Uses compressed air or water to direct a high-velocity stream of an abrasive material to clean an object or surface, remove burrs, apply a texture, or prepare a surface for the application of paint or other types of coatings. (Source: OSHA)

Types of abrasive blasting media:

- *Silica sand (crystalline)*
- *Coal slag*
- *Garnet sand*
- *Nickel slag*
- *Copper slag*
- *Glass (beads or crushed)*
- *Steel shot or grit*
- *Specular hematite (iron ore)*

Commonly used by:

- *Shipyards*
- *Petrochemical companies*
- *Structural steel supply yards*
- *Breweries*
- *Rubber manufacturers*
- *Painting contractors*
- *Plastic manufacturers*
- *Aircraft manufacturers*

**$7 billion**

**Forecasted value of U.S. abrasives industry (2019)**

**3.8%**

**Forecasted growth per year of abrasives industry in U.S.**

**$40 billion**

**Size of global abrasives industry**

# Advantages of Non-Slag Abrasives (Garnet, Glass, etc.)

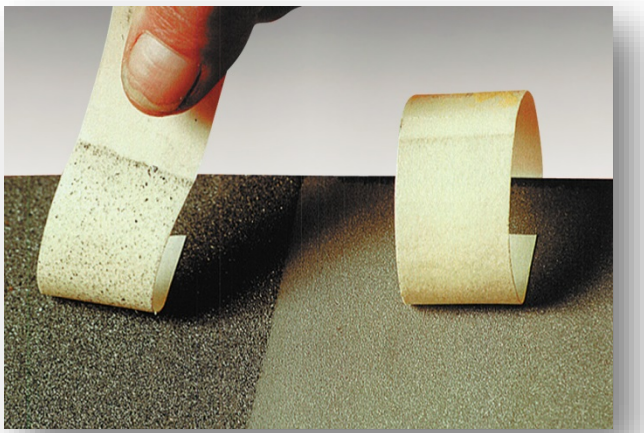
- Compared to coal and copper slag abrasives, non-slag abrasives:

1. **Create less dust** - Improves operator safety and visibility, reduces cleanup costs
2. **Cost effective** –uses less abrasive and can blast faster, resulting in lower abrasive volumes, labor costs and disposal costs
3. **Cleaner finish**– little to no embedment relative to slags (see photo at right)
4. **Highly-recyclable** – Some can be recycled multiple times, creating less waste
5. **Are environmentally sound** – Chemically inert, contain no hazardous compounds. Often the abrasive of choice in projects near bodies of water for that reason
6. **Low relative HSE risk profile**– Little to no risk to human health (e.g. both glass and garnet consists of less than 1% silica)


Daily Press

Recycled glass pitched as safer blasting agent at Hampton Roads shipyards

*The landscape is changing at the former Virginia Materials plant on Peterson Street, where towering coal-black mounds are giving way to white piles of recycled glass.*


*Surface Embedment: Slag compared to Garnet*


COLUMBUS BUSINESS FIRST

How a fast-growing Australian company is expanding at its new Columbus HQ

# Advocacy around Beryllium Rule To-Date

- Consortium of coal & copper slag companies created a coalition called the Abrasive Blast Manufacturing Alliance (ABMA), specifically focused on blocking OSHA Beryllium Rule.
- Alliance made up of companies that collectively produce over 90 percent of the coal slag abrasives media in United States (see ABMA member logos to the right)
- ***Despite its name, ABMA does noes not include, represent or speak for non-slag abrasive manufacturers, such as those that produce, manufacture and sell glass, garnet, etc. blasting media***.
- Advocacy strategy employed by ABMA focused on lumping all abrasive manufacturers in "same boat" – arguing that all producers equally affected by proposed rule, and thus no practical abrasive blasting alternatives exist if slags are regulated.
- Other business advocacy organizations have also weighed in– many have submitted comment letters suggesting minor changes to the underlying rule. But most accept the basic premise that a strong rule needs to move forward (ABMA does not).
- Companies such as Boeing and 3M, and business organizations such as the Shipbuilders Council of America and Aluminum Association have all filed comments in support of lowering PEL from 2.0 micrograms per cubic meter to 0.2

POLITICO

"The Abrasive Blasting Manufacturers Alliance sent a letter Monday to OSHA that calls for **"a much lengthier delay"** and removal of the construction and shipyard industries from the rule's jurisdiction. The coalition said the new rule addresses "an unproven risk" and would **"impermissibly place costly burdens"** on their industry." *(Politico, 3/14/17)*

# Myth vs. Fact: Regulation of Slags Will Not Spur Rush to Silica

- ABMA claims that if slag abrasives become banned, employers will be forced to use silica sand instead, which can cause silicosis.

- OSHA has rejected this argument, citing many other non-silica abrasives present in significant quantities in the market and already being used to replace more harmful slags.

- The American Coal Ash Association (ACAA) estimates that less than 2 million tons of coal slag is created each year. There are 13 million tons of recycled glass created and over 500,000 tons of garnet available for abrasives.

- Most major slag companies now sell crushed glass abrasives too, including:
  - Harsco Minerals (#1 seller of coal slag)
  - US Minerals (#2 seller of coal slag)
  - Kleen Blast (#1 seller of copper slag)

MINNESOTA POLLUTION CONTROL AGENCY

"The federal Occupational Health and Safety Administration (OSHA) has classified the dust created from glass blasting as a 'nuisance dust.' **Glass does not contribute to the lung disease silicosis.**"

*EHS Abrasives LLC converted coal slag to glass manufacturing site in Norfolk, VA*

# Correcting Other Cases of Misinformation

01

## Jobs will not be lost if slag abrasives are better regulated.

- Strategic Materials has created 6 new glass abrasive plants in last 5 years, adding 50+ new jobs.
- GMA Garnet and Blast One International have added over 300 new jobs to meet new demand.
- Harmful abrasives have been withdrawn in many parts of the world and blasters are still working, only with safer materials.
- The non-slag abrasives continues to expand; major customers (particularly in oil and gas) have already largely moved away from slags

02

## Landfills will not be impacted if slag abrasives are better regulated.

- The impact on landfills for slags is miniscule by comparison to current coal waste landfill.

03

## The shipbuilding industry, including the US Navy, can continue work as usual under the new rule by substituting other abrasives in for slags.

- The new rule will protect thousands of USW workers -- the largest union in the nation doing abrasive blasting for the U.S. military.

# Business & Labor Agree: We Need to Move Forward with Rule

**Support adoption of current proposed rule**

**Support lowering of PEL to 0.2**

# Key Takeaways

1. Abrasive blasting is fundamental to American manufacturing and industry.

2. Not all abrasives are the same. Non-slag abrasives are abundant and are much safer than slag options.

3. Advocacy against the new OSHA Beryllium Rule is not representative of the entirety of the abrasives industry.

4. The new OSHA Beryllium Rule provides clear and necessary guidance on the safe use of abrasives.

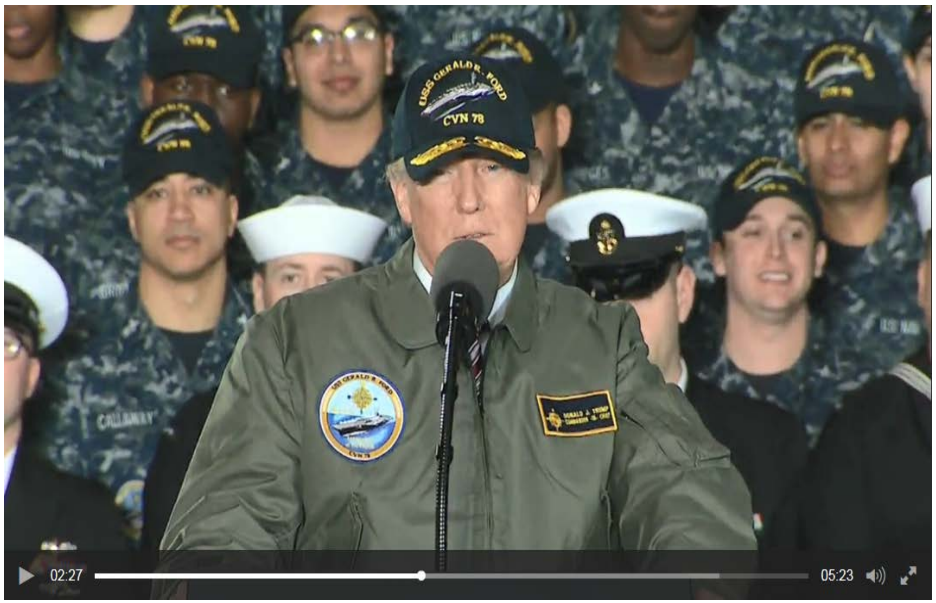
5. Promulgation of current version of the rule should not be delayed. Delay will only result in more misinformation which could have deleterious effect on abrasive blasting and manufacturing workforce.

# Thank you

# Appendix

# March 2, 2017 White House visits Sailors & USW Workers on new USS Ford Carrier VA

Fact : Newport News Shipyard can use over 10,000 tons a year of coal slag abrasives to blast and paint a Carrier like the Ford. This work is done by some of the same workers and sailors in these pictures cheering for the President on the deck of the Ford. They deserve the best protections available!





*"Congratulations to all of the men and women who helped build it. This is American craftsmanship at its biggest, at its best, at its finest.* ***American workers are the greatest anywhere in the world."***

*President Donald Trump*

STRATEGIC MATERIALS

GMA

http://nns.huntingtoningalls.com/videos/acibc-2017-ready-build-12/

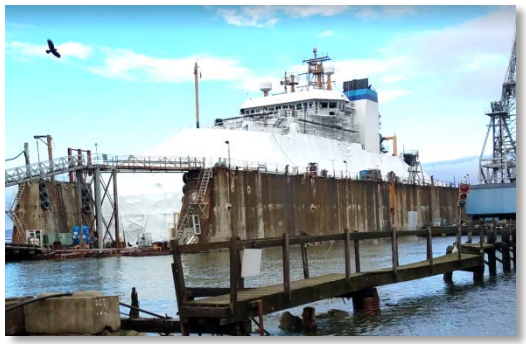
# Blasting with Alternatives is Safer, More Cost-effective

- Blasting with alternatives to conventional abrasives can dramatically reduce airborne dust, **improving visibility by up to 10x**. This provides a safer and more productive environment for everyone onsite.

Blasting with **conventional abrasives** can create excessive dust

Blasting with **garnet** significantly reduces dust exposure

- In using products from GMA Garnet Group, for example:



The Pacific Northwest Shipyard saw a 60% reduction in media, massive reductions in dust, and a cost reduction of +20%.

Enbridge experienced a 70% reduction in blast media at one of it oil tank facilities, which was completed 2 months ahead of schedule, and came in significantly under budget.

The USS George Washington will experience a cost reduction of about 25% and required 10,000 fewer tons of media

# Why Crushed Glass?

## Quality/ Safety/ Environment

TruAbrasives™ crushed glass were designed by our technical team to:

- maximize blasting performance in all applications – tanks, ships, bridges ,etc.
- adhere to Blast Industry SSPC, Navy QPL and CARB ( air board ) specifications
- be cleaner, and contain less contaminants, safe for environment
- meet industry demand, as a replacement for sand and toxic slags
- No Free Silica and no Toxic Metals like Beryllium – worker safe

Our abrasives are sampled and audited on a regular basis at each of our plants.

# Example of Glass in New Tank Construction:
# Brandon Shores Project, Glen Burnie Md

**AQCS Constellation Energy MD.**

**Crushed glass was used to blast the seams of the outside of tanks**

**Crushed Glass was also used to blast concrete base supports of tanks**

**Glass replaced coal slag abrasives on this jobsite**

STRATEGIC MATERIALS

GMA

# What is Coal Slag?

Waste from Coal Fired Power Plants

**Coal Slag** is industrial waste from a coal-fired power plant. It is a Toxic waste with many metals, i.e. arsenic, cadmium, **beryllium** etc.

Boiler Slag ( Coal Slag ) *as defined by the ACAA**

**Boiler slag is the molten bottom ash collected at the base of slag tap and cyclone type furnaces** that is quenched with water. When the molten slag comes in contact with the quenching water, it fractures, crystallizes, and forms pellets. This boiler slag material is made up of hard, black, angular particles that have a smooth, glassy appearance.

Boiler slag is generally a black granular material.

Applications

- Component **of blasting grit** and roofing granules
- Mineral filler in asphalt
- Fill material for structural applications and embankments
- Raw material in concrete products
- Snow and ice traction control material

https://www.acaa-usa.org/About-Coal-Ash/What-are-CCPs/Boiler-Slag