WM Barr and Company, Inc.

An employee-owned company

Meeting materials submitted by Dennis Shireman for EPA's Public Workshop on Use of Methylene Chloride in Furniture Refinishing on September 12, 2017

Our Company History

- During WWII, Mr. William M. Barr witnessed a fire aboard a naval ship caused by a flammable paint remover. Several sailors died and the Navy later developed a Methylene Chloride remover that was non-flammable.
- Mr. Barr obtained the rights to the Navy's non-flammable paint remover after the war.
- He incorporated WM Barr in 1946 and began manufacturing it in Memphis and selling it to consumers.
- Barr is the largest retail supplier of paint removers, solvents, and thinners in the U.S.
- Since 1996, we have been a 100% Employee-Owned Company. We take pride that all workers share in the profits of the company.

Distribution:

Citristrip, Jasco, Goof Off & Klean Strip
Mass Merchants
Home Centers
Hardware Stores

Aircraft Brand Removers
Professional Body Shops
Specialty Automotive Jobbers
Automotive Retail

Our Products

Barr's Family of Removers

Purpose of presentation

- To respond to the EPA's request for information concerning stripping products
- Focus on several issues which are important for both consumer and professionally used Products
  - Summary of National Center for Poison Control data
  - Review of Fatal Incidences
  - Flammability
  - CPSC/Industry efforts to resolve remaining isues in the bathtub/off-label use scenarios.
- Comments on some work to date toward replacing Methylene Chloride removers.

EPA Information Areas Related to the Proposed Ban of Methylene Chloride

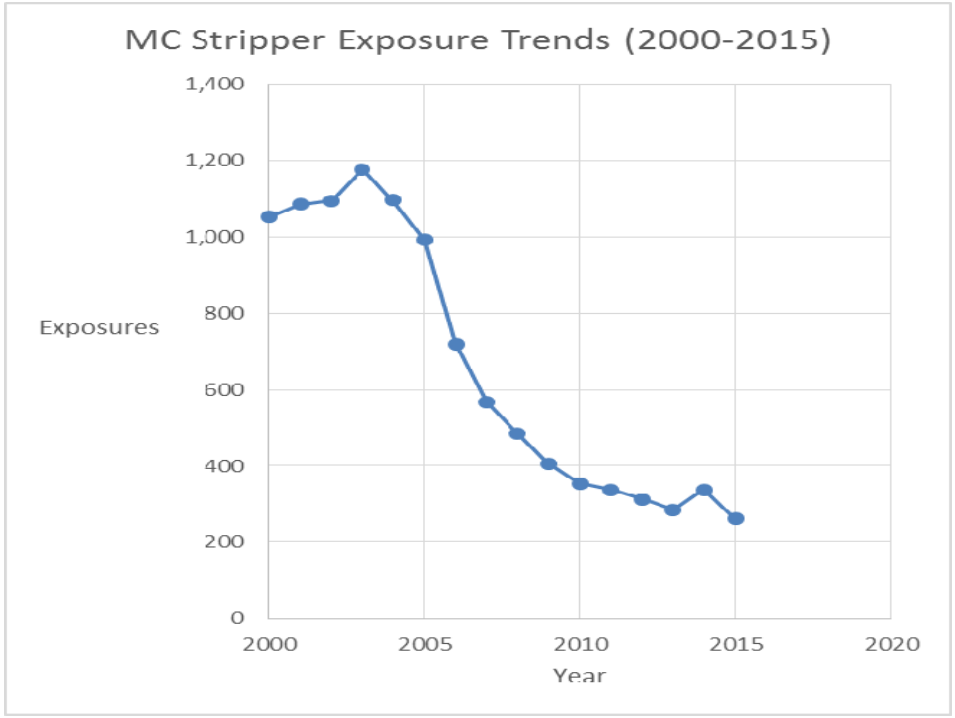
- WM Barr is a small business, proudly owned and operated by about 300 employee owners, most in Memphis, TN.
- Methylene Chloride has been and continues to be essential for removal of chemically resistant coatings coupled with being non-flammable.
- Approximately 15-20% of our business is paint and coating removal, 80+ present is Methylene Chloride based. Projected potential job loss of up to 20-30% of employees due to:
  - Loss of Sales due to high cost and lack of performance expected of strong paint removers
  - Increased litigation costs due to fire injury increase
- Poorer than expected real world performance and higher sales price will impact the whole industry overall.
- We continue to explore new chemicals and blends.
  - Alternatives to methylene chloride introduced through the years – NMP, DBE, Benzyl Alcohol, ATM, Caustic, and others. Most have been failures in market
  - Some (mostly NMP) have found a stable small niche market where performance is acceptable for certain applications
- Barr uses engineering controls in our manufacturing plant to completely comply with OSHA Standards. There have been no serious workplace methylene chloride injuries in 70 years of heavy use.

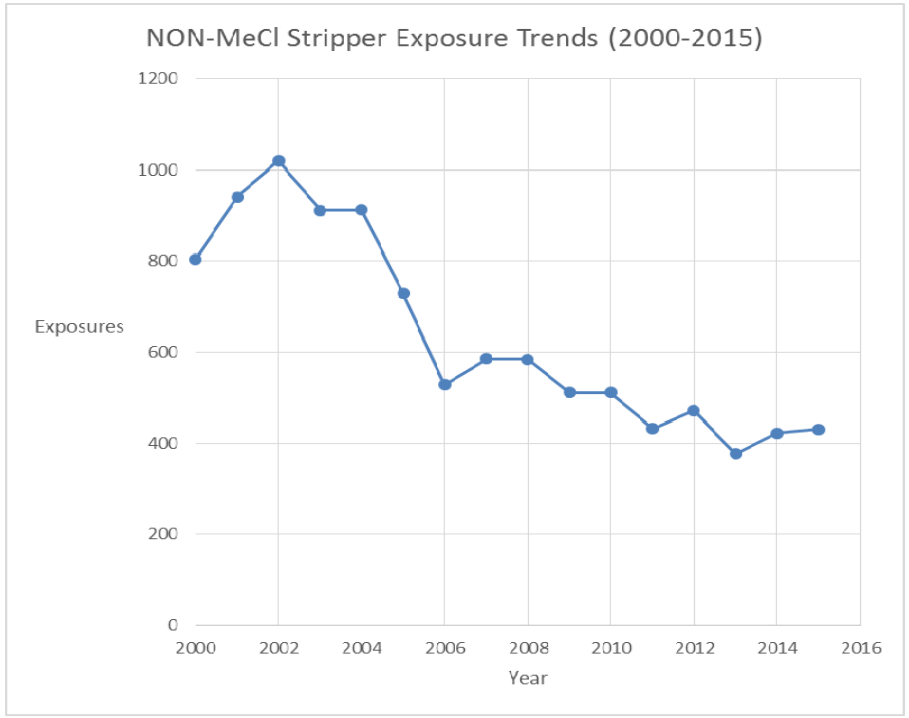
Safety of MeCl2 vs. Alternatives
Review of Poison Control Center Data 2000-2016

- **The data suggest strongly that banning or restricting the use of Methylene Chloride in Paint Removers would cause the volume of non-Methylene Chloride Removers to go up sharply and cause a sharp increase in Poison Control Center Incidents with a similar increase of serious injuries.**

Safety of MeCl2 vs. Alternatives
Review of Poison Control Center Data 2000-2016

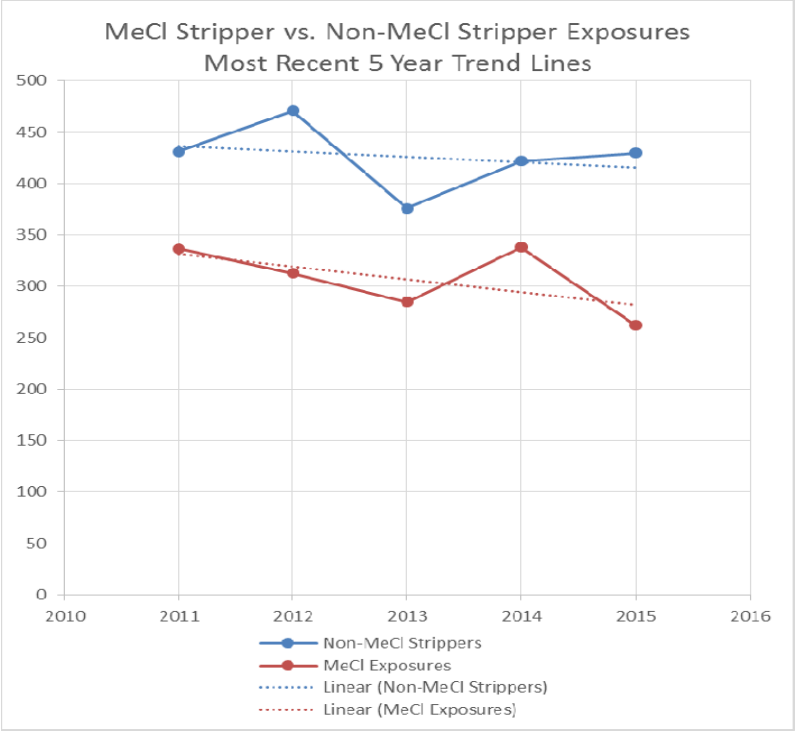
- Methylene Chloride Paint Remover Calls have significantly decreased (78%) while sales grew.
- Non-Methylene Chloride Paint Remover calls also decreased but not as significantly and overall call volume was higher than for MeCl2 removers even though sales were only 20-30% as large.





Safety of MeCl2 vs. Alternatives
Review of Poison Control Center Data 2000-2016

- Over the last 5 years Remover calls have continued downward with MeCl2 decreasing more steeply.
- For the last year of incident reporting (2015) exposures involving Non-MeCl2 paint strippers are 64% higher than reports of exposures involving MeCl2 paint strippers despite the greater market share for MeCl2 paint stripping products.



Safety of MeCl2 vs. Alternatives
Review of Poison Control Center Data 2000-2016

- **5 Categories –**
  - **No Effect**
  - **Minor effect**
  - **Moderate Effect**
  - **Major Effect**
  - **Death**
- **In absolute numbers and as compared to MeCl2 paint strippers, Non-MeCl2 paint stripper exposures had almost 62.7% more Moderate, and 90% more Major outcomes than MeCl2 paint stripper exposure reports. And, based on the most recent 3 year period, both Moderate and Major outcomes for Non-MeCl2 paint strippers are trending higher, not lower -- in direct contrast to the trend noted for MeCl2 paint stripper exposures.**

Safety of MeCl2 vs. Alternatives
Review of Fatal Incidences

- **In a review of fatal incidents since 1980, it was found that the great majority were workplace incidents not involving consumers. Only 2 fatal consumer incidents were found in 35 years of data. In both cases other chemicals or drugs were involved and use conditions were not as directed on labels.**

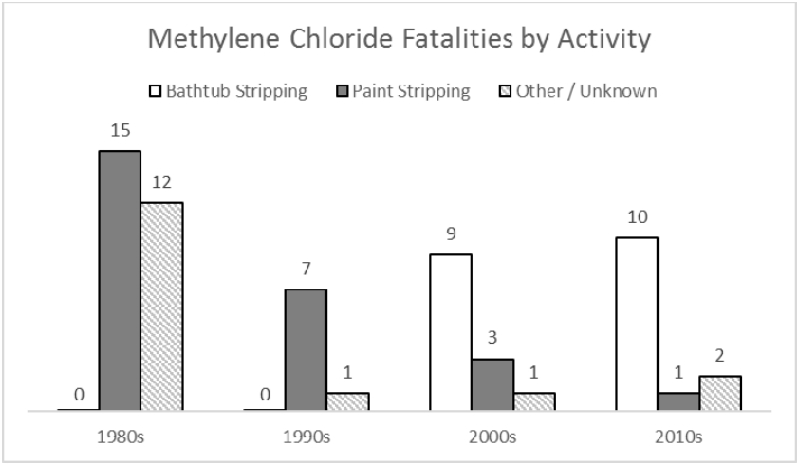
- **Barr sold 30 million units through retail channels in 2007 -2016 – WM Barr is unaware of any consumer fatal incidents during this period.**

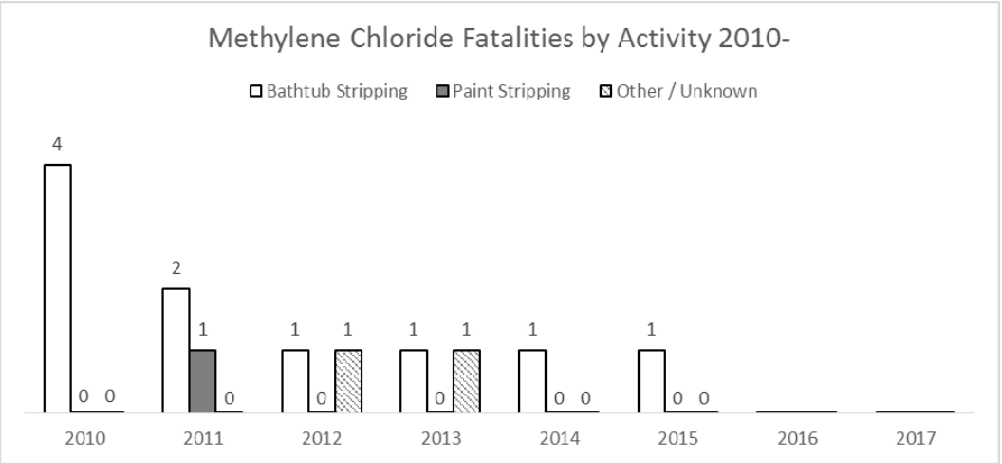
Safety of MeCl2 vs. Alternatives
Review of Fatal Incidences

- **Fatal incidents from coatings stripping other that bathtub stripping have fallen sharply, possibly due to OSHA's more strict exposure limits.**

- **The data clearly shows that the primary cause of fatal incident issue since 2000 is due to bathtub refinishing.**

- **Bathtub refinishing fatalities appears to have peaked in 2010 and have steeply trended downward since.**





Safety of MeCl2 vs. Alternatives
Labeling to Prevent Incidents

- **Since the Fatal Incidents are very specific to bathtub stripping, there is a strong case that specific labeling can be quite effective in preventing the incidents.**
- **Barr is working with the Consumer Product Safety Commission to develop stronger, more specific labeling.**
- **Barr is voluntarily developing and instituting these changes.**


DO NOT USE TO STRIP BATHTUBS
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Flammability

- Excepting MeCl2, all fast acting solvents for removing coatings are flammable (<100 F f.p.) or Extremely Flammable (<20F f.p.).
- NFPA Statistics - In 2007-2011, U.S. municipal fire departments responded to an estimated average of 51,600 fires per year starting with ignition of a flammable gas and another 160,910 fires per year starting with ignition of a flammable or combustible liquid. The flammable gas fires resulted in an estimated 168 civilian deaths, 1,029 civilian injuries, and $644 million in direct property damage per year. The flammable or combustible liquid fires resulted in an estimated 454 civilian deaths, 3,910 civilian injuries, and $1.5 billion in direct property damage per year.
- Unintended consequences – Beginning in 2006, CARB regulated Flooring Adhesive Remover VOC to less than 5% VOC and banned MeCl2. This limit has spread across much of the country. Before this regulation methylene chloride based remover was commonly used for removing old adhesives from floors with no known acute incidents. Reformulated high flash point products were quite expensive and not widely accepted in the market. Many consumers began using extremely flammable (with much lower flash points than pre-VOC regulation) general purpose adhesive removers intended for spot cleanup. There have been several fires with very serious injuries to consumers.

WM Barr work on Methyl Acetate/DMSO/Thiophene plans as removers

- UMass Lowell's Toxic Use Reduction Institute has an ongoing EPA funded project to find safer, effective non-methylene chloride paint removers.
- Basic removers chemicals as we understand: methyl acetate/DMSO and methyl acetate/DMSO/thiophene
- Barr has explored blends of these chemicals. Our concerns are:
  - Performance slower/less effective than methylene chloride on aged alkyd paints and not effective at all on chemically resistant coatings – solvent two component epoxy and two component urethane
  - Flammable/Extremely Flammable (14-23 F f.p.)
  - Raw Material Cost > 3x MeCl2 strippers
  - Methyl Acetate metabolizes to methanol (reproductive toxicity and blindness)
  - DMSO is readily absorbed through the skin with the ability to move other, unintended chemicals with it.
  - Methyl Acetate and thiophene are quite volatile and should not be used in enclosed spaces (i.e. bathtub refinishing) and has the added hazard of flammability.

Conclusions

- Data strongly suggest that banning methylene chloride from all removers will sharply increase injuries.
- The major issue since 2000 is not methylene chloride but the use of it in Bathtub Refinishing.
- Other fast acting solvents should not be used in small unventilated spaces and would face similar issues in Bathtub Refinishing with the added hazard of flammability.
- Continued formulation studies show no replacement for methylene chloride is as effective on difficult to remove finishes and the closest alternates are very flammable.

Thank you