

Comments  
of the  
Precision Metalforming Association  
on the  
National Institute for Occupational Safety and Health  
**“Criteria for a Recommended Standard: Occupational Exposures to  
Metalworking Fluid”**

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**R E C E I V E D**

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**NIOSH DOCKET OFFICE**

The Precision Metalforming Association (PMA) submits the following comments regarding the National Institute for Occupational Safety and Health's (NIOSH) draft "Criteria for a Recommended Standard: Occupational Exposure to Metalworking Fluid" (Draft) dated February 23, 1996.

PMA is the voice of America's \$31+ billion metalforming industry. Employing approximately 360,000 Americans, the metalforming industry gives utility to sheet metal by shaping it using tooling in machines -- frequently with the assistance of metalworking fluids. PMA consists of nearly 1,400 member companies located in 38 states.

Members of PMA include metal stampers, fabricators, spinners, slide formers and roll formers as well as suppliers of equipment, materials and services to the industry. Approximately half of PMA member production is for the automotive and auto parts industry. Although our largest market is automotive, our parts, components and assemblies are found in a wide range of industrial and consumer products.

While PMA represents a large industry, member companies are predominantly small manufacturers. The average company employs only 85 people and more than 67% of the industry averages annual sales of less than \$5 million.

PMA is concerned that NIOSH has not adequately supported its Recommended Exposure Limit (REL) for occupational exposures to metalworking fluids. Technical and legal flaws in the Draft are evident which preclude an objective conclusion based on scientific evidence. PMA further believes that with these inadequacies, NIOSH lacks the justification necessary for a criteria document, and that NIOSH should publish the Draft as a hazard review after making the necessary corrections.

#### Technical Concerns

- NIOSH incorrectly uses highly specific and technical terms in the Draft. NIOSH uses the term “metalworking fluids” when, in fact, NIOSH is referring to “metal removal fluids.” Metal removal fluids are a distinct subset of metalworking fluids and not an interchangeable term. Metal removal fluids have a limited application in the metalforming industry and are used exclusively in processes that might create a release of particulate matter into the atmosphere (i.e., grinding or deburring). Metalworking fluids are used in a much wider variety of applications and are most common in processes that cause no particulate release, such as stamping and fabricating. The studies relied upon in the Draft deal only with metal removal fluids. Therefore, the inclusion of all metalworking fluids in the Draft is not justified. NIOSH must properly utilize these recognized technical terms in order to avoid confusion and the

inappropriate application and use of this information by other sources, such as the Occupational Safety and Health Administration (OSHA).

- NIOSH has avoided temporal considerations in its conclusions about cancer risks due to metal removal fluid exposures. Conclusions that may be relevant to the 1950s, but not the 1990s, need to be identified since metal removal fluids' composition and use characteristics have changed substantially in the past 15 to 20 years. Also, many studies relied on by NIOSH do not accurately reflect current industry practices relative to personal protective equipment usage. These studies should either be identified as antiquated or eliminated from the Draft.
- NIOSH is responsible for drawing conclusions based on sound science that has been peer-reviewed and made available to the public. Three quarters of the Respiratory Effects section is based upon "non-binding, peer review" of papers that have not been published. PMA members rely upon peer-reviewed, published articles for confidence in the results of studies and proposed interpretations. This is because Association members lack qualified staff and sufficient resources to conduct appropriate peer reviews. The scientific value of the conclusions drawn from these studies is highly questionable without rigorous peer review.

- The Draft goes beyond the limits of objective scientific analysis of the epidemiological data. Accepted standards for adequate evidence have been ignored in statements that exposure has resulted in various cancers and that exposure to machining fluids is strongly associated with cancer. The conditions for establishing a relationship between exposure and disease were set forth by Hill (Hill, Bradford, *The Environment and Disease: Association or Causation?* (1965)). NIOSH should subject the available epidemiological data to a rigorous analysis of the conditions set forth by Hill.
- NIOSH is premature in setting a REL for metalworking fluids at  $0.5 \text{ mg/m}^3$  since the scientific data is not adequate to support such a determination. PMA agrees with NIOSH's statement (page 192) that "not all places may be able to control exposure to metal removal fluids to  $0.5 \text{ mg/m}^3$  for all operations." In addition, PMA believes it is not technologically feasible to control exposure to that level given the age of many machine tools used in this country, as well as the size and configuration of many individual machines.
- Because NIOSH has not adequately supported its proposed REL with adequate science, PMA objects to the Draft's recommendations for an Occupational Safety and Health Plan. NIOSH's recommended practices are unsupported by the data and would be extremely difficult and costly to implement, and ultimately result in little or no health and safety benefit.

### Economic Concerns

- The recommendations made in Sections 10.4.3 and 10.4.4 would be financially disastrous. Using Kramer's estimate of \$8.5 million per million square feet of plant space, the average ventilation system cost for PMA members would be around \$500,000. PMA believes this cost is understated and that NIOSH has not considered the costs of installation and maintenance for small business. (Recall that the average annual sales of most of these companies is less than \$5 million.)
- NIOSH's recommendation for a medical monitoring provision is also untenable for small businesses. The "out-of-pocket" expense for one test on exposed employees for an average-sized metalforming company approaches \$30,000.
- Although NIOSH is not required to assess the financial impact these recommendations might have on the business community, it is evident that NIOSH's recommended safety and health plan, the need for which is unsupported by the data, provides an economic threat to industry, with little or no health and safety benefit.

### Legal Concerns

The Occupational Safety and Health Act, 29 USC § 671, gives NIOSH the authority to conduct research for the development of OSHA standards. While in general, NIOSH recommendations must be subjected to a formal rulemaking process before becoming effective as an OSHA standard, a criteria document, and more specifically an REL, can become the basis of a section 5(a)(1) “General Duty Clause” violation. 29 USC § 654(a).

Even though OSHA still has a burden of proof, companies using metalworking fluids should not be exposed to potential legal liability based upon an REL that lacks scientific foundation. Additionally, the misuse of the term “metalworking fluids” when, in fact, “metal removal fluids” is intended, may create unintended consequences.

NIOSH, and ultimately OSHA, have a responsibility to avoid creating legal liabilities where none exist.

## Summary

PMA believes NIOSH has not adequately supported its REL for occupational exposure to metalworking fluids. For the reasons discussed, PMA believes that NIOSH lacks the justification necessary for a criteria document, and that NIOSH should publish the Draft as a hazard review after making the necessary corrections.

PMA appreciates the opportunity to comment on the Draft and looks forward to answering any questions its comments may have raised.