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October 3, 2008

Mr. Mike Morris

Planning, Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

**RE: *South Coast Air Quality Management District Proposed Rule 1144 –
Lubricants and Rust Inhibitors***

Dear Mr. Morris:

The Independent Lubricant Manufacturers Association (“ILMA”) submits these comments on the South Coast Air Quality Management District’s (“AQMD”) Proposed Rule 1144 – Lubricants and Rust Inhibitors.

ILMA, established in 1948, is a national trade association of 134 manufacturing member companies. (The Association previously has provided AQMD with the names of its members with either their headquarters or operations in the four counties that comprise the South Coast Basin.) As a group, ILMA member companies blend, compound and sell over 25 percent of the United States’ lubricant needs and over 75 percent of the metalworking fluids (“MWFs”) utilized in the country. Independent lubricant manufacturers by definition are neither owned nor controlled by companies that explore for or refine crude oil to produce lubricant base stocks. Base oils are purchased from refiners, who are also competitors in the sale of finished products. Independent lubricant manufacturers succeed by manufacturing and marketing high-quality, often specialized, lubricants. Their success in this competitive market also is directly attributable to their tradition of providing excellent, individualized service to their customers.

ILMA recognizes that Southern California is saddled with significant air quality challenges and appreciates AQMD’s effort to pursue multiple regulatory avenues under federal and state mandates to improve air quality for the citizens in the South Coast Basin. However, AQMD’s proposed rule can be improved in a number of areas while at the same time assuring that federal and state air quality goals can be met.

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Improved Definitions – Replace the Term “Lubricant” with “Metalworking Fluid.”

The Purpose and Applicability section of the proposed rule provides:

(a) Purpose and Applicability

The purpose of Rule 1144 is to reduce volatile organic compound (VOC) emissions from the use of lubricants and rust inhibitors at commercial, institutional and industrial facilities that use lubricants and rust inhibitors. This rule shall apply to all fluids used for metal working, metal removal or lubricating operations including, but not limited to, broaching, drilling, drawing, heading, honing, forging, milling, stamping, tapping, threading, turning and wire drawing. The rule also applies to VOC containing fluids used for rust and corrosion prevention and inhibition. The rule applies to: all persons who use these lubricants and rust inhibitors during the manufacturing and assembly of products and parts; and all lubricant and rust inhibitor manufacturers and suppliers who manufacture, supply, sell, or offer for sale lubricant and rust inhibitor materials.

The proposed rule defines “lubricant” and “rust inhibitor” as follows:

- (3) LUBRICANT is a fluid used to reduce heat and friction, to prolong the life of tools and machinery, improve product quality and carry away debris.
- (4) RUST INHIBITOR is an inhibitor, preventative or protectant used to prevent the corrosion of metal surfaces.

In the aggregate, this language plainly indicates that AQMD is concerned not with lubricants generally, but with a subcategory of lubricants – that is, MWFs. To this end, and to avoid any regulatory confusion, we suggest that the term “Lubricant” in the proposed rule be generally replaced with the term “Metalworking Fluid.”

This improved clarity would, among other things, resolve the ambiguity surrounding the phrase, “lubricating operations.” There are a number of lubricating operations in industrial settings (and associated product categories, like industrial oils) that have nothing to do with cutting or shaping metal and appear to be beyond the proposed rule’s intent.

Data and Assumptions Underlying the Emissions Inventory Could Be Improved

The “Preliminary Draft Staff Report” bases its emissions inventory for the South Coast Basin on a 13-year-old Environmental Protection Agency (“EPA”) Fabricated Metal Sector Notebook [Mr.](#)

(1995), coupled with a national MWF sales estimate from ILMA that is five years old and an AQMD survey of local MWF manufacturers, distributors and users from 2006.

Though we do not have more precise numbers, ILMA believes that the MWF market in Southern California has contracted significantly over the last 13 years with the systematic export of more and more metalworking operations overseas, as well as the termination of a number of major aerospace contracts.

ILMA is happy to work with AQMD staff in an effort to help make the data used for the Emissions Inventory current and hopefully more accurate. However, at this point in the proceedings, ILMA firmly believes that AQMD has overestimated the range of potential emissions in the South Coast Basin from MWFs and rust inhibitors.

Test Method Issues

Thus far, ILMA's review of AQMD's proposed test method 313 reveals three fundamental problems: temperature, consensus and the scientific basis for designating methyl palmitate as the chemical delineating status as a VOC. We believe, however, that these problems can be remedied.

Temperature

The test method specifies a temperature of 200 degrees Celsius. This temperature is plainly too high. Metalworking fluids are generally used at ambient temperatures and though heat is certainly generated at the point of cut (*i.e.*, the intersection of the tool and the subject metal), MWFs are cool to the touch when in use. Further, while water is added to many MWFs in operation to compensate for loss due to evaporation, VOCs, or substances that may contain VOCs, typically do not evaporate and are not added.

MWFs are not designed to work at temperatures that even remotely approach 200° C, so their behavior and compositional integrity in these extreme conditions is unknown. Our concern is that excessively high temperatures may either change the molecular composition of metalworking fluid products and/or create VOCs in the test setting that do not exist when the products are used under industrial conditions, or result in non-volatile compounds being incorrectly analyzed and mistakenly identified as VOC compounds.¹

Specifying an excessively high temperature in a rule creates problems. If the proposed test method identifies substantially more VOCs than are ever eluted while metalworking products are in actual use, then the modeled VOC reductions anticipated by the proposed rule will be

¹ Conversations with AQMD chemists during a September 17, 2008 telephone conference suggest that the proposed test method improperly designated glycerin as a VOC.

overstated. If the amount of VOC reduction is overstated, then per ton costs associated with the modeled reduction may be substantially higher than the \$6,671 estimated by AQMD.

Consensus

We are pleased that AQMD took the initiative to try to create a new test method specifically for MWFs. It is our understanding, however, that AQMD did not develop the proposed test method in consultation with any recognized national consensus standards organizations or applicable federal research agencies and, apparently, has no plans to pursue prudent scientific standard method validation activities, such as round-robin testing. While AQMD certainly has the regulatory authority to develop and finalize the test method (and we genuinely appreciate the opportunity to share our comments), it has always been our experience that, with respect to scientific quantitative measurements, securing method validation through a rigorous consensus-based process tends to improve the final result.

Methyl Palmitate

The test method specifies methyl palmitate as the delineation between VOC and non-VOC substances. Despite numerous queries, AQMD has yet to provide any scientific justification for using methyl palmitate to define VOCs.

Proposed Remedies to the Test Method Problems

The temperature and consensus defects can be remedied by allowing MWF manufacturers to test their products either by calculating known components, or by a number of established direct measurement methods:

- EPA Method 24 at 110° C
- Thermo gravimetric Analysis (TGA) at 110° C
- Gas Chromatograph Flame ionization Detection (GC FID), direct port injection at 40° C
- Gas Chromatograph Flame ionization Detection (GC FID), static head space analysis at 40° C.

Need for a Waiver, Variance or Exemption Process

There are a few exceptions to the proposed rule, but they relate only to circumstances where a material is otherwise regulated, or will not be used in the South Coast Basin. There is no mechanism in the proposed rule to provide for variances or waivers for products and uses when substantial justification exists. Though ILMA has high confidence in its members' ability to formulate MWFs for virtually any situation, ILMA members are not magicians. ILMA firmly

believes that the proposed rule needs to include a process to allow for temporary, long term and in some cases permanent exemptions.

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ILMA members sell MWFs to a great diversity of customers for an even greater diversity of applications. In some situations, ILMA members' customers are working under federal government contracts subject to strict and exacting military specifications ("mil specs"). Mil specs can include the types of MWFs that are intended to be covered by the proposed rule, and some mil specs are decades old. The aviation industry imposes similar unwavering requirements and typically requires the use of a certain type of MWF for a given manufacturing task. Using a different MWF in either of these situations, or taking liberties to change the formulation of a MWF, is simply not an option. More important than the contractual obligations between ILMA members and their respective customers, a mechanism should be included in the final rule to allow for justified compliance waivers for national security and public safety reasons.

Timing and Rule Implementation

The proposed rule is scheduled to take effect on July 1, 2009 and would allow for a six-month "sell-through" period. This is not a sufficient period of time for implementing any aspect of the proposed rule, especially considering that the test method is still in the form of a draft and has only been available for a matter of weeks.

As a practical matter, ILMA members will need to test all of their MWFs that may be sold into the South Coast Basin and must determine whether each of these products passes the proposed 25 gram/liter limit. Though the Preliminary Draft Staff Report suggests that MWF manufacturers can extrapolate a given fluid's compliance from the test performance of similar products, the fact that AQMD can levy penalties and fines for non-compliance makes widespread guesswork unlikely. The prudent approach will be to test every MWF.

For the products that exceed the 25-gram/liter limit, companies will need to conduct an analysis to figure out the underlying reason(s) and determine whether the product can be reformulated to not only pass the test, but retain its performance characteristics, not to mention cost. Assuming that a reformulation is possible and meets the technical requirements of the MWF manufacturer, the manufacturer then needs to reconcile all of this with its customer base. In some cases, securing customer approval will be without incident, but may take a considerable amount of time. In other cases, such as mil spec or aviation or biotech contexts, customer approval will take significantly longer, if it can be secured at all.

These challenges will be compounded in two profound ways. First, some ILMA members have hundreds of different MWF products. Second, MWFs are always a part of a larger industrial – commercial process that involves numerous parties, business relationships and their associated contractual obligations. Cost considerations aside; while much of what the proposed rule requires can be effectively pursued, it cannot happen within the contemplated time frame.

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In light of these challenges, ILMA proposes that the compliance deadline generally be set at January 2011 for most MWFs and January 2012 for MWFs used in metal protecting and forming applications. The “shelf life” for many MWFs is over a year, so at least a 12-month sell-through period is also required.

Inconsistency between the Proposed 25g/liter limit and the 50g/liter “Super Compliant” Designation

The proposed rule’s recordkeeping provisions designate MWFs that contain less than 50 grams of VOC per liter of material as “Super Compliant.” Considering this designation, we suggest that the proposed regulation set the limit for VOCs in metalworking fluids at 50 g/liter rather than 25 g/liter.

Rulemaking Notice Concerns

The ILMA representatives in attendance at the September 23, 2008 Public Workshop were surprised by what appeared to be light attendance by the MWF user community in Southern California. Some of those presenting comments at the Workshop questioned whether AQMD has provided sufficient notice of the rulemaking proceedings, especially regarding AQMD’s efforts to engage the many businesses in Southern California that would be directly subject to Rule 1144 when it is finalized. We firmly believe that local business perspectives on this rulemaking would materially enhance both the process and final result.

Conclusion

ILMA looks forward to continuing our productive dialog with AQMD on this important matter.

Sincerely,



Celeste M. Powers, CAE
Executive Director

cc: ILMA Board of Directors
ILMA Safety, Health, and Environmental Regulatory Affairs Committee
Jeffrey L. Leiter, Esq.
Adam B. Cramer, Esq.