INDEPENDENT LUBRICANT MANUFACTURERS ASSOCIATION

November 5, 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

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, and accompanying staff report, both of which were released to the public and interested stakeholders on October 28, 2008.

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 both federal and state mandates to improve air quality for the citizens in the South Coast Basin.

While AQMD has made significant improvements to the proposed rule over prior versions, the following problems or issues remain:

- The effective date for "general metalworking fluids," except vanishing oils, should be extended from 2010 to 2012;

- Methyl Palmitate should not serve as the "marker" for VOCs, and an alternative marker must be identified;

400 N. Columbus Street
Suite 201
Alexandria, VA 22314
phone: 703/684-5574
fax: 703/836-8503
email: ilma@ilma.org
web: www.ilma.org

- Additional exemptions are warranted;

- Draft Test Method 313-L, based on AQMD's comparison of predicted VOC values with actual test results, is not a valid test method for both compliance and enforcement purposes; and,

- The term "Lubricants" should be deleted from Proposed Rule 1144.

AQMD can effectively remedy these problems and issues, while at the same time assuring that federal and state air quality goals are met.

Extending the Effective Date for General Metalworking Fluids

ILMA supports AQMD's proposed, phased-in compliance for Rule 1144 between 2010 and 2012. However, with the exception of vanishing oils, "General Metalworking Fluids" should be subject to Rule 1144 in 2012, rather than in 2010. This additional time is needed specifically because of the nature and complexity of the use and composition of MWFs and because regulating vanishing oils first according to the schedule proposed by AQMD (*i.e.*, 2010) appears to satisfy nearly all of AQMD's VOC reduction goals[1]

Metalworking fluids are complex mixtures and their uses in working systems are even more variable. ILMA members literally manufacture and sell thousands of MWF formulations. While we appreciate AQMD's efforts to test roughly two dozen samples of MWFs, this sampling is plainly not representative (statistically or otherwise) of the wide gamut of MWFs likely used in the South Coast Basin and any expected VOC emissions. Stated differently, AQMD cannot make assumptions on all MWFs based on its limited testing. As a result, ILMA members and other MWF manufacturers will have to test thousands of formulations for VOC content, and it is highly unlikely that such testing can be completed by 2010. In addition to the need for more robust sampling, the various problems with Draft Test Method 313-L (discussed below) need to be resolved.

In *CM #2007CTS-01*, the proposed goal is a VOC reduction of 1.9 tons/day. ILMA agrees that vanishing oils, by their nature as solvents, are likely close to 100% VOCs. If vanishing oils were eliminated by 2010 as proposed, the likely reduction of VOCs is approximately 1.8 tons / day.

As a result, it appears that AQMD can simultaneously achieve the VOC reductions sought, while providing the time and space required to properly extend the rule to MWFs that are not vanishing oils.

[1] ILMA remains concerned with AQMD's aggressive time frame for the adoption of Rule 1144. The fluids covered by the proposed rule are diverse and complex and are not appropriately represented by a handful of sampled fluids. ILMA requests that AQMD put into the record the statutory, regulatory or court-ordered citation for the need to adopt Rule 1144 by a date certain – whether it is December 5, 2008 or January 9, 2009..

Methyl Palmitate as the VOC "Marker"

We remain nonplussed by the lack of documented science behind AQMD's use of methyl palmitate as a "marker" for VOCs in its draft 313-L test procedure. In response to ILMA's repeated queries as to the scientific justification for using methyl palmitate as the VOC marker, AQMD essentially responds that methyl palmitate was the marker in EPA Test Method 24 and is therefore carried over to Test Method 313-L. Given that these are two wholly different test methods, we see neither the theoretical reasoning nor any data-driven justification for this critically important decision.

In an effort to elevate the designation of the test marker beyond the arbitrary, ILMA is now researching alternate chemical markers and may have results before the anticipated January 9, 2008 final hearing. We trust that AQMD will remain open to change in the GC marker for VOCs.

Additional Exemptions from the VOC Limits in Rule 1144 are Required Due to Physical Attributes of Certain Metalworking Settings And/Or Contractual Limitations

The Association takes great pride in the innovative nature of its members. There are thousands of different MWF formulations on the market, and this diversity is driven by a collective desire to design the best fluid for a given process. In any engineering endeavor, there are, of course, limitations imposed by chemistry and physics. In addition to chemical and physical limitations, certain manufacturing settings are tightly controlled by exacting customer contracts that require specific fluids; substituting fluids in these settings is not an option. The following list is our best estimate of manufacturing settings that warrant an exemption from the VOC limits contemplated in Rule 1144:

- Wire Bunching and Stranding. When wires are twisted together to form a cable it is important they are lubricated, but not with a water-based product because of potential corrosion of the cable.

- Tool grinding. There are surface finishing requirements for tool life and corrosion inhibition and carbide leaching associated with water based fluids; flute grinding is one area where we have never seen a water based fluid.

- Cubic Boron Nitride (CBN) Grinding. CBN wheel manufacturer's recommendation for oil-based fluids coupled with grindings requirements for low viscosity.

- Aluminum Fin Stamping. Low viscosity oils are needed because high viscosity products will lead to the failure of the metal to release from the dye. Also, residue is not cleaned from parts prior to assembly.

- Wire Drawing. Oil is needed for generating acceptable surface finish on fine steel wires and breaking down aluminum rod.
- Lapping. Steel parts and aluminum oxide grit create galvanic cell and corrosion on surface in the presence of water. Low viscosity required so that the oils does not lubricate the operation to make the grit less effective. Corrosion is common with equipment in the presence of water.

- Honing. Low viscosity is required for cooling properties associated with surface finishing.

- Electrical Discharge Machining (EDM). Requires a non-electricity conducting environment.

- Screw and Bar Machines. Machine seals allow transfer of fluids from gearboxes to hydraulics to machining center requires a common fluid for all. Basically these machines were designed to use oil on both sides (metal removal side / gear box side) of the machine. These machines are also known as Acme Gridley, Brown and Sharp, and Davenport machine types.

- Magnesium Machining. Magnesium spontaneously reacts with water to create hydrogen gas. Although attempts have been made to use water-diluted fluids on magnesium, the fire and explosion risks outweigh the benefits.

- Temper Rolling. Required for finish and smut pick-up. The ferrous and non-ferrous rolling mills can be very temperamental. The flexibility to adapt a fluid based upon the incoming stock requires flexibility in the lubricant.

- Cold Rolling. Ferrous and non-ferrous; low viscosity highly refined oils are required for lubricant transfer and cooling.

- Fire Resistant Hydraulic Fluids. These fluids are used in applications exposed to high pressure and temperatures, such as steel casting. They are in a closed system and would not be exposed to atmospheric discharges under normal use.

- Neat Cupper Lubricants. These are lubricants applied prior to the cupper press and immediately emulsified during the draw process in the body makers when making aluminum beverage cans. Given the application, the lubricant must be able to be emulsified.

- Aerospace Specified Processes and Chemical Compounds.

- Military Specified Processes and Chemical Compounds (Mil Specs).

- Automotive Specified Processes and Chemical Compounds, Pre-Production Acceptance Process (PPAP).

- Finger Print Removers. Like chemical dissolves like chemicals. Solvents are needed to dissolve and neutralize finger prints and their corrosive elements.
- Penetrating Oils. Low viscosity oils are required as high viscosity oils do not penetrate and wet out the surface effectively.

- Coating Oils. Used for coating of steel stock for shipment. This coating functions as both protective coating and a corrosion inhibitor. Coating oils are sometime referred to as slushing oils.

- Water Displacing Rust and Corrosion Preventatives. Low viscosity oils flow readily and carry surface-active water displacing compounds over the metal surfaces.

- Salt Spray Protection. Waxes carried by solvents to impart salt spray corrosion protection. Water based alternatives cannot carry the same level of protection.

- 30 + Day Rust Protection. Water based alternatives rarely provide this protection. Nitrites can serve this function, but are a suspected carcinogen.

- Domestic Shipment Rust Protection. Waxes carried by solvents to impart outdoor corrosion protection that can be removed. Temperature and humidity variances during shipment are such that water based alternatives cannot carry the same level of protection.

ILMA reserves the right to supplement this suggested exemption roster once draft Test Method 313-L is finalized.

Draft Test Method 313-L

ILMA still has major concerns with draft Test Method 313-L – that is, it is not a test method by AQMD's own data. More specifically, AQMD did testing on three dilute fluids to compare predicted VOC results with actual tests. One sample varied by 100% and another by 33%. A validated test method does not have such variability, especially when critical to both compliance and enforcement.

Given the problems with the test method, ILMA member companies are willing to lend their lab specialists to work with AQMD lab staff to determine the cause of this variability and work to solve the problem.

ILMA still feels a proper rulemaking requires the test method be valid and a fair approach to determining compliance with Rule 1144.

The Term "Lubricants" Must be Removed from the Rule

ILMA supports excluding "Lubricants," as previously defined by AQMD from Rule 1144, especially where the product does not come into *direct* contact with materials either being machined or manufactured.

Conclusion

ILMA appreciates this opportunity to comment on the revised draft of Proposed Rule 1144 and accompanying staff report. While AQMD has made a number of improvements to the draft Rule, additional changes, as discussed above, are appropriate. 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.