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**C O N F I D E N T I A L T E C H N I C A L
I N F O R M A T I O N D O C U M E N T**

TITLE: VOC Calculations and new SCAQMD Requirements

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Mirachem Products and the New South Coast Air Quality Management District VOC Requirements, Effective January 1, 2003

In a board meeting on August 2, 2002, the South Coast Air Quality Management District (SCAQMD) approved a proposal to accelerate the implementation date of changes to their Rule 1171. Effectively, these changes reduce the allowable levels of Volatile Organic Compounds (VOC's) in cleaning products used in relevant applications from < 50 g/l to < 25 g/l, to become effective January 1, 2003. Additional information on this subject is available at www.aqmd.gov, and is included in this release.¹

While this change has not been officially "published", we do believe that the amendments will go into effect as discussed at the board meeting of August 2.

Mirachem, one of the most active supporters of the initial implementation of the Rule 1171, supports this move by AQMD, and applauds their continuing efforts to improve environmental quality. Regulations such as this act as a catalyst for users of industrial cleaning chemicals to look beyond the traditionally accepted conventions, and conduct a thorough and fair evaluation of other methods and technologies, such as those found in Mirachem's cleaners and degreasers.

In an effort to assist businesses in the District, SCAQMD created the "Clean Air Solvent" (CAS) program. This program allows manufacturers to submit their products to the SCAQMD laboratory in Diamond Bar, CA, and upon successful completion of the test protocol, have the product certified as a CAS. This certification allows users in the District to quickly and easily identify products that meet the applicable air quality standards. Mirachem was among the first manufacturers to participate in the program and be awarded Clean Air Solvent Certificates. Certified products include Mirachem 500 Cleaner/Degreaser, Mirachem Pressroom Cleaner, Mirachem 750 Low Foam Cleaner / Degreaser and Mirachem 250 Rust & Scale Remover.

With the new regulations, the standards used for awarding CAS certifications will change. Certificates issued before the implementation of these changes certify compliance at the < 50 g/l level. Products with these certificates may, or may not, meet the new standard of < 25 g/l. SCAQMD is in the process of testing products at the new standard, in preparation for renewal and re-issuance of CAS certifications. Again, Mirachem products are among the first to go through the process, and certification is expected to be complete by September 1, 2002.

In the mean time, users of industrial cleaners in the District should be aware that the regulations do not require that a product have a CAS certification in order to be compliant with the provisions of Rule 1171. The Rule simply requires that the product, as used, must meet the specified requirements.

Specific requirements exist for proper use and dilution of Mirachem's products, to be compliant with SCAQMD regulations. These requirements are²:

New <25 g/l Standard:

Mirachem 500 Cleaner / Degreaser

Dilute at 2 part water to 1 part of Mirachem 500, or greater.

Mirachem 750 Low Foam Cleaner / Degreaser

Dilute at 2 part water to 1 part of Mirachem 750, or greater.

Mirachem Pressroom Cleaner

Dilute at 2 part water to 1 part of Mirachem Pressroom Cleaner, or greater.

Mirachem 250 Rust & Scale Remover

Use concentrated, or at any recommended dilution.

Mirachem Commercial Parts Washer Fluid M500

Ready-to-use product, complies directly out of the container.

Mirachem Commercial Parts Washer Fluid M750

Ready-to-use product, complies directly out of the container.

The Mirachem Corporation certifies that when used as indicated, and at proper dilution, Mirachem 500 Cleaner/Degreaser, Mirachem Pressroom Cleaner, Mirachem 750 Low Foam Cleaner / Degreaser, Mirachem 250 Rust & Scale Remover, Mirachem Commercial Parts Washer Fluid M500, and Mirachem Commercial Parts Washer Fluid M750 continue to meet the requirements of Rule 1171.

This release also contains a reference chart indicating the VOC levels in selected Mirachem products at various dilutions.

For additional information, including Material Safety Data Sheets, visit our website at www.mirachem.com, or call our Customer Service Department at 800-847-3527.

¹ Information obtained from the SCAQMD website. Current as of the date of this release, but subject to change as deemed necessary by SCAQMD.

² Information provided based on the results of SCAQMD CAS analysis.



**Summary of
Volatile Organic Compounds (VOC)
In MiraChem® Products**

As Determined by
South Coast Air Quality Management District (SCAQMD)

<u>Product</u>	<u>VOC</u>		<u>Use Dilution</u>	<u>VOC @ Use Dilution</u>	
	Grams/Lit	lbs./gal.		Grams/Lite	lbs./gal.
Mirachem 250 Rust & Scale Remover	0	0	NA	NA	
Mirachem 500 Cleaner/Degreaser	80	0.67	1:1	40	0.33
			2:1	25	0.21
Mirachem 750 Low Foam Cleaner/Degreaser	75	0.62	1:2	25	0.21
Mirachem Pressroom Cleaner	75	0.62	1:1	35	0.29
			2:1	25	0.21
			3:1	18	0.16
Mirachem Commercial Parts Washer Fluid M500	25	0.21	Undiluted	25	0.21
Mirachem Commercial Parts Washer Fluid M750	25	0.21	Undiluted	25	0.21

No Volatile Organic Hazardous Air Pollutants (VOHAP), Ozone Depleting Compounds (ODC), or Global Warming Compounds (GWC) were detected by SCAQMD as being present in any of these products.

All six products have been certified by South Coast Air Quality Management District as meeting the requirements of a Clean Air Solvent (CAS) as defined by SCAQMD Method 313-91.



South Coast Air Quality Management District

BOARD MEETING DATE: August 2, 2002 AGENDA NO. 26

PROPOSAL:

Amend Rule 1171 – Solvent Cleaning Operations

SYNOPSIS:

Rule 1171 requires that by July 1, 2005, the VOC content of certain solvent activities be limited to 25 g/l. There are many low-VOC materials available which already meet this limit. The proposed amendment will lower the VOC content limit from 50 g/l to 25 g/l, as used, by January 1, 2003. The solvent cleaning activities affected by the proposed rule amendment include: general product cleaning and surface preparation; general repair and maintenance cleaning; general cleaning of ink application equipment; cleaning of flexographic and gravure printing ink application equipment; cleaning of removable press components in lithographic or letterpress printing; and cleaning of polyester resin application equipment. The proposed amendments will also add clarifying rule language, remove obsolete exemptions and may modify certain exemptions.

COMMITTEE:

Stationary Source, June 28, 2002, Reviewed

RECOMMENDED ACTION:

Adopt the attached resolution:

1. Certifying the Addendum to the October 1999 CEQA Final Environmental Assessment (EA) for the proposed amendments.
2. Amending Rule 1171 – Solvent Cleaning Operations.

Barry R. Wallerstein, D.Env.
Executive Officer

Background

Rule 1171 – Solvent Cleaning Operations, a key component of South Coast Air Quality Management District's (AQMD) ozone reduction strategy, was adopted on August 2, 1991 to reduce VOC emissions from the use of solvents and solvent wastes generated during the production, repair, maintenance, or

servicing of products, tools, machinery, and general work areas. Subsequent rule amendments expanded the scope of the rule to cover not only coating application equipment cleaning and surface preparation, but all solvent cleaning operations and activities at all facilities. Industries subject to the provisions of the rule include facilities that operate and maintain machinery or must remove organic material as part of the production process.

The rule was last amended on October 8, 1999 and established lower VOC content limits for all solvent cleaning activities in two steps. The first reduction in VOC content took effect on December 1, 2001, while the second phase is scheduled to occur on July 1, 2005. Both phases are expected to achieve VOC emission reductions through greater use of aqueous cleaning technologies and VOC-exempt solvents, or through the development of new cleaning materials and/or technologies.

The availability of low-VOC materials has greatly increased during the last several years. The 1999 amendment of Rule 1171 required the use of cleaning solvents with a VOC content limit of 25 grams per liter by July 1, 2005 for all general cleaning applications and other specific solvent cleaning activities. Today, there are many available low-VOC materials that already meet the 25 grams per liter VOC content limit for year 2005. The AQMD has certified over 150 Clean Air Solvents, and most of these products can meet the year 2005 VOC content limit for general cleaning applications.

Proposal

The scope and intent of the proposed amendments are to advance the compliance schedule where compliant products are readily available in the market. Staff is proposing to advance the requirement to lower the VOC content limit of 50 grams per liter to 25 grams per liter for cleaning materials used for several solvent cleaning activities from July 1, 2005 to January 1, 2003. There are many low-VOC cleaning materials readily available in the market that already meet the 25 grams per liter VOC content limit for year 2005. Over 150 Clean Air Solvents have been certified by AQMD, and most of these products can meet the 2005 VOC content limit for general cleaning applications. Staff's proposal will accelerate the reduction of 1.94 tons per day of VOC emissions from solvent cleaning activities by two and one-half years starting in 2003.

In addition, Proposed Amended Rule 1171 will add new terms to the definition section, clarify certain existing terms, and remove obsolete ones in order to enhance rule effectiveness. Other proposed amendments to Rule 1171 are as follows:

- ✍ clarify the rule's applicability to solvent cleaning operations in accordance with the interpretation of Health and Safety Code Section 41712(f) issued by the California Air Resources Board;
- ✍ add a solvent cleaning process for electron beam ink application equipment to the ultraviolet ink category;
- ✍ require compliance with the state airborne toxic control measure for emissions of chlorinated toxic air contaminants from automotive maintenance and repair activities;
- ✍ modify rule language to add new and clarify existing exemptions, and remove obsolete ones;

California Environmental Quality Act (CEQA) Analysis

Pursuant to the California Environmental Quality Act (CEQA) and the AQMD's Certified Regulatory Program (Rule 110), staff has prepared an Addendum to the October 1999 Final EA to address the environmental impacts of the proposed amendments to Rule 1171 - Solvent Cleaning Operations. The analysis concluded that accelerating the compliance dates to lower the VOC content limit for solvents used for specified cleaning activities does not result in new or more severe significant effects requiring

substantial revisions in the previous EA. In particular, no new significant adverse project-specific or cumulative impacts in any environmental areas were identified, nor would any project-specific or cumulative impacts in any environmental areas be made substantially worse as a result of implementing the proposed project.

The Addendum to the October 1999 Final EA is included as part of the attached package for the public hearing on the proposed amendments. The October 1999 Final EA is provided for Board Members only and is available for review in the Public Information Center.

Socioeconomic Impact Assessment

The California Health and Safety Code Section 40440.8 requires an assessment of the socioeconomic impacts of the adoption, amendment, or repeal of a rule or regulation that will significantly affect air quality or emissions limitations. The proposed amendments to Rule 1171 - Solvent Cleaning Operations will not result in increased costs to the affected industries and, therefore, will have no socioeconomic impact.

AQMP and Legal Mandates

The California Health and Safety Code requires the AQMD to adopt an Air Quality Management Plan to meet state and federal ambient air quality standards in the Basin. In addition, the California Health and Safety Code requires that the AQMD adopt rules and regulations that carry out the objectives of the AQMP. The 1999 amendment of Rule 1171 implemented a control measure from the 1997 AQMP (CM#97ADV-CLNG) to meet state and federal requirements. The proposed changes to Rule 1171 accelerates part of the VOC emission reductions expected from the 1999 rule amendment.

Implementation Plan

Staff will continue the on-going implementation efforts on Rule 1171 with outreach to the sources affected by these amendments, including solvent suppliers. Furthermore, staff will continue to conduct public outreach and coordination regarding water quality issues associated with the rule.

Resource Impact

Current AQMD resources are sufficient to implement the proposed Rule 1171 amendments with no budget impact.

[Attachments](#)

Summary of Proposal

Key Issues and Responses

Rule Development Process

Key Contacts List

Resolution

Proposed Rule Language

Staff Report

Addendum to the October 1999 Final Environmental Assessment

October 1999 Final Environmental Assessment (available to the public at SCAQMD's Public Information Center)

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[AQMD Home Page](#)

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URL: <http://www.aqmd.gov/hb/020826a.html>