September 18, 2006

To: Fred Gelfant
Fax: 425 940 6540

The following six pages arrived from Gary McAlister on Saturday.

Jim

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

SEP 14 2006

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Jim Berry P.E., Consultant
Berry Environmental
5021 Yadkin Dr., Suite 202
Raleigh, NC 27609

Dear Mr. Berry:

This letter summarizes approved modifications to EPA Method 24 for determining the VOC content of surface coatings. Method 24 is found in Title 40, Part 60, Appendix A of the CFR. It is our intent to publish an update of Method 24 in the Federal Register that incorporates all of these modifications that affect coating industries covered by New Source Performance Standards when resources become available.

Method 24 has been the EPA's test method for determining the volatile organic carbon (VOC) content of paint and other coatings since 1981. Over the last several years, in response to continuing evaluation of the seemingly infinite varieties of coatings and applications for which it has been used, the EPA has accepted alternative and supplementary procedures to the existing method, and accepted one supplementary test procedure developed by a recognized consensus method testing body, American Society for Testing Materials (ASTM).

The EPA published a method in 1998 for determining the VOC content of multi-component methacrylate coatings used as traffic marking coatings in 40 CFR Part 59, Subpart D, Appendix A. The provisions it introduced that are different from Method 24 include:

1) using a larger sample size of 3.0 +/- 0.1 gram,
2) eliminating the requirement to dilute the sample after it is added to the weighing dish
3) using a paper clip is to mix and smooth the multi-component sample before exposing it to the heat cycle of one hour at 110° C, and
4) using the paper clip to break up the film of the coating, after weighing the cooled sample, before returning the sample to the oven for a second heat cycle of one hour at 110° C and a subsequent weighing.

We received a petition in 1999 stating that the measure of VOC content of acrylic reactive resins is also adversely affected by adding the dilution solvent required by Method 24. The Acting Director of the Agency's Emissions, Monitoring and Analysis Division responded in a letter dated February 14, 2001 (copy enclosed). It authorized use of the alternative methacrylate traffic marking test for determining the VOC content of acrylic reactive resins used

in floor and industrial maintenance coatings with one exception. The maximum sample size was restricted to a 1 gram because this size resulted in forming a sample film that was approximately the same thickness as the film formed by the coating in actual use.

The Acting Director also approved a test to measure the VOC content of electrical insulating varnishes developed by a standards developing organization[1], Committee D-09 (Electrical and Electronic Insulating Materials), of the ASTM. The method, ASTM D6053-96, allows use of a 3 gram sample.

We also recognize that the apparent VOC content of high solids, polymer chemistries other than methacrylate and acrylic reactive resins also increase when the diluent required by Method 24 is used. Users or producers of these kinds of coatings could also request the use of an alternative method. The process for seeking approval is to submit a written request for an alternative method. This process is described in detail in the enclosed document entitled, "Handling Requests for Approval of Minor/Major Modifications/Alternatives to Testing and Monitoring Methods or Procedures." If requested we would consider and would probably approve the use of the alternative method that does not require diluent (originally approved for methacrylate chemistry) for any high-solids (90% non-volatile or greater), multi-component, addition- or free-radical, cured, coating chemistry including epoxy, urethane, vinyl ester, polyester, and polyurea. The allowable sample size of any approved alternatives would be consistent with how the product is used.

Sincerely,

Gary McAlister
Measurement Technology Group

Enclosures

[1] Public Law 104-113, the National Technology Transfer and Advancement Act of 1996, requires that Federal Agencies adopt private sector standards, particularly those developed by standards developing organizations, whenever possible.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

FEB 14 2001

Mr. Wilfried H. Riesterer
Silikal Resin Systems
173 Interstate Lane
Waterbury, Connecticut 06705-2540

Dear Mr. Riesterer:

This is in response to your request for an alternative to the Environmental Protection Agency's (EPA's) Test Method 24 for determining the volatile organic compound (VOC) content of acrylic reactive resins used by your company in floor- and industrial maintenance coatings. You stated that Method 24 is not appropriate for your coatings because it requires a dispersing solvent which inhibits proper curing. You requested permission to use a method entitled "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" which was included as Appendix A to Subpart D of 40 CFR Part 59, National Volatile Organic Compound Emission Standards for Architectural Coatings. It is your belief that this method is appropriate because it does not require a dispersing agent and it mirrors the installation procedure for your resins.

We have reviewed the data you submitted which involved eight different coatings tested using Method 24 and the alternative method at three different sample sizes (0.3 g, 1.0 g and 3.0 g). In addition, the meeting with you and Borys Schafran was very helpful in clarifying the situation.

After taking all the information into consideration, EPA has determined that the requested alternative method with one modification is acceptable for determining the VOC content of the acrylic reactive resins use by Silikal in floor- and industrial maintenance coatings. The one modification involves the sample size. Since the 1 gram sample is representative of how the product is used, the approval is based on your using a 1 gram sample instead of the 3 gram sample specified in the alternative method.

If you have questions concerning this matter, please contact Candace B. Sorrell of my staff at (919)541-1064.

Sincerely,

for J. David Mobley, Acting Division Director
Emissions, Monitoring, and Analysis Division

EMISSION MEASUREMENT CENTER
GUIDELINE DOCUMENT

HANDLING REQUESTS FOR APPROVAL OF MINOR/MAJOR MODIFICATIONS/ALTERNATIVES TO TESTING AND MONITORING METHODS OR PROCEDURES

INTRODUCTION

The purposes of this interim guideline are (1) to discuss the Environmental Protection Agency (EPA) alternative test method and monitoring approval/disapproval procedures under 40 CFR Parts 60, 61, and 63 and (2) describe EPA procedures for requesting and responding to requests for approval of alternative test methods and monitoring procedures. The procedures describe both external and internal procedures and responsibilities associated with EPA's technical assistance and review authority roles. A more extensive version of this guideline is under development.

BACKGROUND

The General Provisions to 40 CFR Parts 60, 61 and 63 (NSPS and NESHAP) give the Administrator of the EPA the authority to approve changes to testing and monitoring requirements specified by the Subparts of Parts 60, 61, and 63 for determining or assessing compliance of stationary sources with Federally enforceable emission limitations or standards. Many of the Subparts reiterate this authority.

Delegations 7-119 and 7-121 of EPA's Delegations Manual formally clarify that the authority for approval of (1) minor changes to test methods procedures, (2) shorter sampling times/smaller sampling volumes, (3) waivers of emissions and performance test requirements, and (4) all changes to monitoring requirements can be delegated to the Regional Administrators or a designee. Authority for approval of alternative methods or equivalent methods can be delegated **only** to the Director of the Office of Air Quality Planning and Standards (OAQPS).

In many cases, the Regional Administrators have delegated the authority to approve minor changes to test methods and monitoring procedures to the State or local agencies responsible for implementing the NSPS and NESHAP. The Director of OAQPS has further delegated responsibility for the authority for approval of major changes to test methods to the Director of the Emissions, Monitoring and Analysis Division (EMAD) who, in turn has delegated it to the Leader of the Source Measurement Technology Group.

As further clarification, our understanding is that this delegation should not be applied to programs operated under the Air Quality Strategies Division (AQSSD) Director's discretion (i.e., those completely delegated to State or local agencies with little or no EPA oversight) nor to initial State Implementation Plan reviews. For these programs, the agency will provide specific guidance on what constitutes acceptable test methods through the regulation or associated guidance material (e.g., the Title IV background documentation).

ACCEPTANCE CRITERIA

A request for a major change to a test method or monitoring requirement and testing waivers will receive rigorous review. Basic principles of these reviews will be:

(a) The change in the testing or monitoring method or procedure will provide a determination of compliance status at the same or higher stringency as the method or procedure specified in the applicable regulation; or

(b) The compliance or conformance with an applicable emission limitation or standard has been sufficiently demonstrated by other means to justify the testing waiver.

In addition, the requester shall include the compelling reasons which prompted the request; that is, a request for any change should address significant deficiencies in applying the prescribed procedure or provide meaningful improvements achieved over existing procedures or methods. Examples of supporting reasons are as follows:

(a) Overcoming significant interferences or biases (e.g., addition of an HCl-filled impinger to remove NH_3 from an SO_2 gas sample);

(b) Allowing for new technology for improved accuracy, lower cost procedures, or increased applicability (e.g., use of dynamic calibration gas cells for in situ cross-stack continuous emission monitoring systems in lieu of a relative accuracy audit);

(c) Allowing alternative measurement locations for hybrid processes subject to multiple regulations (e.g., alternative measurements and emission calculation procedures for combined cycle, gas turbine/fossil fuel-fired boiler units).

Most importantly, acceptance of an alternative test method shall be based on substantive technical support information. While chemistry, engineering, and economic evaluations will be important to the EMAD reviews, requests must also include support data of the type described in Method 301 of Appendix A, Title 40 Part 63. The promulgation of Method 301 included the requirement that any non-validated method proposed for demonstrating conformance with a federal emission limitation or standard be subject to the requirements in Method 301. Supporting information includes:

(a) direct comparisons with existing reference or compliance test methods;

(b) precision and bias determinations (e.g., duplicate test trains

and multiple test runs under a range of test conditions); and

(c) detailed and documented test procedures (e.g., similar to published EPA reference methods).

CONTENT OF REQUEST

Requests must be made and approvals granted on a facility-specific basis. A complete letter of request should include:

- Name(s) and location(s) of facilities to which requested testing alternative is to apply.
- Federal testing requirement (e.g., subpart and paragraph of 40 CFR part 60, 61, or 63) to which facility is subject.
- Detailed description of alternative testing procedure(s).
- Justification for alternative testing procedure (see discussion in section on Acceptance Criteria above) including any supporting test data.
- Names of responsible state/local agency and EPA Regional contacts, if possible.

Questions regarding these procedures should be directed to Robin Segall (919/541-0893; segall.robin@epa.gov).

Send complete requests for review of alternative test methods to:

Dr. Connie B. Oldham, Leader
Emission Measurement Center
U.S. EPA (Mail Code E143-02)
Research Triangle Park, NC 27711

Copies of the request should be sent to the responsible EPA Regional Office and state/local agency.