BOARD MEETING DATE: December 3, 2004
AGENDA NO. 38

PROPOSAL:

Annual Status Report on Rule 1113 – Architectural Coatings

SYNOPSIS:

At the December 6, 2002 meeting, the Board approved a resolution directing staff to provide annual progress reports on achieving the 2006 compliance limits. This annual report provides an update of staff's work on available coatings evaluations and implementation activities associated with the rule. The intent is to provide detailed data by July 1, 2005 on all aspects of the rule including but not limited to information relative to the required technological assessments.

COMMITTEE:

Stationary Source, November 19, 2004, Reviewed

RECOMMENDED ACTION:

Receive and file.

Barry R. Wallerstein, D.Env.
Executive Officer

Background

At the December 6, 2002 meeting, the Board approved a resolution directing staff to continue to provide annual progress reports on achieving the 2006 limits found in Rule 1113 – Architectural Coatings. To fulfill the Board's directive, this fifth annual report provides a brief update on staff's work over the past year with the intent of disseminating a more detailed report in July of 2005. The report to the Board in July 8, 2005 will provide results of the laboratory analyses of specific coating categories required in the technology assessment. Additional information will be available at that time relative to specific volatile organic compounds (VOC) limits with effective dates in 2006, which is the premise for the annual report.

Ongoing work continues to support the following conclusions as presented in previous annual reports:

- Studies and surveys conducted by staff and other available resources indicate that

workable compliant and super-compliant coatings used in the Basin continue to grow.[1]
- Ongoing staff research of technical information and other sources of data, further substantiate the current technological feasibility of the future VOC limits in the rule.
- Compliant coatings are used on a continual basis throughout the Basin that meet or exceed industry and public requirements of performance, and are applied under varying environmental conditions on many different substrates.

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[1]Super compliant coatings are those coatings that exceed the current and/or future limits for the applicable coatings categories as set forth in the Table of Standards found in paragraph (c)(2). These also include those coatings that meet future limits in advance of their effective date.

The July 1, 2006 VOC limits include the following categories as shown in the Table of Standards for Rule 1113, Architectural Coatings:

- Clear Wood Finishes
- Floor Coatings
- Industrial Maintenance Coatings
- Non-flat Coatings
- Primers
- Sealers and Under Coaters
- Quick-Dry Enamels
- Quick-Dry Primers, Sealers, and Undercoaters
- Rust Preventative Coatings
- Specialty Primers Waterproofing Sealers
- Waterproofing Concrete/Masonry Sealers

As the July 1, 2006 limits approach, AQMD staff continues to evaluate and review these and all other coating categories in the Table of Standards in order to further evaluate the availability of compliant products.

Rule 1113- Architectural Coatings is a key instrument to achieve the attainment goals in the 2003 AQMP. VOC emissions resulting from architectural coatings are critical and have been determined by staff to be one of the most significant non-mobile sources contributing toward ozone pollution within the South Coast basin (Basin). Based on the report "1997 Annual Average Emissions by Source Category in the South Coast Air Basin," more than 50 tons per day of VOC emissions are from architectural coatings.

REVIEW OF FIELD APPLICATIONS

Last year's annual report to the Board included further analysis of architectural coatings applied at existing and new construction activities throughout the Basin. These studies drew public comments asking for a longer term analysis of the field applications of many compliant coatings such as clear wood finishes, concrete/masonry coatings and industrial maintenance coatings. Staff has returned to many of the coating application locations and will complete follow ups to all the sites discussed in last year's report for an all inclusive review to the Board on July 8, 2005. These re-evaluation reports will assist in determining

long term viability of low- and zero-VOC architectural coatings. New applications of other coatings will also be included for public review.

ONGOING COATING EVALUATIONS

An in depth analysis of material safety data sheets (MSDS), technical and product data sheets published by coating manufacturers, is one of many methodologies used to complete the evaluation of available coatings. The list from last year's report is being updated on a regular basis. On a weekly basis, a number of compliant and super compliant coatings are added to the list. Coatings in all categories of the Table of Standards are currently under review and a detailed database of available coatings will be included in the report to the Board on July 8, 2005.

Additional long term evaluations of coatings, a part of the past National Technical Systems (NTS) atmospheric study, are continuing. Following the completion of testing by NTS in 2002, the test panels were obtained by AQMD staff and continue to be evaluated on test racks in close proximity to the original locations during the NTS study. Evaluations were completed by AQMD staff at the two test locations in February and November, 2004, and these will be included in the report to the Board on July 8, 2005.

RULE IMPLEMENTATION EFFORTS

Additional work-in-progress includes a compilation of data into a master list as a direct result of an extensive survey of distributors and users of architectural coatings that was initiated in April 2004. The list provides data from facilities that responded and includes non-compliant and compliant products offered for sale and in use within the Basin. Those that did not respond to the survey may be subject to more detailed audits by staff. This project is scheduled to be completed by the end of January 2005 for inclusion in the July 8, 2005 report to the Board.

TECHNOLOGY ASSESSMENTS

Past studies presented to the Board regarding architectural coatings indicated the availability of compliant coatings in the specific categories of wood coating products, industrial maintenance coatings, nonflats, primers, sealers, undercoaters, floor, rust and waterproofing products. Studies conducted under AQMD contracts such as those completed by AVES, National Technical Systems and KTA-Tator, demonstrated that low- and zero-VOC coatings are as good, if not better, than the higher VOC counterparts and meet or exceed expected performance coating characteristics. Many of the manufacturers of the coatings used in those studies have informed AQMD staff that they will continue to improve on their low- and zero-VOC product lines.

The ongoing technology assessment established by the Essential Public Service Agencies (EPSA) Committee comprised of representatives from the AQMD, Metropolitan Water District of Southern California, the Department of Water Resources, Cal Trans and the Los Angeles Department of Water and Power is scheduled to be completed in 2005. Meetings with AQMD staff and the EPSA have been scheduled to discuss VOC compliant industrial maintenance coating systems that are currently undergoing performance testing, both in

the laboratory and in the field. The tests conform to the coatings industry recognized testing procedures and environments. The AQMD staff will present those results to the Board in the July of 2005 report.

Additionally, an AQMD study that was initiated in November 2004 by the University of Missouri (UMR), Rolla Coatings Institute to specifically review coatings affected by the future VOC limits should be completed by early 2005 and those results will also be included in the July 2005 report.

MEETINGS

Staff continues to solicit the expertise of the Technical Advisory Committee (TAC) for assistance in its continuing evaluation of coatings performance. On May 7, 2004, AQMD staff released an RFP to solicit and qualify a consultant with technical expertise in the field of coatings testing and analysis. The consultant, UMR Rolla Coatings Institute, will analyze recently developed and commercially available architectural and industrial maintenance (AIM) coatings in solvent-borne, water-borne, and zero-VOC formulations. AQMD staff first released a draft of the original RFP to the TAC on March 23, 2004. At that time a request was made to review the content and reply back for potential revisions to the RFP. Many of the comments and suggestions received were incorporated into the final RFP that was released on May 7, 2004 with a copy forwarded to the TAC on May 11, 2004. The TAC was consulted on the review of potential candidates and on test protocols being considered. On June 24, 2004, a teleconference was held with the TAC to discuss the RFP that was released and to initiate further discussions on the selection of coatings for the study. Also, during July and into August, the TAC was further solicited by staff to make comments on coating selection and testing protocols. Conference calls were held with the TAC and the selected contractor, UMR Rolla Coatings Institute, on July 7 and 13, 2004, in order for the members to comment on the coatings selection and testing protocols.

Following the final selection of coatings, another conference call was held on September 17, 2004 to discuss the testing protocols in more detail. On September 28, 2004, the AQMD requested that the TAC provide final input for the testing protocols as related to the first phase of the study for the nonflat category. Feedback was received from four TAC members. Several members of the TAC expressed their concern that the scope of the study is limited and the number of coatings being tested and test protocols are insufficient to draw any substantial conclusions relative to the 2006 limits in the rule. Based on input from the TAC, certain general properties testing were removed from the original proposal to allow for bidders to increase the number of coatings to be tested. As a result, there has been an increase in coatings to be studied of over 20%. AQMD staff continues to meet and confer with the TAC for inputs in accomplishing the goals and objectives of the study.

AVERAGING COMPLIANCE OPTION (ACO) PLANS

Rule 1113 - Architectural Coatings has an option that provides manufacturers of coatings additional flexibility, to meet the rules limits by allowing them to average the VOC content of coatings across a number of categories. This is termed the Averaging Compliance Option (ACO). The first year that the ACO was made available, there were

three manufacturers that submitted plans that were approved by the AQMD for the period of June 30, 2001 to July 1, 2002. Audits for the three manufacturers participating in the first year of the ACO were completed by January 2004 and all were in compliance with the rule and their plan requirements. To date, there are eight manufacturers with approved plans utilizing the ACO for averaging a variety of coating categories including flats, nonflats, floor, industrial maintenance, primers, sealers, undercoaters, quick-dry primers, quick-dry sealers, quick-dry undercoaters, quick-dry enamels and rust preventative.

In order to insure compliance with the new plans, AQMD staff have been conducting paper and field audits for the eight manufacturers utilizing the ACO for the period beginning January 1, 2003 and ending December 31, 2003. This second phase of audits requires extensive staff time to review and analyze the data as required under the ACO provision of the rule and the plans submitted. Staff will complete three audits by the end of December with an additional five to be completed for inclusion in the report to the Board by July 2005.