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September 18, 2007

Barbara Fry, Chief
Measures Assessment Branch
Air Resources Board
California Environmental Protection Agency
1001 I Street
Sacramento, California 95812

Dear Ms. Fry:

This correspondence contains comments on the proposed limits on the volatile organic compound (VOC) content for various architectural coatings contained in the Air Resources Board (ARB) June 2007 draft Suggested Control Measure (SCM).

The California Department of Transportation (Caltrans) manages more than 50,000 highway lane-miles and more than 12,600 bridges throughout California, including more than 1,000 steel bridges spanning at least twenty feet. Caltrans shares the concerns of ARB regarding the impact that VOCs contained in industrial maintenance coatings will have on air quality.

Beginning in 1978, Caltrans began striving to utilize protective coatings containing less than 250 g/L of VOCs. This effort has entailed extensive evaluations of available low-VOC coatings from industrial coating suppliers and in-house formula development utilizing recommendations from raw material suppliers when available coatings have not met our requirements

Caltrans continues to prefer single component latex coatings for maintenance painting of steel bridges because of their ease of application and their freedom from pot-life limitations that affect most thermosetting coatings. However, as the allowable VOC content in these coatings decreases, we are seeing increased problems associated with their use. These problems are less frequent in the South Coast Air Quality Management District (SCAQMD), where the current limit is a maximum of 100 g/L, due to the generally warmer climate, which helps with the film formation process for these coatings. It is apparent that we will not be able to use <100 g/L latex coatings in many areas of California, such as along the coast and in the mountains.

We are currently evaluating single and multi-component thermosetting coatings that have VOC contents close to 250 g/L for use in these areas.

Caltrans also uses relatively large amounts of concrete curing compounds. One of the most critical applications for these compounds is curing concrete on highway bridge decks. The compound for this application must dry quickly, be scuff-resistant, be paintable, and have excellent moisture retention properties. The only curing compound we have found that meets all of these criteria has a VOC content of 350 g/L.

Since 1981, Caltrans has used a silane-type concrete waterproofing material to improve the concrete's freeze/thaw resistance, reduce chloride intrusion, and reduce a process called alkali/silica reactivity that can cause the concrete to crack. We are not aware of any product that can replace the silane-type waterproofing products.

We request the ARB consider the following actions related to the proposed SCM:

- Retain the current limit of 250 g/L for Industrial Maintenance Coatings. We are still evaluating coatings that comply with this limit and estimate it will take five to six years to evaluate and begin to implement coatings for coastal and mountain use that would meet a lower limit. Specifications for large infrastructure projects such as the new San Francisco Oakland Bay Bridge have already been developed and contracts have been awarded based on the current limits. The Bay Bridge project is projected for completion in 2013.
- Retain the current limit of 350 g/L for concrete curing compounds applied to roadways and bridges. Resin-type curing compounds required for these applications are not available with a significantly lower VOC content.

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- Adopt a limit for silane type concrete and masonry sealers that will allow their use on concrete infrastructure. These products generate VOCs as they cure. Their VOC content can only meet current limits if they are formulated to meet the requirements for a low solids coating. We have found silanes to be ineffective under these conditions.

If you have any questions, please contact me at (916) 227-7289.

Sincerely,



ANDY ROGERSON
Chief, Chemical Testing Branch
Office of Testing and Technology Services
Materials Engineering and Testing Services
Division of Engineering Services