

Comment Letter #67



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Re: Public Comments on Draft 2022 Air Quality Management Plan (AQMP)

RadTech International is the premier trade association in North America for Ultraviolet/Electron Beam/Light Emitting Diode (UV/EB/LED) technology. We speak on behalf of our over 800 members who are involved in a myriad of industry sectors ranging from printing and packaging to nail polish. RadTech has been participating in the AQMP development, serving as a member of the advisory committee for over a decade. In that capacity, we have made comments throughout the process and are pleased to submit written comments on the Draft 2022 AQMP and accompanying Policy Briefs.

Comments on Policy Briefs

The Climate Change and Decarbonization Policy Brief highlights efforts to reduce Greenhouse Gas (GHG) emissions from various sectors. UV/EB/LED technology can support these efforts because our processes are all electric and can replace add on controls that use fossil fuels thereby eliminating greenhouse gasses and Nitrogen Oxides emissions. According to the AQMP policy briefs, reducing emissions of Nitrogen Oxides (NOx) will be critical to attain the standard by 2037. One of the most significant cost factors when comparing thermal cure to UV cure is the energy cost. Studies have shown that conversion from a large (1.10 MBTU/hr) gas dryer to a UV curing unit can cut the annual energy cost in half for the same production capacity thereby achieving emission reductions; reducing costs to businesses and advancing the state's transition to clean and carbon free energy. Currently, facilities who invest in pollution prevention strategies such as UV/EB/LED are not adequately recognized or rewarded for their NOx and GHG emission reduction efforts. We urge the district to provide incentives in the form of permit exemptions and reduced recordkeeping.

Comments on Draft AQMP

CTS-01 --Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants [VOCs].

We appreciate the district's consideration of UV/EB/LED technology as one of the potential ways to achieve VOC reductions and are strongly support the proposal to incentivize the use of zero and near-zero VOC materials. To that end, we suggest amendments to the district's permit exemption rule (Rule 219) to remove regulatory barriers to implementation of low VOC (less than 50 grams/liter in VOC content) materials. Most UV/EB/LED materials emit little to no VOCs or Hazardous Air Pollutants without relying on materials such as tBAC and PCBTF. Since the materials do not "dry" (cure) unless exposed to energy, there is less clean-up. UV/EB users enjoy an increase in up-time and productivity due to the nature of the chemistry (doesn't skin over in applicator, not clean up between shifts/weekends, faster start-ups). Moreover, the materials are not absorbed through the skin like solvents, and they have very low vapor pressures, making inhalation less likely. Technological innovations have overcome past challenges such as substrate penetration, coating of large areas, curved surfaces and line of sight issues.

We request the **inclusion of a description of Ultraviolet/Electron Beam/ Light Emitting Diodes (UV/EB/LED) technology in the Plan as it appeared in the 2003 AQMP.**

Unfortunately, most of that language was eliminated in the 2016 Plan and is not present in the 2022 Draft Plan. The SCAQMD constituents, especially small businesses who may not have access to in-house environmental professionals, would benefit from a more detailed description of our technology.

We would proposed the following language which, is essentially what appears in the 2003 Plan:

"Energy-curable products are liquids with low viscosity that are 100 percent reactive solids. The main difference between traditional solvent-based products and radiation-curing products is the curing mechanism. Energy curable products do not dry in the sense of losing solvents to the atmosphere as is the case with solvent-based products. Instead, when they are exposed to energy, a polymerization reaction starts which converts the liquid to a hard, tough, cured solid film in a fraction of a second. This process typically results in significantly lower VOC emissions and a lower carbon footprint as compared to solvent-based products. The most common means used to cure the products are ultraviolet light (UV), electron beam (EB) and light emitting diodes (LED). UV & LED-curing products need a chemical photoinitiator to initiate the polymerization (curing) process when exposed to UV light. EB-cured products do not contain photoinitiators and are cured when electrons generated with the EB equipment react directly with monomers and polymers in the reactive liquid formula to effect full cure. Due to almost instant curing of these products, the concept of drying time is eliminated which allows any post-application operation to commence immediately or in-line. Other advantages include the attainment of very high gloss levels, reduction of VOC emissions and solvent odors, and reduced energy consumption. UV/EB/LED products can be used on virtually all substrates, from metal and wood to glass and plastic. Applications of UV/EB/LED curing products are numerous

and expanding rapidly. Examples include: coatings, inks and adhesives for paper, furniture, automotive components, no-wax flooring, credit cards, packaging, lottery tickets, golf balls, eye glass and contact lenses, CDs, baseball bats, beverage can labels and functional coatings and hundreds of other items. Energy-curing technologies have made significant progress in alleviating technical limitations for field applications such as automotive repair, and efforts are underway for applying this technology in aerospace and military field uses.

Use of super-compliant zero and near-zero VOC materials, such as some ultraviolet light, electron beam, and light emitting diode-cured coatings, eliminate or substantially reduce emissions compared to similar products that are not zero or near-zero products. There are several product categories where these materials perform as well as, or better than traditional products and they are widely available in the market.”

FLX-02 Stationary Source VOC Incentives [VOCs]

The Draft Plan (see Appendix IV-A-pg. 165) recognizes that, although regulatory relief incentives have been incorporated into several South Coast AQMD rules, including Rule 109 -- Recordkeeping for Volatile Organic Compound Emissions, “incentivizing the use of cleaner, less polluting, products and equipment requires additional efforts to broaden the scope of stationary source incentives”. Removing overly prescriptive permitting and recordkeeping requirements would help the district achieve its incentives goals under Control Measure FLX-02. While we wholeheartedly agree with the incentives concept, we are concerned with how it would be implemented by requiring facilities to “accept permit conditions”. Embroiling facilities in the permitting system and demanding acceptance of permit conditions, would defeat the purpose of an incentives program as facilities will not see costly permit modifications as an incentive. We very much support the provision of incentive funding to facilitate the adoption of clean, low VOC emission technologies from stationary sources and believe that eliminating permit fees via permit exemptions would indeed be an incentive.

Oftentimes, the regulated community (especially small businesses) do not have a clear road map on steps they can take to convert to cleaner technologies. We urge the district to add the www.radtech.org link to the district’s website so that interested facilities can have access to additional information about UV/EB/LED technology.

In summary, there are both tangible and intangible benefits to deciding to go to UV/EB/LED curing. When factoring these benefits into the selection criteria, UV/EB/LED typically becomes the most economical and environmentally safe solution. Our technology can play a vital role in the district's 2022 AQMP. As detailed above, some of the recommendations we have to improve the Draft Plan are:

- Add a more detailed description of UV/EB/LED processes
- Provide funding incentives and ease regulatory burdens by providing exemptions (permit & recordkeeping) for facilities that reduce emissions beyond what district rules currently require.
- We appreciate the opportunity to provide comments and look forward to the development of the AQMP.

Sincerely,

Rita M. Loof
Director, Environmental Affairs