

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report for

Proposed Amended Rule 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II

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Deputy Executive Officer
Planning, Rule Development, & Area Sources
Elaine Chang, DrPH

Assistant Deputy Executive Officer
Planning, Rule Development, & Area Sources
Laki Tisopulos, Ph.D., P.E.

Director, Area Sources
Lee Lockie, M.S.

Author:	Raman C. Patel, M.S., P.E.	Senior A.Q. Engineer
Assistance Provided by:	Mohsen Nazemi, P.E. Fred Lettice, P.E. Jay Chen, P.E. Charles Tupac, P.E. Mohan Balagopalan, M.B.A. Kien Huynh	Assistant DEO, E & C Manager, E & C Manager, E & C AQAC Supervisor, E & C Senior A. Q. Engineer Air Quality Engineering II
Reviewed By:	Jeri Voge Barbara Baird	Senior Deputy District Counsel Principal Deputy District Counsel

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EXECUTIVE SUMMARY**PAR 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II**

Rule 219 is an administrative rule that exempts equipment emitting small amounts of air contaminants from District written permit requirements under Regulation II.

The proposed amendments to Rule 219 are as follows:

Exempt the following equipment that has very small potential for emissions:

- Passive and intermittently operated active venting systems used at and around residential structures to prevent the accumulation of naturally occurring methane and associated gases in enclosed spaces, (c)(10).

Modify language to level the playing field for exempt equipment for:

- Printing and related coating and/or laminating and associated dryers and curing equipment, (h)(1).
- Coating, or adhesive application, or laminating equipment (l)(6).
- Drying equipment associated with coating, adhesive or laminating equipment (l)(11).
- Roller to roller coating systems (j)(13).
- Hand application of resins, adhesives, dyes and coatings (l)(10).

Add exemption from written permits for equipment/processes utilizing ultra-low VOC material:

- printing operations, (h)(1);
- coating, adhesive applications and laminating equipment, (l)(6); and
- Drying equipment associated with coating, adhesive or laminating equipment (l)(11).
- Roller-to-roller coating systems, (j)(13)

Require a Rule 222 filing, ~~and with associated fees under Rule 301 as well as~~ Annual Emission Reporting for the following operations that are currently not required to have a written permit:

- Certain specified equipment, processes or operations that are individually exempt from permits, but may emit 4 tons or more of VOCs in aggregate at one facility, (s)(3). These processes/sources are: printing operations, (h)(1), (h)(7); coating, adhesive and resin operations, (l)(6), (l)(10); and hand application of solvents for cleaning purposes, (o)(4).

Modify or delete language to clarify certain exemptions as follows:

- Remove “internal combustion engine” from paragraph (b)(4). This was inadvertently left in the last amendment.
- Modify the language to “Hand application of resins, adhesives, dyes and coatings” for clarification, (l)(10).
- Modify the language by adding “including dispensing” to (m)(4). This is to clarify that “dispensing” of the VOC containing materials (primarily diesel fuel) is exempt in conjunction with the storage equipment.

BACKGROUND

Rule 219 is an administrative rule that exempts equipment, processes, or operations emitting small amounts of air contaminants from the AQMD’s written permit requirements. The rule was first adopted in 1976, and last amended in May and July of 2006.

At the July 14, 2006 Board meeting, in response to requests for additional changes to Rule 219 by representatives from a manufacturing company, Wavefront Technologies, and RadTech, an association of equipment manufacturers, staff proposed to study and reconsider exemption levels related to the application of Ultra Violet (UV) and Electron Beam (EB) curable materials. Staff has reviewed the exemption levels applicable to UV/EB and Roller to Roller Coating manufacturing processes, compared the exemption levels applicable to other ink, adhesive and coating applications and is proposing to harmonize the exemption levels in an equitable manner.

In the previous amendments to Rule 219, staff also had presented a proposal to require permits for certain categories of equipment, processes or operations that are individually exempt from permits, but may emit 4 tons or more of VOCs or PM₁₀ per year in aggregate at one facility. In view of concerns raised at the time by several companies with regard to implementation of this proposal, the proposal was deferred for further study. Staff is now proposing to require Rule 222 filing for facilities that exceed 4 tons of VOCs per year of emissions in certain specified equipment categories.

LEGISLATIVE AUTHORITY

The California Legislature created the AQMD in 1977 (The Lewis-Presley Air Quality Management Act, H&S Code 40400 et seq.) as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin). By statute, AQMD is required to adopt an Air Quality Management Plan (AQMP) demonstrating compliance with all state and federal ambient air quality standards for the Basin (H&S Code 40460(a)). Further,

AQMD must adopt rules and regulations that carry out the AQMP (H&S Code 40440(a)). Finally, AQMD is authorized to establish a permit system for any article, equipment, machine, or other contrivance that may cause the issuance of air contaminants and to enforce its rules and regulations (H&S Code 42300 et seq.).

AQMD Rule 201 requires permits for equipment which may eliminate, reduce, or control the issuance of air contaminants. H & S Code 39002 provides that local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources. Additional authority to regulate non-vehicular sources of air pollution is provided by H & S Codes 41508 and 42310. AQMD Rule 204 authorizes the Executive Officer to impose written conditions on any permit to assure compliance with all applicable regulations.

RULE PROPOSAL

The following summarizes the proposed amendments to Rule 219:

Exempt the following equipment that has very small potential for emissions:

1. Passive and intermittently operated active venting systems used at and around residential structures to prevent the accumulation of naturally occurring methane and associated gases in enclosed spaces, (c)(10).
 - Underground gases, mainly methane gas, emanating from subsurface geological formations into the atmosphere are natural phenomena in certain areas of the South Coast Air Basin; particularly in coastal cities and the City of Los Angeles' designated methane zones and buffer zones. These gases, including methane (non-reactive), ethane, volatile organic compounds, hydrogen sulfide and other toxic air contaminants, may also be detected in areas near abandoned oil wells which later become developed properties. Local agencies at the city and county levels regulate such collection systems in accordance with building and construction codes where methane gas is or has been known to exist. Typical venting systems consist of a series of slotted pipes placed below the slab and within a backfilled gravel layer, impermeable membranes or other barriers to migration placed directly below the slab, gas detectors and alarms with inter-connected blowers, and vertical stacks. The blowers are activated upon detection of methane in the system or in a confined area at a pre-established concentration, for example in Los Angeles, at 37,500 ppm_v. In the passive or the intermittently active mode, the system provides the methane gas and associated gases with a preferential pathway away from residential structures into the atmosphere. The air quality impacts from passive and intermittently operated systems

are not expected to be significant due to the lesser concentrations of non-methane and non-ethane volatile organic compounds associated with passive systems and the minimal hours of operation for intermittently operated systems. To date, permits have been issued for non-passive systems built at some non-residential structures. This proposed exemption would expand the exemption provided in Rule 219(c)(5) to larger residential structures such as town homes, condominiums and apartment buildings.

- Fiscal Impact: No financial impact on the AQMD because there are currently no permits issued to such equipment.

Amend language to the following:

1. Printing and related coating and/or laminating equipment and associated dryers and curing equipment, (h)(1)
 - The language is being revised to create a level playing field and ensure consistent implementation of the exemption to all, and not just selected, types of products and technologies, which are clean technologies and/or emit small amount of emissions. This amendment will maintain the 6 gallons per day exemption level applicable to UV/EB curable materials; eliminate the unrestricted usage exemption for UV/EB materials containing fifty (50) grams or less of VOC per liter of material when cleanup solvents containing twenty five (25) grams or less of VOC per liter of material are used. This amendment will also allow UV/EB operations using more than 6 gallons of materials per day to still qualify for an exemption if it can be shown that the corresponding VOC emissions are equal to or less than three (3) pounds per day or 66 pounds per calendar month. This change will result in the creation of a level playing field and in equal treatment of all printing and related coating and/or laminating operations regardless of the generic composition (solvent based, waterborne, UV/EB, etc.) of the materials used. This limited exemption from permits applies only to low emitting equipment. Without this restriction on material usage, equipment using low VOC content material could avoid permit review and result in potentially significant VOC emissions due to high throughputs.
 - As an incentive to promote ultra-low emission rate equipment and processes, the proposal establishes a limited exemption for all inks, coatings and adhesives, fountain solutions and associated VOC containing solvents containing 50 grams or less per liter of VOC and for cleanup solvents containing 25 grams or less per liter of VOC, provided the total VOC emissions do not exceed one ton per year and provided the operator files a registration with the District pursuant to Rule 222.

- Changes have also been made to clarify the exemption in order to allow consistent implementation.
 - Fiscal impact: Unknown ~~at this time~~ but expected to be minimal. Staff will be developing a filing procedure for the ultra-low emission rate equipment and processes as an alternative to permitting process.
2. Roller to roller coating systems (j)(13)
- The proposed change will allow greater flexibility by allowing coating usages greater than 12 gallons per day provided the VOC emissions are equal to or less than 3 pounds per day or 66 pounds per calendar month. The twelve gallon per day figure was originally determined as being approximately equal to a VOC emission rate of 3 pounds per day for a material that contained 25 grams of VOC per liter. As with exemptions found in subparagraphs (h)(1)(E), (l)(6)(F) and (l)(11)(F), for these coating systems and for associated VOC containing solvents containing 50 grams or less per liter of VOC and for cleanup solvents containing 25 grams or less per liter of VOC, the exemption will apply if the total VOC emissions do not exceed one ton per year and provided the operator files registration with the District pursuant to Rule 222.
 - Fiscal impact: There is no financial impact on the AQMD because there are currently no permits issued for such equipment. Staff believes that there is only one piece of equipment currently installed and operating. Staff will be developing a filing process as an alternative to permitting process for these processes.
3. Coating, adhesive application, or laminating equipment (l)(6)
- At the present time, this equipment operated within control enclosures do not qualify for an exemption under Rule 219(l)(6). This proposed amendment will expand the existing exemption to treat application and laminating equipment operated outside and within control enclosures equally.
 - This exemption was originally designed to exempt coating and laminating equipment that emitted 3 pounds of VOC per day or less. The usage limitations that are found in subparagraphs (l)(6)(B), (l)(6)(C), (l)(6)(D), and (l)(6)(E) were selected to be approximately equivalent to an emission rate of 3 pounds of VOC per day, which is the exemption level in subparagraph (l)(6)(A). The usage limits in gallons were developed to make it easier for small businesses to determine if they qualified for the exemption. This amendment will eliminate the unrestricted usage exemption for UV/EB materials containing fifty (50) grams or less of VOC per liter of material when cleanup solvents

containing twenty-five (25) grams or less of VOC per liter of material are used. This amendment will also allow UV/EB operations using more than 6 gallons of material per day to still qualify for an exemption if it can be shown that the corresponding VOC emissions are equal to or less than three (3) pounds per day or 66 pounds per calendar month.

- Furthermore, in an effort to promote ultra-low emission rate equipment and processes, this proposal establishes a limited exemption for coatings, adhesives and associated VOC containing solvents containing 50 grams or less of VOC per liter and for cleanup solvents containing 25 grams or less of VOC per liter provided the total VOC emissions do not exceed one ton per year and provided the operator files a registration with the District pursuant to Rule 222.
 - This change will result in the creation of a level playing field and in equal treatment of all coatings regardless of their generic composition (solvent based, waterborne, UV/EB, etc.). This exemption should only be applicable to low emitting equipment and not to equipment using low VOC content materials that could potentially result in significant VOC emissions due to high throughputs.
 - Changes have also been made to clarify the exemption in order to allow consistent implementation.
 - Fiscal impact: Unknown ~~at this time~~ but expected to be minimal. Staff will be developing a filing process as an alternative to permitting for these ultra-low emission rate equipment/processes.
4. Drying equipment or curing ovens associated with coating, adhesive or laminating equipment (l)(11)
- This exemption was originally designed to exempt the flash-off ovens, drying ovens and curing ovens associated with the coating and laminating equipment covered by the exemption in Rule 219(l)(6). In order to ensure consistent implementation of all types of products and technologies which emit small amount of emissions, this amendment will eliminate the unrestricted usage exemption for UV/EB materials containing fifty (50) grams or less of VOC per liter of material when cleanup solvents containing twenty-five (25) grams or less of VOC per liter of material are used. This amendment will also allow ovens associated with UV/EB operations using more than 6 gallons of material per day to still qualify for an exemption if it can be shown that the corresponding VOC emissions are equal to or less than three (3) pounds per day or 66 pounds per calendar month. This change will result in the creation of a level playing field and in equal treatment of all drying equipment regardless of the generic composition (solvent based,

waterborne, UV/EB, etc.) of the materials being processed. This exemption should only be applicable to low emitting equipment and not to equipment using low VOC content materials that could potentially result in significant VOC emissions due to high throughputs.

- Furthermore, in an effort to promote the use of ultra-low emission rate equipment and processes, this proposal establishes a limited exemption for coatings, adhesives and associated VOC containing solvents containing 50 grams or less of VOC per liter and for cleanup solvents containing 25 grams or less of VOC per liter provided the total VOC emissions do not exceed one ton per year and provided the operator files with the District pursuant to Rule 222.
- Changes have also been made to clarify the exemption in order to allow consistent implementation.
- Fiscal impact: Unknown ~~at this time~~ but **expected to be minimal**. Staff will be developing a filing process as an alternative permitting for ultra-low emission rate equipment/processes.

Add exemption from written permits for equipment/processes utilizing ultra-low VOC material;

Staff is proposing to exempt, from written permits, printing, coating, adhesive applications and laminating equipment and associated VOC containing solvents and cleanup solvents if they use ultra-low VOC materials provided their VOC emissions do not exceed one ton per year and they submit a filing pursuant to Rule 222. This exemption replaces the current open-ended exemption applicable only to equipment and processes utilizing UV/EB curable materials, and expands it in an equitable manner to all equipment and processes utilizing ultra-low VOC materials.

Require ~~Filings under~~ Rule 222 filing ~~with associated fees under Rule 301 as well as~~ Annual Emission Reporting for the following operations that are currently not required to have a written permit:

Certain specified equipment, processes or operations that are individually exempt from permits, but due to their expanded use may emit 4 tons or more of VOCs in aggregate when operated at a facility, (s)(3).

- Rule 219 currently exempts certain equipment, processes, or operations from a written permit because, individually, they are small sources of emissions. However, at a single facility, these activities in aggregate, though individually exempt, could result in a significant source of emissions. Staff recommends that facilities be required to obtain a Rule 222 Filing for certain equipment, processes, or operations if their emissions in aggregate exceed the proposed threshold and are not holding written permits for any other equipment or processes. These

proposed categories of processes/sources are: printing operations, (h)(1), and (h)(7); coating, adhesive and resin operations, (l)(6), and (l)(10); and hand application of solvents for cleaning purposes, (o)(4).

Under this proposal:

- a facility with an AQMD written permit will not be subject to paragraph (s)(3).
- similarly, a facility with an AQMD written permit and having 4 tons or more of VOC emissions from the specified equipment per paragraph (s)(3) will not be subject to a Rule 222 filing.
- a facility with no AQMD written permit and having less than 4 tons of VOC emissions in aggregate from the specified equipment per paragraph (s)(3) will not be subject to a Rule 222 filing.
- a facility with no AQMD permits and having 4 tons or more of VOC emissions in aggregate from the specified equipment per paragraph (s)(3) will be subject to filing under Rule 222.

These categories were selected based on emissions data found in the AER program. The emissions from ~~the related these specific~~ operations ~~already exceed or~~ have the potential to exceed 4 tons threshold for VOCs.

It should be noted that the AER only collects emission inventory information for facilities that have at least one written permit from the AQMD. At this time, the number of facilities with no AQMD permits or filings, which individually have the above-described equipment, processes or operations that could have emissions exceeding 4 tons per year is unknown. However, staff is aware of at least one facility with no AQMD permits or filings that has more than 4 tons per year of VOC emissions.

- **Fiscal Impact:** Currently, under the AER program, facilities with at least one permit from the AQMD are required to report VOCs, (and other criteria air pollutants) emissions from un-permitted sources that are exempt per Rule 219.

At the present time, although the fiscal impact cannot be fully determined from facilities having no AQMD filings and with 4 tons or more of VOC emissions, it is expected that the fiscal impact would be small.

CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727.2 ANALYSIS (COMPARATIVE ANALYSIS)

Health and Safety Code Section 40727.2 requires a comparison of the proposed amended rule with existing regulations imposed on the same equipment. There are no federal air pollution ~~or AQMD~~ regulations which will require a comparative analysis under Health and Safety Code 40727.2 that affect these types of operations. There are several AQMD rules that may be applicable depending on the type of equipment, processes or operations impacted by the proposed amendments to Rule 219. These are source specific rules under Regulation XI. These rules impose VOC limits on types of materials (such as inks, coatings, solvents, etc) used. None of these rules require permits or filing. The proposed amendments to Rule 219 do not change or affect in any way VOC limits imposed by these rules.

INCREMENTAL COST EFFECTIVENESS

Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis of potential control options for rules which would achieve the emission reduction objective relative to Ozone, CO, SOx, NOx, and their precursors. The proposed amendments to Rule 219 are administrative in nature and do not result in emission reductions. Therefore, the incremental cost-effectiveness analysis is not required.

**CALIFORNIA ENVIRONMENTAL AIR QUALITY ACT ANALYSIS
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

Staff has reviewed the proposed amendments to Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, pursuant to CEQA Guidelines § 15002(k)(1) - Three Step Process, and has determined that the proposed amendments are exempt from CEQA pursuant to CEQA Guidelines § 15061(b)(3) – Review for Exemption. The proposed amendments are covered by the general rule that CEQA applies only to projects which may have a significant effect on the environment. Staff has reviewed the proposed amendments and has determined that it can be seen with certainty that there is no possibility that proposed amendments to Rule 219 will have a significant impact on air quality or other environmental areas. Therefore, the proposed project is exempt from CEQA. If approved by the Governing Board, a Notice of Exemption (NOE) will be prepared for the proposed project pursuant to CEQA Guidelines §15062 – Notice of Exemption, and mailed to the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties.

SOCIOECONOMIC ASSESSMENT

The proposed amendments to Rule 219 extend the exemption for passive and intermittently operated active venting systems to large residential structures. There is no fiscal impact on the AQMD since these systems are not permitted currently.

The proposed amendments require Rule 222 Filings with associated fees under Rule 301 as well as Annual Emission Reporting for unpermitted facilities with exempt equipment, processes, or operations that collectively emit four tons or more per year of VOCs. Additionally, the proposed amendments eliminate the current unlimited usage of UV/EB type materials and provide a new limited exemption for a number of related processes including printing, and related coating operations, coating and associated drying operations as well as roller to roller coating operations. Staff proposes to develop a Rule 222 filing process as an alternative permitting process for these ultra-low emission rate sources.

It is unknown how many facilities may now require filings under this proposal that it is expected to be small.

FINDINGS UNDER THE CALIFORNIA HEALTH AND SAFETY CODE

Before adopting, amending, or repealing a rule, the California Health and Safety Code (H&SC) requires AQMD to adopt written findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined in H&SC section 40727. The findings are as follows:

Necessity - The AQMD Governing Board has determined that a need exists to: amend Rule 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II, to exempt from written permits certain equipment that has been evaluated and found to emit small amounts of air contaminants; to require filing pursuant to Rule 222 for certain equipment, processes and operations that are exempt but emit in aggregate 4 tons or more of VOCs, harmonize exemption levels applicable to coating, ink, adhesive and laminating equipment; and to include new and clarified rule language for various types of equipment.

Authority - The AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from H&S Code Sections 39002, 40000, 40001, 40440, 40441, 40463, 40702, 40725 through 40728, 41508, 41700, 42300 et seq.

Clarity - The AQMD Governing Board has determined that PAR 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II is written and displayed so that the meaning can be easily understood by persons directly affected by the rule.

Consistency - The AQMD Governing Board has determined that PAR 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II is in harmony with, and not in conflict with, or contradictory to, existing statutes, court decisions, federal or state regulations.

Non-Duplication -The AQMD Governing Board has determined that the proposed amendments to Rules 219 - Equipment Not Requiring a Written Permit Pursuant to Regulation II does not impose the same requirement as any existing state or federal regulation, and the proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon AQMD.

Reference - In adopting these regulations, the AQMD Governing Board references the following statutes which the AQMD hereby implements, interprets or makes specific: H&S Code Sections 40001 (rules to achieve ambient air quality standards), 40440 (adoption of rules and regulations), 40701 (rules regarding district's authority to collect information), 41508 (authority over non-vehicular sources), 42300 et seq. (authority for permit system), 40702 (rules and regulations), 42320 (rules implementing the Air Pollution Permit Streamlining Act of 1992), and 41511 (rules for determination of amount of emissions).

CONCLUSION

Rule 219 is an administrative rule that is amended frequently to add, delete or clarify language regarding equipment that is exempt from AQMD permitting requirements. This amendment attempts to further refine and clarify the rule language, require new Rule 222 Filings and Annual Emission Reporting. Also, the amendment proposes to exempt certain equipment with low emission potential.

PUBLIC COMMENTS AND RESPONSES

This section summarizes the comments received as a result of the Public Workshop conducted on February 23, 2007. Most of the comments focused on two proposed amendments: Ultraviolet and Electron beam (UV/EB) curable materials; and the permitting proposal for 4 Ton emitters.

UV/EB Materials

Background

The current issue of permitting spray machines using ultraviolet (UV) materials arose due to a UV coating line that was proposed in October 2005 and installed in January 2006 by Spectrum Custom Design, a wood cabinet manufacturer in Desert Hot Springs. This coating line contains several pieces of equipment including a spray machine, a flash-off oven and a UV curing oven. The company uses a waterborne stain and a waterborne UV topcoat to finish their cabinets. Spectrum Custom Design submitted a permit application for their spray machine on October 19, 2005 and for their UV curing oven on January 12, 2006. After the applications

were submitted, the consultant for Spectrum Custom Design informed the AQMD (letters dated January 16, 2006, February 14, 2006 and March 23, 2006) that he believed the spray machine and associated drying/curing ovens were exempt from a permit under Rule 219(m)(6) as amended on December 3, 2004. In correspondence dated March 9, 2006 and April 4, 2006, AQMD staff advised the company that permits were required for the spray machine and drying and curing ovens. In response to the company's request, Supervisor Wilson and AQMD staff visited the company's facility on April 6, 2006. Subsequent to this visit and as part of the proposed amendments to Rule 219, the AQMD staff recommended and on May 5, 2006, the AQMD Governing Board adopted amendments to Rule 219 including language to expand a permit exemption to include drying equipment (including UV curing ovens) associated with coating, adhesive application, or laminating equipment operated inside, as well as outside of, control enclosures using UV/EB. The Governing Board also directed staff to discuss the requested permit exemption for spray machines with the Permit Streamlining Task Force and report back to the Board with a timeline for addressing the spray machine permitting concerns at its June meeting. AQMD staff discussed this exemption request at the May 18, 2006 Permit Streamlining Task Force meeting and provided a status report to the Stationary Source Committee on May 26, 2006. At the June AQMD Governing Board meeting, the requested report was continued until the July Board meeting. At the July Board meeting, staff provided the timeline of first six months of 2007 within which to consider amendments to Rule 219 for addressing the above request and other requests and comments received by the Board regarding the UV/EB materials.

Comment: Staff is proposing to eliminate Board adopted exemptions which have been "part and parcel" to the agency's public policy for various years, i.e. the unrestricted usage exemption for UV/EB materials.

Response: Staff is not proposing to eliminate the exemption of UV/EB materials. The amendment will retain the exemption level at 3 pounds per day or less (or 66 pounds per month) of VOC emissions, or 6 gallons per day (or 132 gallons per month) applicable to UV/EB curable materials. However, staff is proposing to remove the unrestricted usage exemption for UV/EB materials containing 50 grams or less of VOC per liter of material when cleanup solvents containing 50 grams or less of VOC materials are used. This change will create a level playing field and will result in the equal treatment of all printing and related coating, laminating equipment and associated dryers and curing equipment; and other coatings, adhesive application or laminating equipment, regardless of the generic composition (solvent based, waterborne, UV/EB, etc.) of the

materials used. ~~Furthermore,~~ This proposal will incentivize the introduction of new, ultra-low VOC materials by making the exemption still applicable for these processes if associated VOC emissions are less than one ton per year.

Comment: The RadTech cannot support the segmenting of categories for UV into UV solventborne, UV waterborne and 100% solids UV. Specifying different exemption thresholds for different types of UV materials, causes discord, not harmony, in the rule. The 50 grams per liter limit would adequately address any concerns the district may have of potential VOC formulations being inadvertently exempted from permits.

Response: Rule 219 (h)(1) was originally designed to exempt printing and related coating and/or laminating equipment that had minimal emissions (less than 3 pounds of VOC per day). Over time, the exemption was modified to include specific usage levels for various types of coatings (6 gallons of UV/EB, 6 gallons of plastisol type inks, 2 gallons per day of other graphic arts materials) to make it easier for a company to determine if they qualified for the exemption. All of the indicated usages were designed to correspond to the baseline threshold of 3 pounds per day VOC emission rate. A facility still has the option of determining the exemption based on VOC emissions at 3 pounds per day or less.

There are three types of UV materials: Non-solvent based and non-waterborne (100% solids), waterborne and solvent based. All three types can emit VOCs to the atmosphere due to additives that do not crosslink to form a final film or printed image. Laboratory analysis of non-solvent based and non-waterborne inks and coatings, using EPA Test Method 24, indicated as much as 80 grams of VOC per liter of material. Non-cross linking VOC containing components are added to waterborne and solvent based UV curable materials and must evaporate prior to exposure to UV light. The usage limits of 6 gallons per day for 100% solids UV materials and 2 gallons for solvent based and waterborne UV materials are appropriate because they are based on their potential emissions.

Comment: The EPA and AQMD have documented the lack of suitable test methods to measure very small VOC emissions from (UV/EB) processes. VOC content of very low VOC materials is difficult to measure. USEPA has allowed the use of calculated VOC as reported

in the MSDS data sheets by suppliers. The option to use calculations in the rule is appreciated, but “district approved test methods” should be changed to “EPA approved” test methods. This will level the playing field nationally. The current proposed language could mean different test methods will be used by different regions.

Response: The EPA and AQMD have only documented the lack of a suitable VOC content test method for thin-film UV curable materials. Both EPA and AQMD consider EPA Method 24 to be applicable to non-thin film UV curable materials. Most UV coating applications are non-thin film applications but the AQMD looks at each application independently to determine the applicability of EPA Test Method 24. ~~Rule 219 is only applicable within the AQMD. Therefore, the requested change cannot possibly result in the commenter’s desire to level the playing field nationally. Since this is an administrative rule that only deals with the need for a written permit from the local AQMD, staff believes the current proposed language is appropriate. In addition, AQMD has historically developed and used test methods that may be different from EPA test methods based on the air quality needs of this region. Nevertheless, in response to comments received, staff has agreedis proposing to alter the staff proposal to allow the use of all test methods approved by the District, CARB and US EPA.~~

Comment: When determining Rule 219 exemption eligibility, staff uses a 5 percent VOC default emission factor. There is little, if any, scientific basis behind the factor. It unfairly penalizes industry for fictitious emissions.

Response: AQMD staff disagrees with this statement for two reasons: First, it is AQMD engineering policy to allow applicants, coating manufacturers or other parties to determine the VOC emissions from UV curable materials using Method 24, if applicable, or other test methods or procedures acceptable to the AQMD. Only when acceptable test data or other acceptable data is unavailable does the staff require the use of the 5 percent by weight VOC emission factor. This factor applies only to the UV curable portion of a coating. The second reason is that the 5 percent factor is not without scientific basis. The factor is actually based on three VOC content tests performed by the AQMD laboratory using EPA Method 24. The three tests were performed on clear UV over-varnishes used in the printing industry. Absent other test data, staff believes the 5 percent emission factor, while probably conservative, is reasonable. Staff

has repeatedly requested EPA Method 24 test data and associated reports from the commenter but no data has been submitted to date.

Comment: A permit (UV/EB type) is simply a rubber stamp with a cost attached to it which does not provide incentives for businesses in California to convert to less polluting processes. UV/EB technology allows businesses to stay in compliance in California, without the necessity to move manufacturing operations overseas. Industry estimates that overly stringent regulations have caused 83 percent of the wood manufacturing industry to move either out of state or overseas. This had unintended consequence of increasing import/export of goods thereby increasing air pollution at the ports.

Response: As directed by the AQMD Governing Board on May 5, 2006, AQMD staff discussed the permitting requirements for spray machines with the Permit Streamlining Task Force on May 18, 2006. A RadTech representative was present during the meeting. The group concluded that it was reasonable to require permits for spray machines. During the meeting, the RadTech representative was asked if she had problems obtaining permits for the spray machines and she responded that she did not. The cost of a permit for spray machines (approximately \$1,695) cannot be a factor when, for example, the cost of the spray machine purchased by Spectrum Custom Design is approximately \$270,000 and the cost of the entire coating line is approximately \$730,000, making the cost of the AQMD permit approximately 0.6% of the spray machine or approximately 0.2% of the entire coating line. Also other companies using UV/EB spray machines have applied for and obtained permits without relocating outside the South Coast area. Further, it has been AQMD's experience that certain factors, such as workers compensation insurance costs in California, have played a significant role in certain manufacturing companies' decisions to move out of state or out of the country and not the cost of permits. Nevertheless, staff has agreed to provide a higher threshold for triggering a permit for ultra-low emission rate equipment and will develop a registration filing process as an alternative to permitting process for the ultra-low emission rate equipment.

Comment: The use of Rule 219 to impose a new requirement that would specify how to determine VOC emissions, such as by an AQMD approved test method or calculation procedures is inappropriate.

Response: Staff disagrees. AQMD historically has required test data or some other documentation to justify emission rates, VOC content (or any other air contaminant), usage data, etc. for, in this case, verification of exemption. This is added for clarification.

Roller-to-Roller Coating Equipment

Comment: Wavefront Technology manufactures 3-dimensional structures on flexible substrates utilizing 100% solid, ultra low VOC Photocurable oligomer. Exemption paragraph (j)(13) “Roller to Roller coating systems...” should be eliminated. This was added last year to capture only one manufacturer (Wavefront). The Wavefront process was and is already captured under another exemption found in paragraph (j)(11), “Photocurable Stereolithography equipment....,” and should be reviewed and managed under such.

Response: The exemption in Rule 219(j)(11) was written for a very specific process (photocurable stereolithography) that is used to manufacture prototypes and various parts one layer at a time. The parts are “built” in a tank of resin by exposing very thin successive layers of liquid resin to the light. The process is time consuming and parts are basically built one layer at a time. Total resin usage per machine is typically less than one gallon per day. Based on field observations and meetings with the company, staff has determined that tThe Wavefront reel~~roller~~-to-~~reel~~roller coating process uses different equipment and is basically a different manufacturing process from the photocurable stereolithography equipment and process that was evaluated and in led to the development of Rule 219(j)(11). In conclusion, the Wavefront reel~~-to-reel~~ process was not considered in the development of Rule 219(j)(11), is not the same process and is not covered by this permit exemption.

In response to the commenter, however, staff has provided additional flexibility to this process in qualifying for the requested exemption by adding language to (j)(13), allowing options of VOC emissions of 3 pounds per day or 66 pounds per month or up to one ton per year of VOC emissions provided that the material contains 50 grams or less of VOC per liter for VOC containing solvents and cleanup solvents containing 25 grams or less of VOC per liter and the operator files a registration with the District pursuant to Rule 222. Staff believes that this proposal will offer the company substantial flexibility in its operation before triggering a permit.

4 – TONS PER YEAR EMISSIONS PROPOSAL

Comment: Cooling tower emission factor (EF) is a gross approximation, and significantly overstates actual emissions. Further refinement is needed before using it for making permit applicability decisions. The assumption that there is a continuous leak of hydrocarbon into the cooling water is not an accurate estimation of VOC emissions.

Response: Staff uses the following default emission factors for Particulate Matter (PM₁₀) and VOCs from AP-42.

- VOC emission factor of 0.7 lb of VOC per million gallons of circulating cooling water is based on AP-42, Table 5.1-2. This controlled emission factor is used when hydrocarbon leaks into the cooling water system are minimized and the cooling water is monitored for hydrocarbons.
- PM₁₀ emission factor of 0.019 lb per 1000 gallons of circulating cooling water is consistent with the default emission factor provided in AP-42, Section 13.4, Table 213.4-1.
- In addition, there are alternative methods for emission calculations provided in “Emission Calculation Guidelines for Cooling Tower Emissions” prepared by Annual Emission Reporting group. The method allows facility operators to use site specific parameters, such as total dissolved solids (TDS), drift loss and operating hours.
- Staff believes that the emission factors for VOC and PM₁₀ as provided in the guidelines are the best available at the present time, and used by applicants in their applications for power plant permitting filed with the California Energy Commission, as well as by other agencies and other districts. Facility operators may use alternative methods for emission calculations subject to AQMD approval.

However, staff has removed cooling towers from the proposal. In the future, staff will conduct audits of cooling tower emissions to determine any additional requirements are necessary.

Comment: AQMD does not have the authority under CA H&S Code Section 42300 to require a permit for hand operations using hand wipe, rags, and Q-tips. The commenter contends that requiring a permit for this type of operation is not within the authority granted by H&S 42300. Where is the authority for AQMD to impose this requirement?

Response: Staff has changed the proposal from a required permit to one which requires a Rule 222 filing along with associated fees under Rule 301 and Annual Emission Reporting.

For the record, however, staff responds as follows to the question posed by the commenter.

H&S Code Section 42300 (a) states that the AQMD may establish, by regulation, a permit system that requires that before any person builds, erects, alters, replaces, operates or uses any article, machine, equipment, or other contrivance which may cause the issuance of air contaminants, the person obtain a permit from the AQMD. The authority is not limited to permitting "equipment" and "machines", but also includes "articles" or "contrivances". Thus, the language of the section is broad enough to authorize a permit requirement for the hand applications of VOC containing materials, if the hand application articles or contrivances may cause the issuance of air contaminants as proposed in subparagraph (s)(3)(E).

AQMD has not heretofore interpreted its permit authority to be strictly limited to H&S 42300. Under AQMD Rule 201, permits are required for equipment which may "eliminate, reduce, or control" the issuance of air contaminants. H&S 39002 provides that local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources.

Under H&S 41508, "except as otherwise specifically provided in this division" districts can adopt requirements that are "additional, stricter standards than those set forth by law or by the state board for nonvehicular sources." Since hand wipe operations are a nonvehicular source, AQMD can adopt additional requirements, such as permit requirements, unless "expressly" otherwise provided.

Hand wipe operations are NOT included in the list of exceptions to permit requirements specified in H&S 42310, which prohibits

AQMD from requiring a permit for various sources, including any vehicle, structure designed for and used as a dwelling for not more than four families, etc. Therefore, AQMD can require permits or filings for every pollution emitting activity except those listed in H&S 42310.

Comment: Baseline Emissions, New Source Review (NSR), Emission Offset, Emission Reduction Credit (ERC), and Implementation Procedures. Comments are summarized below:

- Use of the last two years baseline emissions may not represent normal operations because of a recent business downturn and thus could severely limit capacity of a facility. For example: facility with hand wipe operations might be permitted to produce 100 units, but over the past 2 years, its actual production might have only been 20 units. This will cap its future emissions at 20 unit level based on the proposal of last 2 years. Facility would not be able to return to its fully permitted capacity without triggering New Source Review.
- Asks for agreement on how to determine baseline emissions.
- Asks for specifics as to New Source Review (NSR) and offsets will be triggered.

Response Staff has removed the proposed requirement for permitting equipment and processes that exceed 4 tons of VOC. None of the programs mentioned by the commenters will be triggered by the current proposal to require Rule 222 filings for these categories of equipment and processes.

Comment: The proposal should require permits for only those facilities that currently do not have any written permits, and are therefore completely outside the District's permitting regime, yet have significant emissions.

Response: Staff has changed the proposal to one which requires filings instead of permits and this requirement would apply only for to-all facilities that have no AQMD permits and that have emissions from specified categories of equipment, operations, or processes that are currently exempt under Rule 219 and that have 4 tons or more of VOC emissions per year. Thus, this proposal no longer affects facilities with AQMD permits. Further clarification on how this affects

permitted and unpermitted facilities has been provided in the Final Staff Report.

Facilities should be on notice that in the near future, staff will conduct field audits at permitted facilities to verify the emissions contribution from the sources listed under paragraph (s)(3) and better assess the potential emissions (PM₁₀, VOC NO_x) impact of the proposal. Based on the field audit findings, staff may propose amendments to Rule 219 in the future for the Board's consideration.

Comment: Staff is proposing to require permits for each piece of equipment at a facility. This would penalize clean processes such as UV/EB because no differentiation is made between polluters and environmentally beneficial processes.

Response: Staff has accommodated this concern and has changed the proposal to require Rule 222 filings instead of permits in order to provide incentives for UV/EB and other clean processes and equipment. ~~Bringing sources that cumulatively emit 4 tons of emissions in any given fiscal year or more into the filing system is fair and equitable but also very important to fully account for the quantity and location of these emissions.~~