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Board Agenda Item

TO: Air Pollution Control District Board

FROM: Terry Dressler, Air Pollution Control Officer

CONTACT: Douglas Grapple, 961-8883 (grappled@sbcapcd.org)

SUBJECT: Addendum Memorandum - Amendments to the Definition of "Reactive Organic Compound" and Rules on Solvent Cleaning Machines and Solvent Cleaning, Definitions, and Permitting Provisions

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The District received late comments from EPA and ARB on these proposed amended rules. Their comments and our responses (*shown in italicized text*) are provided below.

Comments from the United States Environmental Protection Agency, Email Dated August 26, 2010:

1. We recommend revising the exemption in section B.2 for architectural coating application equipment with solvents below 950 grams ROC per liter material to sunset in the future. South Coast AQMD 1171 and San Joaquin Valley APCD 4663 have both expired this exemption.

Response to Comment 1. *The District is implementing solvent cleaning provisions using an approach where we consider each individual industry as much as practical. Rather than having one general omnibus solvent cleaning rule, like the South Coast AQMD Rule 1171, Solvent Cleaning Operations, the District is tailoring the operation-specific rules by working with the effected industries. We feel that by tailoring solvent ROC-content limits to meet the individual industry needs we will achieve the most cost effective emission reductions. We plan to amend the architectural coating application equipment cleaning provisions with a lower ROC-content solvent limit through a future rulemaking effort at which time we will reconsider EPA's suggestions and other suggestions from the industry.*

2. To further reduce ROC emissions from solvent cleaning operations, we recommend raising the freeboard ratio requirement in section I.3 from 0.5 to 0.75. SCAQMD and SJVAPCD both already require freeboard ratios of at least 1.0 for degreasers.

Response to Comment 2. *The freeboard ratio of 0.5 is found in the current, SIP-approved Rule 321. The District based this provision, which is an alternative to a freeboard height of 6 inches or higher, on a provision in a South Coast AQMD rule. Changing the requirement from 0.5 to 0.75 or*

from 0.75 to 1.0 for other cold solvent cleaning machines may require the installation of freeboard extension kits or equipment replacement. Also, certain specific industries (e.g., electronic device manufacturers) have encountered employee-ergonometric issues when trying to implement a freeboard ratio of 1.0 or higher. The District and the regulated community have not had an opportunity to investigate such impacts. Further, while it is true that the South Coast AQMD and San Joaquin Valley APCD rules now require a freeboard ratio of 1.0 or higher, the requirement has been implemented with opportunity for public review. Hence, we will consider the suggestion during a future rulemaking effort to allow adequate public and regulated community review and input.

3. We agree with the comments for Rule 321 from CARB's comment letter dated June 8, 2010 to lower ROC limits to those already achieved in other California Air Districts.

Response to Comment 3. *As committed to in our Clean Air Plans, we will be taking industry through the same regulatory path that other air districts took. Their first-cut was to start with a general solvent limit of 50 grams per liter and reduce it to 25 grams per liter later. Hence, we will consider adding lower ROC-content limits into our rule during a future rulemaking effort.*

4. We are concerned that the current test method, EPA Method 24 in section P.1, is not the appropriate method to evaluate the exemption allowing solvents with 2% by weight or less of ROC in B.1. A more appropriate test method may be SCAQMD Method 313, as referenced in SCAQMD Rule 1122 Section (h)(1). We will notify the district if we find other acceptable test methods.

Response to Comment 4. *The District was previously unaware of EPA's concern regarding EPA Method 24 in the rule. Existing Rule 321 Sections B.1 and N.1 refer to EPA Method 24 and EPA approved Rule 321 into the SIP on April 2, 1999. We added the provisions in the existing rule based on recommendations in the Air Resources Board, "Determination of Reasonably Available Control Technology and Best Available Retrofit Control Technology for Organic Solvent Cleaning and Degreasing Operations," July 18, 1991. In addition, some solvent manufacturers refer to EPA Method 24 when citing VOC content data for their products.*

The District plans to review this suggestion and consider the change during a future rulemaking effort.

5. It is inappropriate to reference an Illinois SIP in section P.3 and incorrect to reference 40 CFR 51 Appendix M, Methods 204-204F for control device efficiency. Consider replacing section P.3 and P.4 describing capture and control efficiency with language similar to that found in SCAQMD Rule 1122 Section (h)(7)(A) and (B).

Response to Comment 5. *The District respectfully disagrees that it is inappropriate to reference 40 CFR 52.741(a)(4)(iii) et seq. The current rule refers to such sections and EPA approved Rule 321 into the SIP on April 2, 1999.*

Regarding the suggestion to use language similar to the South Coast AQMD Rule 1122(h)(7)(B) text, we found that the South Coast AQMD provision refers to the South Coast AQMD District

"Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency." We would prefer to rely on a protocol developed by the Santa Barbara County APCD.

The District plans to review this suggestion, possibly developing our own protocol for the determination of ROC capture efficiency, and consider the change during a future rulemaking effort. In the meanwhile, we believe it is appropriate to reference:

- *40 CFR, §52.741(a)(4)(iii), for determining a capture system's efficiency, and*
- *40 CFR, §52.741(a)(4)(iv), and 40 CFR, §52.741(a)(4)(vi), for determining an emission control device efficiency.*

6. In section P.8, we do not recommend speciating the exhaust from an emission control system. Instead, we suggest EPA Method 18 to determine exempt compounds, as in SCAQMD Rule 1122 section (h)(7)(B).

Response to Comment 6. *The District plans to review this suggestion and consider the change during a future rulemaking effort. Due to the need to conduct significant technical analysis to determine the efficacy of this suggested revision, the District prefers not to make such a last-minute change in response to this suggestion.*

Comments from the California Air Resources Board, Letter Dated August 26, 2010

[*For brevity some of the comments are combined into one.*]

[ARB COMMENT 1]

Rule 202 Exemptions to Rule 201

Sections I.3., U.2.d.i., and U.3.

To provide consistency with Rule 321 Solvent Cleaning Machines and Solvent Cleaning, we recommend lowering the ROC content limit of 50 grams per liter or less to 25 grams per liter or less in sections I.3 and U.2.d.i. These sections should read as follows:

I.3. Equipment used in surface coating operations provided that the total amount of coatings and solvents used does not exceed 55 gallons per year. [. . .] Cleaning agents meeting the criteria of Section U.2.b or Section U.2.c or that have a reactive organic compound content of 25 grams per liter or less, as determined by the Environmental Protection Agency Reference Method 24, do not contribute to the 55 gallons per year per stationary source limitation.

U.2.d.i. Any solvent that has a reactive organic compound content of 25 grams per liter or less, as determined by the Environmental Protection Agency Method 24, or

U.3. Wipe cleaning operations, provided that the solvents used do not exceed 55 gallons per year per stationary source and that the solvent cleaning complies with the requirements in Rule 321, Solvent Cleaning Machines and Solvent Cleaning.[…]Solvents meeting

the criteria of 2.b. or c. above or that have a reactive organic compound content of 25 grams per liter or less, as determined by the Environmental Protection Agency Reference Method 24, do not contribute to the 55 gallons per year per stationary source limitation.

Rule 321 Solvent Cleaning Machines and Solvent Cleaning

Sections B.13, B.15, G.3, H.7, I.7, J.11, K.6, L.11, M.2, and M.3.

We recommend lowering the ROC content limit of 50 grams per liter or less to 25 grams per liter or less in sections B.13, B.15, G.3, H.7, I.7, J.11, K.6, L.11, M.2, and M.3. This will maximize the emission reductions and provide consistency with other district rules such as those in South Coast AQMD and San Joaquin Valley APCD.

Response to ARB Comment 1 *ARB has submitted these comments to us before and our responses remain the same:*

When the Santa Barbara County Air Pollution Control District (District) first proposed the solvent rule changes in the 2001 Clean Air Plan, air district's with solvent cleaning requirements were setting the solvent limit for general use at 50 grams per liter. Although these air districts have since lowered the rules' ROC limits to 25 g/l for general solvent use, we will continue to propose the 50 g/l limit for this category as committed to in the 2001 CAP. And, we will be using earlier versions of the other air district rule requirements for establishing the ROC limits.

The District believes it is important for the industry in our jurisdiction to have the same opportunity as the industries in the other air districts to first adjust to the 50 g/l limit and then lower the limits. On September 23, 2009, our Community Advisory Council recommended that the general solvent use limit be set at 50 g/l through this rulemaking process.

The 2010 CAP (currently in draft) includes revisions to Rules 202 and 321 to lower the 50 g/l limit to 25 g/l. That rulemaking effort is scheduled for the 2013-2015 timeframe. It is important to note that our calculations show that the initial Rule 321 rulemaking effort (using the 50 g/l limit) will reap about 0.5 ton per day of ROC emission reduction and the addition emission reduction (using the 25 g/l limit) will be 0.028 ton per day. Thus, for air quality strategy purposes, we believe it is important that we accomplish this initial rulemaking effort before proceeding to the next lower level of ROC-content limits.

[ARB COMMENT 2]

Section M.1. Solvent Requirements

While we understand the District's rationale for wanting to lower the ROC limits incrementally, we believe it is feasible to lower the ROC limits further than currently proposed in Rule 321. We recommend lowering ROC content limits to match the limits shown below that are currently in the South Coast AQMD Rules 1171 and 1124, and San Joaquin Valley APCD Rule 4663.

Solvent and Cleaning Activity	ROC Limit	
	From g/l (lb/gal)	**To** g/l (lb/gal)
(a) Product Cleaning During Manufacturing Processes and Surface Preparation for Coating Application:		
(i) General	50 (0.42)	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	900 (7.51)	100 (0.84)
(iii) Medical Devices & Pharmaceuticals	900 (7.51)	800 (6.7)
(b) Repair Cleaning and Maintenance Cleaning:		
(i) General	50 (0.42)	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	900 (7.51)	100 (0.84)
(iii) Medical Devices & Pharmaceuticals:		
(I) Tools, Equipment, & Machinery	900 (7.51)	800 (6.7)
(II) General Work Surfaces	900 (7.51)	600 (5.0)
(c) Cleaning of Coatings Application Equipment	950 (7.93)	25 (0.21)
(d) Cleaning of the Following Items and Equipment and their Components:	900 (7.51)	200 (1.68)
(i) Aerospace Vehicles;		
(ii) Aerospace Vehicle Payloads and Satellites;		
(iii) Aerospace Vehicle, Aerospace Vehicle Payload, and Satellite:		
(I) Transport Equipment (e.g., railcars, trucks, trailers, forklifts, and containers), and		
(II) Support Processing Equipment (e.g., clean rooms, tools, payload fairing fixtures, alignment jigs, fuel and oxidizer loading carts and associated transfer lines).		

Response to ARB Comment 2

Again, the District believes it is important for the industries we regulate to go through the same "ratcheting down of the limits" process as was done in other areas in the state. And we have another Rule 321 revision scheduled in the draft 2010 CAP in the 2013-2015 timeframe; at which time we will include lowering the other solvent cleaning activity ROC-content limits.

Please note that on the 200 g/l limit for space vehicles, etc., the South Coast AQMD Rule 1124 provides an alternative to this limit: solvent having a composite vapor pressure of no greater than 45 millimeters of mercury at 20 degrees C. Hence, when the District revises Rule 321 in

2013-2015, the rulemakers will need to consider the 200 g/l limit with the composite vapor pressure alternative for this category.