



ENVIRONMENTAL SERVICES DEPARTMENT

AIR QUALITY DIVISION

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Technical Guidance #TG98-003

Rule: 330, Sections 301 & 302

May 27, 1998

Subject: VOC from Asphalt Plants

Issue: Asphalt plants emit VOCs. Are they therefore subject to control requirements pursuant to Sections 301 and 302 of Rule 330?

Discussion: Rule 330 does apply to asphalt plants' VOC emission. (By contrast, Rule 340, "Cutback and Emulsified Asphalt", applies to the VOC *content* of asphalt *paving materials*, not to the amount of VOC emitted by the plants that make them.) One of the ways that Rule 330 provides for an operator to comply with a VOC-emission exceedance of Section 301 or Section 302 is through the use of "low VOC material containing no more than 20 percent VOC by volume (as determined by the applicable test methods(s)....., provided that no VOC from the material comes into contact with flame;" [subsection 304.3 of the rule]. The applicable test method listed in Rule 330 for determining the amount of VOC in a material is EPA Method 24.

- **Hot-mix asphalt** cement contains no solvent; i.e., a Method 24 Test would yield a VOC content of zero. In addition, molten asphalt is added beyond the reach of flame within the confines of the drum in an asphalt concrete plant. Therefore, asphalt cement is in compliance with Sections 301 and 302 of Rule 330.
- **Emulsified asphalt** is not exposed to flame and cannot be formulated using more than a few percent liquid organic diluent without destroying its properties. Therefore, emulsified asphalt always contains less than 20% VOC and is in compliance with Sections 301 and 302.
- Even though **cutback asphalt** can contain up to 45% liquid organic diluent, it is not exposed to flame in an asphalt plant, and the most volatile organic cutting agent generally used is mineral spirits, which has an initial boiling point exceeding 310°F. A Method 24 Test subjects a sample to no higher than 240°F for 1 hour. The result of these factors is that cutback asphalt tests out as containing less than 20% VOC, with the possible exception of unlikely cases (e.g., 45% naphtha). Thus, cutback asphalt is in compliance with Sections 301 and 302 as normally formulated.

Conclusion: Asphalt plants are in compliance with Sections 301 and 302 of Rule 330 when using undiluted asphalt cement or emulsified asphalt. Asphalt plants using cutback asphalt demonstrate compliance with both sections if the cutting solvent has an initial boiling point greater than 300°F.

(Historical note: This technical guidance document is derived from the now rescinded technical guidance #TG-004 of 7/14/93.)

Committee Members Participating in the Final Vote

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