

03/06/1984

VOC270306841

Category: 27 – Solids Applied/Transfer Efficiency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Date: March 6, 1984

Subject: Summary of States Where VOC Limits Are Not Enforced On A
Solids-Applied Basis

From: Linda M. Murphy, Chief
State Air Programs Branch

To: Tom Helms, Chief
Control Programs Branch

Per my telephone conversation with you today, please review the attached information which was obtained principally from sources testifying at public meetings on the Massachusetts bubble regulation.

I look forward to John Calcagni's advice on this matter.

Summary of states where VOC limits are not on a solids-applied basis

Region	State	Source of Information
II	NY	<ul style="list-style-type: none"> • Industry highlighted sources in Little Falls and Long Island, N.Y. • Bruce Maillet confirmed with state.
	NJ	<ul style="list-style-type: none"> • Industry highlighted weekly bubbles on gallons applied basis. • Bruce Maillet confirmed with state-10 weekly bubbles issued on gallons applied basis.
III	PA	<ul style="list-style-type: none"> • Dave Salman of ESED says VW plant has a bubble calculated in gallons applied basis.
	MD	<ul style="list-style-type: none"> • Calculating on a solids-applied basis
IV	SC	<ul style="list-style-type: none"> • WR Grace bubble is gallons-applied basis. • Highlighted by industry, confirmed by Regional Office
	TN	<ul style="list-style-type: none"> • Highlighted by industry, unconfirmed
	KY	<ul style="list-style-type: none"> • Highlighted by industry, unconfirmed
V	IL	<ul style="list-style-type: none"> • Industry highlighted source in Addison
	OH	<ul style="list-style-type: none"> • Bob Donaldson confirmed with state. ...but...Regional Office (Steve Rothblatt) said that R.O. has always aggressively implemented on a solids-applied basis.
VI	TX	<ul style="list-style-type: none"> • According to RO VI, State is calculating correctly, DEQE inquiry found that the State calculates on a gallons applied base.
IX	CA	<ul style="list-style-type: none"> • R.O. has found some problems in can and coil coating sources in San Francisco Bay area.

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December 2, 1983

Mr. Tom Hazen
 Hazen Paper Company
 Third Level Canal
 Holyoke, MA 01040

Dear Tom:

Malcom requested I write, and explain the basic difference between the methods Massachusetts and New Jersey use to calculate the VOC allowed to paper companies.

I can do this best by using an example.

Given: Company XYZ applies 300 gallons coating per day. The VOC density is 7.36 pounds per gallon, and the VOC content is 5.9 pounds per gallon coating. The coating contains no water.

In New Jersey: The allowable is 2.9 pounds VOC per gallon of coating, times the 300 gallons of coating per day, or 870 pounds VOC per day.

In Massachusetts: The allowable is 287 pounds VOC per day and is calculated as follows:

$$\text{Volume \%VOC} = 5.9/7.36 \times 100 = 80\%$$

$$\text{Therefore, Volume \% Solids} = 1 - 0.8 = 20\%$$

$$\text{Therefore, Volume Solids} = 20\% \times 300 = 60 \text{ gallons per day}$$

$$\text{The allowable volume \% VOC} = 2.9/7.36 = 39.4\%$$

$$\text{Therefore, Volume \% Solids} = 1 - 0.394 = 60.6\%$$

The allowable volume of coating per day, based on solids is $60 / 0.606 = 99$

The allowable volume of VOC per day = $99 \times 39.4\% = 39$ gallon VOC per day

The allowable is $39 \times 7.36 = 287$ pounds VOC per day.

The Mass. method allows only $287/870 = 33\%$ of the New Jersey method.

The Mass. allowable changes slightly if a different density for the solvent is used. For example: At 7 pounds VOC per gallon, the Mass. allowable would be 233 pounds VOC per day.

The major difference between the States is that New Jersey applies the 2.9 pounds to the coating as it is now applied; whereas, Mass. applies the 2.9 pounds to the coating after it has been reduced in volume to meet the regulations.

The effect of this difference in calculating is shown in the example that I left with you during our last meeting.

Please call me if you have any questions.

Very truly yours,

DONALD L. CULBERTSON, INC.

Donald L. Culbertson, P.E.
President

DLC/ec

cc: Malcom Gesner