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Workgroup Recommendations and Other Potential Control Measures
VOC Workgroup

VOC012 – Cutback and Emulsified Asphalt Paving

Amend existing New Jersey Subchapter 16.19 to lower the volatile organic compound content (VOC) in emulsified asphalt and set a new VOC limit for cutback asphalt.

DESCRIPTION

The existing New Jersey Regulation bans cutback or emulsified asphalt use from April 16 through October 14, unless they are used solely as a penetrating prime coat, the material is a cold-mix, stockpile material used for pavement repair; the user can demonstrate that there are no emissions of volatile organic compounds (VOC) from the asphalt under conditions of normal use, or the emulsified asphalt contains no greater than eight percent VOC by volume and is used for mixed-in-place construction.

NJDEP has seen a significant decrease in the use of cutback and emulsified asphalt as a result of the existing regulation. Cutback asphalt use is very small in New Jersey. Cutback has gone from 5,313 pounds used annually in 1996 to 2,352 pounds used 2002. Emulsified has gone from 21,021 pounds used annually in 1996 to 10,086 in 2002. Existing inventory calculations assume a 20 percent VOC content for cutback and an 8 percent VOC content for emulsified. A Material Safety Data Sheet (MSDS) dated August 28, 2002 for emulsified asphalt produced by CITGO and used by the New Jersey Department of Transportation (NJDOT) shows the percent volatiles by volume as "negligible".

The Ozone Transport Commission (OTC) and New Jersey are considering amending existing cutback and emulsified asphalt regulations. The amendments are still under evaluation and input/comments from the public are welcome.

A potential control measure is:

*Set the VOC content for cutback asphalt, for existing allowable uses only, to 4 percent

*Lower the VOC content of emulsified asphalt from 8 percent to 4 percent or lower

EFFECTIVENESS

Lowering the VOC content of cutback and emulsified asphalt could possibly result in an estimated reduction 779 tons per year of VOCs. The percentage of asphalt being used during the ozone season is not known.

SOURCES

OTC Control Measure Summary, March 8, 2006

N.J.A.C. 7:27-16.19

CITGO Asphalt Refining Company, Material Safety Data Sheet, Emulsified Asphalt, All Grades