



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

November 6, 1991

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Areawide Credit for Transfer Efficiency

FROM: G. T. Helms, Chief
Ozone/CO Programs Branch

TO: David L. Calkins, Chief
Air Programs Branch, Region IX

On October 3, 1991, a number of Office of Air Quality Planning and Standards (OAQPS) representatives met to attempt to resolve an issue raised in the July 19 San Diego meeting of the California Technical Review Group (TRG). The attachment lists attendees of both the July 19 and October 3 meetings.

The TRG requested that the Environmental Protection Agency recommend a method for determining areawide volatile organic compounds (VOC) emission reduction achieved by using spray application equipment with optimal transfer efficiency (TE) as required in California's districts' rules. These rules have required the coatings applicators to use one of the following application methods:

- electrostatic application
- flow coater
- roll coater
- dip coater
- high-volume low-pressure (HVLP) spray
- hand application methods

The rules also make provision for alternative application methods that have demonstrated capability of at least 65 percent TE with approval from the Executive Officer. The TRG believed an areawide method could be fashioned into an AP-42-type procedure that would establish a baseline emission factor and, concurrently, create a creditable VOC reduction factor from the improved transfer efficiency.

The TRG understood that the methodology would not be used to provide surplus emission reduction credit that could be used for emission offsets or in emission trades. Rather, the emission reductions calculated could be applied toward the "progress requirements" of Title I of the Clean Air Act (e.g., the 15 percent reduction required in moderate and worse ozone nonattainment areas between 1990 and 1996).

The OAQPS representatives decided that foremost is the need to establish an accurate baseline. An accurate baseline is best derived when using a calculation methodology heavily supported by coatings and solvents purchase invoices, making calculation methodology the key concept in the development of an inventory baseline analysis. It is a long-term cumulative tally of coatings and

solvent use, normalized for production (for the periods before and after introduction of the new coating application techniques), incorporating factors such as uniform film build, solvent recovery, and hazardous waste pickup.

Once the baseline is established, the district can begin to formulate a credit structure to account for the accumulated, emission reductions achieved through control measures. As in the baseline derivation, credit also follows from an areawide determination. Areawide credit is generated throughout the entire basin when individual sources of VOC reduction (coating facilities, irrespective of product) are summed to display a mass production/mass balance tons-per-year number.

Any areawide emission reduction from TE improvement that would apply to the "progress requirement" must, of course, be based only on improvement after 1990. Sources that complied with the California districts' application technique requirement prior to 1991 may have experienced emission reductions; but those reductions would have already been accounted for in the 1990 baseline year from which the 15 percent 6-year reduction is calculated.

Although OAQPS does not have the staff resources to undertake development of the kind of methodology described above, we would be willing to advise those TRG members who are interested in undertaking such a study.

I request that you inform the appropriate members of the TRG of our position on this issue. All staff questions on this issue should be directed to David Sanders of my Branch at (919) 541-3356.

Attachment

cc: John Ungvarsky, Region IX
Doris Lo, Region IX
Susan Wyatt, ESD
Bob Blaszcak, ESD (CTC)
Air Branch Chiefs, Regions I-VIII, X

Attachment

Attendees of July 19 Meeting

California Air Resources Board: Ron Friesen, Gary Yee, Paul Milke, others
San Diego AQMD: Mike Lake, Natalie Zlotin, Thuy Lee
Santa Barbara AQMD: Alan Frederick
Sacramento AQMD: Bridget Tollstrup
South Coast AQMD: Laki Tsitsopoulos, others
Bay Area AQMD: Jim Guthrie, Dal Belik
San Bernadino AQMD: representative
OAQPS: John Silvasi, Dave Salman
EPA Region IX: John Ungvarsky, Doris Lo

Attendees of October 3 Meeting

TSD: Gil Wood, Pete Westlin, Lourdes Morales
ESD: Jim Berry, Vickie Boothe
AEERL: Chuck Darwin (CTC)
AQMD: Tom Helms, John Silvasi, David Sanders