Category: 46 — Low Solvent Technology

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

March 8, 1984

Mr. Richard A. Lillquist
President
Flexible Packaging Association
1090 Vermont Avenue, N.W.
Washington, D.C. 20005

Dear Mr. Lillquist:

Thank you for your letter of January 27, 1984 summarizing the points discussed in our meeting of January 11, 1984. In addition, you have requested written guidance regarding several issues related to the flexible packaging industry. We have responded to these issues in the order in which they were presented in your letter. In addition, where existing Agency communications addressed the issue, I have included copies of the memorandum.

A. Low-Solvent Technology

Request: That written guidance be given to Regions stating that EPA continues to endorse the development of low-solvent inks.

Response: It has been EPA's policy as indicated in our memorandum of April 25, 1980 (copy enclosed), from Richard G. Rhoads, Director, Control Programs Development Division to Director, Air and Hazardous Materials Division, Regions I-X, concerning "Compliance Schedules for Low Solvent Technology Programs for the Graphic Arts CTG Category" that EPA endorses the development of low-solvent technology provided that certain requirements listed in the memorandum are met. That endorsement continues to be EPA policy.

B. Mixing of Controls

Request: That EPA approve the use of combined technologies for achieving compliance.

Response: EPA has historically supported the concept of allowing alternative approaches to achieve equivalent control for volatile organic compounds (VOC's). Subsequent to the issuance of the Graphic Arts Control Technique Guideline (CTG) document, this concept was incorporated in the interim revised Emissions Trading Policy Statement (47 FR 15076, April 7, 1982) that would allow a company to combine technologies under certain conditions. This policy indicates that emission trades should be acceptable

if one emission point (perhaps non-CTG) in the plant could be controlled at a lower cost than the CTG emission point, provided that total plant VOC emissions are not greater than they would be if the emission points had been controlled to the original regulation requirements. In each case, the "excess" emissions control is creditable only to the extent that it is greater than required by the EPA-approved State Implementation Plan (SIP). Also, it is cited in our Federal Register notice of December 8, 1980 (copy enclosed), concerning "Compliance With VOC Emission Limitations for Can Coating Operations," the mixes of low-solvent technology and add-on control equipment may be utilized to demonstrate that actual emissions from a plant are equivalent to allowable emissions from a plant.

C. Thirty-Day Averaging

Request: That EPA reconfirm that 30-day averaging is reasonable and consistent with the CTG for the graphic arts.

Response: It has been EPA policy that a daily weighted average is the preferred alternative where continuous compliance with an emission standard is not feasible. However, in our memorandum of January 23, 1984 (copy enclosed), from John R. O'Connor, Acting Director, Office of Air Quality Planning and Standards titled "Averaging Time for Compliance With VOC Emission Limits - SIP Revision Policy," certain criteria are established under which exceptions to the continuous or daily average may be given.

In view of this, we can only approve 30-day averaging for graphic arts sources where it is shown to be consistent with the CTG and the criteria in this policy on a case-by-case basis.

D. Enforcement

Request: That EPA issue enforcement guidance to the Regions directing them to cease prosecuting firms complying with approved State extension plans which establish a timetable for compliance using low-solvent inks or add-on controls.

Response: I understand you have discussed this issue in greater depth at a subsequent meeting with Mr. Ed Reich and Mr. Michael Alushin of EPA. I hope this meeting has led to a broader understanding of EPA compliance assurance programs and policies. Enclosed is a copy of Ed Reich's February 29, 1984, letter to you in this regard.

I hope that these responses to your inquiry clarify our position with regard to the flexible packaging industry.

Sincerely yours,

Joseph A. Cannon
Assistant Administrator
for Air and Radiation

(4) Enclosures

Enclosure 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

DATE: April 25, 1980

SUBJECT: Compliance Schedules for Low Solvent Technology Programs for the Graphic Arts CTG Category

FROM: Richard G. Rhoads, Director
Control Programs Development Division (MD-15)

TO: Director, Air and Hazardous Materials Division, Regions I-X

Segments of the graphic arts industry affected by the Group II CTGs have requested additional time to comply with the forthcoming State VOC regulations through the development of low solvent inks programs. Meetings with the flexible packaging representatives and suppliers have indicated that low solvent inks look very promising for this segment of the industry and that the completed programs will result in VOC reductions beyond that achievable by add-on controls. However, for many plants these technology forcing programs will require compliance schedules that extend beyond 1982.

For the graphic arts category, there are two ways that extensions can be granted. The States can address the low solvent programs through a regulation that allows for alternative compliance schedules or through a categorical compliance schedule regulation specifically for a low solvent technology program. In either case the extended compliance programs must demonstrate that every affected source will meet the requirements as discussed below.

1. Document the economic burden of RACT add-on controls.

2. Identify a specific alternative compliance plan and outline an enforceable compliance schedule.

3. Demonstrate substantial VOC reductions early in the program, thus showing early commitments by the company to ensure expeditious implementation.

4. Show a greater reduction in VOC emissions than would otherwise have occurred as a trade off for being allowed more time to achieve compliance through a low solvent ink development program.

5. Contain a commitment to install add-on control equipment by a specified date if the low solvent development program fails by a specified date.

If a State adopts a regulation for the control of VOC for the graphic arts category that requires documentation for all affected sources in accordance with the criteria above, EPA would regard it as being expeditious and would propose such a regulation for approval. Adoption of such a regulation cannot be a basis for a waiver of any requirement of the Clean Air

Act. Each urban area which has been granted an extension beyond 1982 must demonstrate attainment of the ozone ambient air quality standard by the statutory deadline and must in the interim demonstrate reasonable further progress toward achieving the standard. States with 1982 attainment dates can grant extensions beyond 1982 only if the SIP continues to demonstrate attainment by 1982 after the growth increment is adjusted for the increased emissions.

Attached is a low solvent compliance plan submitted to the State of Michigan. This plan has been approved by the State and Region V has concurred that it contains the key ingredients for an approvable alternative compliance program. OAQPS has also reviewed the plan and deemed it acceptable to serve as an example plan.

Please call Tom Williams, FTS 629-5226, for additional information or additional copies of the plan.

Attachment

cc: Ed Tuerk
Ed Reich, DSSE
Mary Ann Muirhead, OGC
Air Branch Chief, Regions I-X
VOC contact, Regions I-X
R. C. Campbell

Enclosure 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

January 20, 1984

MEMORANDUM

SUBJECT: Averaging Times for Compliance With
VOC Emission Limits - SIP Revision Policy

FROM: John R. O'Connor, Acting Director
Office of Air Quality Planning and Standards (MD-lO)

TO: Director, Air and Waste Management Division
Regions II-IV, VI-VIII, X
Director, Air Management Division, Regions I, V, IX

The Purpose of this memorandum is to clarify the Agency's policy regarding emission time averaging for existing sources of volatile organic compounds (VOC's). Numerous State Implementation Plan (SIP) revisions, both broad regulations and source-specific changes, have been submitted which provide for compliance determinations by "time averaging" emissions of VOC for periods exceeding 24 hours. These requests and the following policy on this subject were discussed extensively at a recent meeting attended by those Regional Offices which have the most pending actions (Regions I, III, IV, V); the Office of Air Quality Planning and Standards; and the Office of General Counsel. This policy represents the consensus of the meeting attendees.

The objective of EPA's national VOC emissions control program is the timely attainment and maintenance of the national ambient air quality standard (NAAQS) for ozone. SIP revisions and other regulatory actions relating to VOC control must maintain the integrity of this basic objective. There should be assurances that VOC emission control is reasonably consistent with protecting this short-term ozone standard. Further, since SIP's and associated VOC control programs contemplate the actual application of reasonably available control technology (RACT), regulatory actions that incorporate longer term averages to circumvent the installation of overall RACT level controls cannot be allowed.

Current Agency guidance specifies the use of a daily weighted average for VOC regulations as the preferred alternative where continuous compliance is not feasible. An example might be where a facility operates in a batch manner with multiple lines and various products. Reference is made to the December 8, 198O, Federal Register (copy attached) where can coating operators are allowed to "bubble" several production lines and average emissions over a 24-hour time period.

The preferred daily weighted average alternative may not be feasible in all cases. Where the source operations are such that daily VOC emissions cannot be determined or where the application of RACT for each emission point (line, machine, etc.) is not economically or technically feasible on a daily

basis, longer averaging times can be permitted under certain conditions. In determining feasibility, consideration might be given, for example to the extent to which modifications can be made to testing, inventory, or recordkeeping practices in order to quantify daily emissions. Also, variability or lack of predictability in a source's daily operation might be considered as well as availability of control technology or the physical impediment or restriction to control equipment installation. In order to allow longer than daily averaging in SIP regulations, the following conditions or principles must be honored:

1. Real reductions in actual emissions must be achieved, consistent with the RACT control levels specified in SIP's or the control technique guidelines (CTG's). These limits are typically expressed in terms of VOC per unit of production (a qualitative term such as lbs VOC/gal coating). Where it is not feasible to specify emission limits in such terms, emission limits per unit of time can be approved provided that:

    a. The emission limits reflect typical (rather than potential or allowable) production rate and operating hours. These emission limits must truly reflect emissions reductions consistent with RACT and are not simply an artificial constraint on potential emissions. This must be supported in the SIP revision by historical production and operation data.

    b. Nonproduction or equipment downtime credits are not allowed in the emission limit calculation unless a Federally enforceable document specifically restricts operation during these times. Such credit must be based on real, historical emissions.

2. Averaging periods must be as short as practicable and in no case longer than 30 days.

3. A demonstration must be made that the use of long-term averaging (greater than 24-hour averaging) will not jeopardize either ambient standards attainment or the reasonable further progress (RFP) plan for the area. This must be accomplished by showing that the maximum daily increase in emissions associated with long-term averaging is consistent with the approved ozone SIP for the area.

4. Sources in areas lacking approved SIP's, or in areas with approved SIP's but showing measured violations, cannot be considered for longer term averages until the SIP has been revised demonstrating ambient standards attainment and maintenance of RFP (reflecting the maximum daily emissions from the source with long-term averaging).

Meaningful short-term (i.e., daily) emission caps are desirable especially for sources subject to large fluctuations in emissions. The use of

a daily cap (equal to or less than current average emissions on a daily basis) that limits short-term emissions to RACT equivalent levels would meet the above objective of ensuring VOC control that is consistent with attaining the NAAQS for ozone.

States have the primary responsibility to show adherence to the above principles and, to do so, must include the following information (in detail) in all SIP revision requests that seek VOC averaging times greater than 24 hours:

1. The VOC limits specified in an enforceable form with appropriate compliance dates.

2. A description of the affected processes and associated historical production and operating rates.

3. A description of the control techniques to be applied to the affected processes such as low solvent and waterborne coating technology and/or add-on controls.

4. The nature of the emission control program whether a bubble, a regulation change, a compliance schedule, or some other form of alternative control program.

5. The method of recordkeeping and reporting to be employed to demonstrate compliance with the now emission limit requirement and support the showing that the emission limit is consistent with RFP and the demonstration of attainment.

Each EPA Regional Office shall have the primary responsibility for determining the approvability of application requests. However, in order to assure Regional consistency, coordination with the Office of Air Quality Planning and Standards staff is encouraged during the initial development of any single "time average" SIP revision or regulation. Also, all SIP revisions involving long-term averaging must be proposed in the Federal Register with an explanation of how the principles listed above have been satisfied. Should there be any questions on this policy, please call Tom Helms (FTS 629-5526) or Brock Nicholson (FTS 629-5516).

Attachment
(Federal Regulation 12/08/80)

cc: Barbara Bankoff
Ron Campbell
Jack Farmer
Mike Levin
Ed Reich
B. J. Steigerwald
Darryl Tyler
Peter Wyckoff
Chief, Air Branch, Regions I-X
Regional Administrator, Regions I-X