

03/10/1978

VOC450310781

Category: 45 – Criteria for Plan Revisions for Nonattainment Areas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: March 10, 1978

SUBJECT: Example Demonstration of Attainment for Photochemical Oxidants

FROM: Richard G. Rhoads, Director
Control Programs Development Division

TO: Director, Air and Hazardous Materials Division, Regions I, III-X
Director, Environmental Programs Division, Region II

This office has received numerous inquiries concerning the content of the 1979 State Implementation Plan (SIP) submissions relating to the demonstration of attainment for oxidants. Specifically, the inquiries focused on questions of which models are acceptable for air quality prediction purposes and which techniques are acceptable for presenting the emissions inventory.

One of the statutory criteria for approval of the 1979 plan is that it must determine the level of control needed to demonstrate attainment (including growth). For oxidants, such a determination shall be made by applying any modeling technique referenced in the document "Use, Limitation and Technical Basis of Procedures for Quantifying Relationships Between Photochemical Oxidants and Precursors," EPA 450/2-77-021a, November, 1977. Consideration of background and transport for oxidants should generally be in accordance with the procedures described in this document. Although the use of Appendix J to 40 CFR Part 51 to determine the degree of emission reduction necessary to attain the ambient standard for photochemicals oxidants is not referred to in the above-mentioned document, the use of such a procedure by State agencies should be condoned. In no instances, however, should the Regional Offices employ Appendix J or any other method not referenced in the above mentioned document to develop photochemical oxidant control strategies.

Emission inventories should be developed in accordance with the document "Procedures for the Preparation of Emission Inventories for Volatile Organic Compounds," EPA 450/2-77-028, December, 1977, and the Agency's recommended policy on the control of volatile organic compounds (VOC) published in the July 8, 1977, Federal Register (42 FR 35314). Because there exists a need to be able to compare baseline inventories from one area to another, as well as to determine the impact of employing various control strategies, a common format for summarizing such inventories is desirable. Therefore, the enclosed format should be strongly recommended to State agencies generating summary reports of VOC emissions. This format allows the control agency to identify all major source categories of volatile organic compound emissions and to determine the reductions that may occur in an area if various control strategies are employed. In addition, the enclosed form should be utilized to summarize the anticipated percent emission reduction from transportation control

measures to allow one to determine what percentage of the total emission reduction is attributable to various transportation control measures. Finally, both summaries should be prepared for each area for which a separate strategy is being developed.

Hopefully, these comments adequately respond to your questions in the subject areas. However, if you need further assistance, please feel free to contact me or my staff.

Enclosure

cc: R. Neligan
J. Hidinger

SUMMARY FOR AAT FOR VOC

| SOURCE | BASE YEAR EMISSIONS 1977 |
|---|---|
| PETROLEUM REFINERIES | REFINERY FUGITIVES (leaks) |
| | MISCELLANEOUS SOURCES a) Process Drains & Waste b) Vacuum Producing Systems c) Process Unit Blowdown |
| | OTHER |
| STORAGE, TRANSPORTATION & MARKETING OF PETROLEUM PRODUCTS | OIL & GAS PRODUCTION FIELDS |
| | NATURAL GAS & NATURAL GASOLINE PROCESSING PLANTS |
| | GASOLINE & CRUDE OIL STORAGE* |
| | SHIP & BARGE TRANSFER OF GASOLINE & CRUDE OIL |
| | BULK GASOLINE TERMINALS** |
| | GASOLINE BULK PLANTS*** |
| | SERVICE STATION LOADING (Stage I) |
| | SERVICE STATION UNLOADING (Stage II) |
| | OTHER |
| INDUSTRIAL PROCESSES | ORGANIC CHEMICAL MANUFACTURE |
| | PAINT MANUFACTURE |
| | VEGETABLE OIL PROCESSING |
| | PHARMECEUTICAL MANUFACTURE |
| | PLASTIC PRODUCTS MANUFACTURE |
| | RUBBER PRODUCTS MANUFACTURE |

TEXTILE POLYMERS MANUFACTURE

OTHERS

INDUSTRIAL
SURFACE
COATING

LARGE APPLIANCES

MAGNET WIRE

AUTOMOBILES

CANS

METAL COILS

PAPER

FABRIC

METAL FURNITURE

WOOD FURNITURE

FLATWOOD PRODUCTS

OTHER METAL PRODUCTS

OTHERS

NON-INDUSTRIAL
SURFACE
COATINGS

ARCHITECTURAL COATINGS

AUTO REFINISHING

OTHERS

OTHER
SOLVENT
USE

DEGREASING

DRY CLEANING

GRAPHIC ARTS

ADHESIVES

CUTBACK ASPHALT

OTHER SOLVENT USE

OTHER
MISCELLANEOUS
SOURCES

FUEL COMBUSTION

SOLID WASTE DISPOSAL

FOREST, AGRICULTURAL,
& OTHER OPEN BURNING

TOTAL VOC EMISSIONS FROM STATIONARY SOURCES

MOBILE
SOURCES

HIGHWAY VEHICLES

- a) Light Duty Automobiles
 - b) Light Duty Trucks
 - c) Heavy Duty Gasoline Trucks
 - c) Heavy Duty Diesel Trucks
 - d) Motorcycles
-

OFF HIGHWAY VEHICLES

RAIL

AIRCRAFT

VESSELS

TOTAL VOC EMISSIONS FROM MOBILE SOURCES

TOTAL VOLATILE ORGANIC EMISSIONS

SUMMARY FOR AAT FOR VOC (cont.)

| 1982 (1987) PROJECTED ALLOWABLE EMISSIONS | |
|---|--|
| SOURCE | EMISSIONS FROM SOURCES EXISTING IN 1977 |
| PETROLEUM REFINERIES | REFINERY FUGITIVES (leaks) |
| | MISCELLANEOUS SOURCES |
| | a) Process Drains & Waste |
| | b) Vacuum Producing Systems |
| | c) Process Unit Blowdown |
| | OTHER |
| STORAGE, TRANSPORTATION & MARKETING OF PETROLEUM PRODUCTS | OIL & GAS PRODUCTION FIELDS |
| | NATURAL GAS & NATURAL GASOLINE PROCESSING PLANTS |
| | GASOLINE & CRUDE OIL STORAGE* |
| | SHIP & BARGE TRANSFER OF GASOLINE & CRUDE OIL |
| | BULK GASOLINE TERMINALS** |
| | GASOLINE BULK PLANTS*** |
| | SERVICE STATION LOADING (Stage I) |
| | SERVICE STATION UNLOADING (Stage II) |
| | OTHER |
| | INDUSTRIAL PROCESSES |
| PAINT MANUFACTURE | |
| VEGETABLE OIL PROCESSING | |
| PHARMECEUTICAL MANUFACTURE | |
| PLASTIC PRODUCTS MANUFACTURE | |

RUBBER PRODUCTS MANUFACTURE

TEXTILE POLYMERS MANUFACTURE

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OTHERS

OTHER
SOLVENT

DEGREASING
