Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources.* AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

Background Report Reference

AP-42 Section Number: 9.9.7

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Ref # 3 of TRC Report p. VI-4

AP-42 Section 9.9.7
Reference
Report Sect. 4
Reference 3

EPA-450/3-76-018-c
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Sec. 4 Ref. 3

DETERMINING INPUT VARIABLES FOR CALCULATION OF IMPACT OF NEW SOURCE PERFORMANCE STANDARDS: WORKSHEETS FOR FOOD AND AGRICULTURAL INDUSTRIES

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

EPA-450/3-76-016-c

DETERMINING INPUT VARIABLES FOR CALCULATION OF IMPACT OF NEW SOURCE PERFORMANCE STANDARDS: WORKSHEETS FOR FOOD AND AGRICULTURAL INDUSTRIES

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FOREWORD

During 1974, two studies were initiated that ultimately resulted in the establishment of priorities for developing and promulgating New Source Performance Standards (NSPS). The procedures used to determine these priorities produced a great deal of information that is believed to be useful in the industries involved and, accordingly, is being published in this series of reports (EPA-450/3-76-017, EPA-450/3-76-018, EPA-450/3-76-019, and EPA-450/3-76-020). This information is organized as follows:

EPA-450/3-76-017 discusses (1) the mathematical model (Model IV) used to determine NSPS impacts over a 10-year period; (2) the methods used to attain input variables; and (3) the summary tables which are the heart of this study. Included in the summary tables are data related to (1) emission, growth, and replacement rates; (2) present and future production and capacity; (3) nationwide emissions; and (4) NSPS impact. These tables include information on 13 pollutants and nearly 200 stationary source categories.

EPA-450/3-3-76-018-a, -b, -c, -d, -e, and -f are the calculation sheets, showing how the input vairables reported in EPA-450/3-76-017 were derived. All information sources, assumptions, and calculations are documented and explained. The appropriate worksheets are arranged alphabetically in the following volumes:

018-a - Stationary Combustion Sources

018-b - Chemical Processing Industries

018-c - Food and Agricultural Industries

018-d - Mineral Products Industries

018-e - Metallurgical Industries

018-f - Miscellaneous Sources (Evaporation Losses, Petroleum Industry, Wood Products Industry, and Assembly Plants

The 018-a -f series is of interest only to those concerned with the detailed calculations used to determine the Model IV input variables.

EPA-450/3-76-019-a provides additional results and information produced during the priority study. Its major purpose is to describe the computer program used to rank all the Model IV input and output variables by pollutant (these rankings are reported in 019-b and -c). In addition, it contains (1) summaries of the control systems considered "best" for each source, (2) equipment retirement ages, and (3) emission trends for each source category.

EPA-450/3-76-019-b and c present the computer-generated ranked data for each pollutant. Ranking is from highest to lowest for each of the 21 variables, e.g., A (nationwide capacity) and Eu (uncontrolled emission rate). Volume 019-b contains ranked data for particulate, nitrogen oxide (NOx), and sulfur oxide (SOx) sources. In Volume 019-c, the remaining pollutant sources are ranked: hydrocarbons, carbon monoxide (CO), fluorides, hazardous material, acid mist, lead, ammonia, sulfides, chlorine, and trace metals.

EPA-450/3-76-020, the final document in this series, takes the objective impact values from EPA-450/3-76-017, adds subjective judgements, and uses these combined criteria to produce a priority list for NSPS development. The report then calculates nationwide emission trends over the next 15 years for each criteria pollutant (particulate, SOx, NOx, hydrocarbons, and CO) based on a series of scenarios (e.g., no NSPS, 20 NSPS per year, etc.)

In summary, documents EPA-450/3-76-017 and 020 present the results of this study. Each stands alone, but they also complement each other, with 020 building on the results of 017. The remaining documents (018-a -f and 019-a -c) present additional and/or more detailed information derived from the impact and priority studies.