PART5
Information Sheet #2:
Tire-Wear Particulate Emissions
October 26, 1994

US EPA, NVFEL, AQAB, 2565 Plymouth Road, Ann Arbor, Michigan 48105 (313) 668-4325

I.   Introduction

PART5 Information Sheets are a series of documents intended to give users detailed information about techniques that can be used to more accurately model highway mobile source particulate emissions and avoid potential errors. When referring to PART5 in this and other Information Sheets, we will mean the latest officially released version of the PART model, unless otherwise specifically noted. At the time of this Information Sheet, the latest version of the model was PART5, released July 29, 1994.

All of the PART5 Information Sheets will be made available on the Technology Transfer Network (TTN) bulletin board system (BBS) in the OMS section. Any micro-computer with a modem can be used to download the files. The phone number for the TTN BBS is (919) 541-5742. All files are made available to users as soon as they answer a few registration questions. The TTN BBS can be called at any time, 24 hours a day, 7 days a week, except Monday mornings from 8 a.m. to noon (EST) when the system is down for maintenance.

If you would like to be added to our PART5 mailing list, please fill out the information described in the last section of this Information Sheet. This only needs to be done once. You do not need to send in this information if you are already on our mailing list.

II.   Problem Description

It has been determined that the remedy for the first problem (Problem A) noted in "PART5 Information Sheet #1" ("Calculation of Fleet Average Fugitive Dust") results in inaccuracies in the tire-wear emissions output. This problem also affects the Total PM emissions, since tire-wear emissions are included in the sum. The remedy for Problem A in PART5 Information Sheet #1 instructed the user to input the fleet average number of wheels for each vehicle class. This remedy conflicts with the proper calculation of tire-wear emissions. Both fugitive dust and tire-wear emission factors calculations depend on the number of wheels. The number of wheels should be vehicle class-specific for the tire-wear emission factor while the fugitive dust calculation requires a fleet average number of wheels.

III.   Remedy

Until the next released version of the PART5 model, it will be necessary to make two seperate scenario inputs for each required scenario if fugitive dust calculations are required. One which will calculate the proper unpaved dust output, using the procedure specified in part A of the Remedy section of "PART5 Information Sheet #1", and another which will calculate the proper tire-wear emission output.

If fugitive dust calculations are required, follow the procedure specified in part A of the Remedy section of "PART5 Information Sheet #1".

There are two ways to calculate the vehicle class-specific tire-wear emissions:

1) Set WHEELFLG = 1 or, equivalently, leave a blank in line 2 of scenario section of input. Then exclude the optional line 7 of the scenario input. The program will default to an appropriate set of vehicle class-specific number of wheels.

Or

2) Set WHEELFLG = 2 in line 2 of scenario section of input. Input the optional line 7 with user specified number of wheels which are vehicle class-specific. This will override the default vehicle class-specific number of wheels in PART5.

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IV.   <u>Other Information Sheets</u>

This is the first issued information sheet since the initial release of the PART5 model.

If you would like to be on our PART5 user mailing list please fill out the following information and send it to:

PART5 User Mailing List (AQAB)
U.S. EPA, National Vehicle and Fuel Emissions Laboratory,
Emission Planning & Strategies Division,
Air Quality Analysis Branch
2565 Plymouth Road
Ann Arbor, Michigan 48105

Name(s) of user(s):_____

Company/Affiliation:_____

Address:_____

City/State/Zip:_____

Phone Number:_____

Fax Number:_____

Equipment (IBM compatible, mainframe/mini, Macintosh, Other):_____

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  Do NOT send in your name and address more than once.
        Please, send only one name per address.
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