

Attachment A

EDMS Version 3.0

Version 3.0 was developed in cooperation with the United States Air Force (USAF). In addition, Version 3.0 was designed and tested under the guidance of a government and industry advisory board (Design Review Group) composed of air quality experts from scientific, analysis and policy fields.

Version 3.0 is a Windows 3.1 application but also runs in the Windows 95 environment. Among the many analytical improvements in Version 3.0 are:

- More comprehensive emission factors for aircraft, ground support equipment and mobile sources.
- Greater resolution in defining ground transportation activity around the airport.
- Basic output graphics for visual validation of source and receptor placements.
- A new and flexible data base architecture for efficient data import and export.

In addition, Version 3.0 offers greatly improved performance, more options for viewing and printing results, an on-line help system, and a new user manual with a two-case tutorial chapter to help users get started.

Minimum hardware requirements for Version 3.0 are a 486DX 66-MHz processor, 8 Mb RAM, 3.5 inch 1.44 Mb floppy disk drive, and a 300 Mb hard disk drive. 16 Mb RAM is recommended for larger studies (e.g., detailed dispersion analysis).

Version 3.0 is available (no cost to FAA offices; currently \$200.00 to all others) by contacting the following office: CSSI, Inc., EDMS Distribution; 1250 Maryland Ave.,

S.W., Suite 520; Washington, DC 20024-2141 (phone: 202-488-0003; fax: 202-488-0105).

EDMS Version 3.01

EDMS Version 3.0 was updated by Version 3.01 which incorporates two "bug" fixes described below. Version 3.01 is available for both Windows 3.1 and Windows 95. The Windows 95 version of EDMS 3.01 features a native 32-bit application for enhanced performance.

Version 3.01 is available at no cost to current users of EDMS 3.0. Diskettes that will allow current users of Version 3.0 to upgrade to EDMS 3.01 can be obtained by contacting the same office above for version 3.0, or you shortly will be able to down load the program (as well as all future updates) from the AEE-120 environmental models Internet site whose address is: <http://aee.hq.faa.gov/aee-100/aee-120>.

EDMS 3.01 Software Corrections

GSE Correction

A bug in the assignment of ground support equipment (GSE) to aircraft was identified in EDMS 3.0. When an aircraft/engine combination is added to a study, a default assignment of GSE

automatically is added to the study. If the user removes the aircraft from the study, all of the associated GSE automatically should be removed from the study as well. However, in EDMS 3.0 all but one GSE is removed. The undeleted GSE incorrectly remains in the user's study. If the user adds the same aircraft/engine combination back into the study, the undeleted GSE is counted twice and will result in a small increase in the GSE emission totals. (If the same aircraft/engine combination is not added back into the study, the undeleted GSE has no effect on the study.) To check if this has occurred in any of your studies, open the *GSE/AGE & APU Assignments* screen under the *Emissions-Aircraft* menu. All the aircraft included in your study are listed in the *Aircraft-Type* pull-down listing. For each listed aircraft, check the *Assigned GSE/AGE & APU* in the right hand side list-box. If a duplicate GSE is found in the listing, the equipment is being counted twice. Selecting and removing one of the duplicates corrects the problem for that aircraft/engine combination. This bug in the assignment of GSE has been corrected in EDMS 3.01, but studies in EDMS 3.0 still must be checked as outlined above.

Dispersion Concentration Correction

A bug in the calculation of the Annual Arithmetic Mean (AAM) for NO_x, SO_x, and PM-10 concentrations was identified in EDMS 3.0. In refined dispersion analysis, AAM concentrations for NO_x, SO_x, and PM-10 are calculated by dividing the sum of an entire year's concentrations at a particular receptor by the total number of weather hours. In EDMS 3.0 this sum is incorrectly divided by a number that is one (1) higher than the actual number of weather hours. The higher number in the denominator results in AAM concentrations that are slightly lower than they should be, with the change usually occurring around the decimal place representing 1/10000th of a microgram. The Dispersion Report lists the actual number of weather hours for which concentrations were estimated. For dispersion runs made with EDMS 3.0, the correct AAM concentrations can be calculated by dividing the displayed AAM concentrations by the number of total weather hours in the Dispersion Report, and multiplying by the number of total weather hours plus one. This bug in the calculation of the AAM has been corrected in EDMS 3.01. This bug also can be corrected by re-running the dispersion calculations in EDMS 3.01.