



## Project Summary

# ESPVI 4.0 Electrostatic Precipitator V-I and Performance Model: User's Manual

Phil A. Lawless

The User's Manual is the companion document for the microcomputer program ESPVI 4.0, Electrostatic Precipitator V-I and Performance Model. The program was developed to provide a user-friendly interface to an advanced model of electrostatic precipitation (ESP) performance. The program is capable of modeling standard ESP configurations as well as those that might be proposed for improved performance. It incorporates many of the latest developments in prediction of ESP performance, including electrical waveform effects, non-rapping reentrainment, and electrode misalignment.

*This Project Summary was developed by EPA's Air and Energy Engineering Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).*

### The Manual

The manual provides the documentation needed to load the program from its disks, sets up the computer configuration for optimal operation, and introduces the operation of the program. The user is expected to be familiar with the operation of an ESP and know the important factors that affect it. An example ESP is provided with the program to help with the manual's exposition. It is taken from a report describing measurement of the unit's performance and so provides a direct comparison of the model's predictions.

The program consists of a series of menu screens; the document is similarly organized, with increasing levels of detail provided as the menus become more specific. Finally, a section on the underlying algorithms discusses typical values that might be encountered with the model.



*Phil A. Lawless is with Research Triangle Institute, Research Triangle Park, NC 27709*

*Norman Plaks is the EPA Project Officer (see below).*

*The complete report consists of paper copy and diskette, entitled "ESPVI 4.0 Electrostatic Precipitator V-I and Performance Model: User's Manual:*

*Paper Copy (Order No. PB 92-169 614/AS; Cost: \$19.00, subject to change)*

*Diskette (Order No. PB 92-502 251/AS; Cost: \$90.00, subject to change)*

*(Cost of diskette includes paper copy.)*

*The above items will be available only from:*

*National Technical Information Service*

*5285 Port Royal Road*

*Springfield, VA 22161*

*Telephone: 703-487-4650*

*The EPA Project Officer can be contacted at:*

*Air and Energy Engineering Research Laboratory*

*U.S. Environmental Protection Agency*

*Research Triangle Park, NC 27711*

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