

**PACKAGE ID** - 001244IBMPC00 PFPL-NT

**KWIC TITLE** - Puff/Plume for Windows 95-NT

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**LIMITATION CODE** -COPY                   **AUDIENCE CODE** - LIM

**COMPLETION DATE** - 05/01/1997   **PUBLICATION DATE** - 05/01/1997

**DESCRIPTION** - PFPL-NT is a GUI event-driven scientific application integrating 14 background processes to access the consequences of accidental releases of hazardous materials from production facilities and transportation vehicles. A simple straight-line Gaussian assumption has been employed with observations from meteorological towers to calculate and visually display plume directions, plume width, and dose/concentration estimates in the immediate vicinity of a radiological or chemical release.

**PACKAGE CONTENTS** - Media Directory; Software Abstract;  
WSRC-MS-98-00403; Media Includes User's Guide, Executable Module;

**SOURCE CODE INCLUDED?** - No

**MEDIA QUANTITY** - 1 CD Rom

**METHOD OF SOLUTION** - Straight-line Gaussian Dispersion Model, with ground-shine and optional deposition model calculations included for dose and concentration estimates of pollutants.

**COMPUTER** - IBM PC

**OPERATING SYSTEMS** - Windows 95 or NT

**PROGRAMMING LANGUAGES** - Tcl/Tk (20%) Fortran 90 (80%)

**SOURCE CODE AVAILABLE (Y/N)** - N

**UNIQUE FEATURES** - The GUI consists of a Data Input Screen which the user can select parameter options such as release location and type, background map, and model configuration files; and a Graphics Output screen which consists of model release information, X-Y plotting capability, display of of plume featured on a background map, and capturing, printing, and saving of GUI bitmap images. The GUI application is configured for using 256 color display graphics up to 1280x1024 pixel resolution; scroll bars have been employed in a virtual window for adapting PCs with lesser resolution.

**RELATED SOFTWARE** - All software has been incorporated within GUI application.

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**OTHER PROG/OPER SYS INFO** - Tcl 7.3 and Tk3.6 installation package for Windows NT needs to be installed on host PC Workstation. This is a freely available package distribution residing on the Tcl/Tk archive [www.neosoft.com](http://www.neosoft.com). Once GUI software matures on Windows 95-NT, a compiled version of the application will be developed and there will no longer be a need for the Tcl/Tk package to be installed.

**HARDWARE REQS** - IBM 486 or Pentium PC (or compatibles)

**TIME REQUIREMENTS** - After input data has been selected, model takes approximately 30 seconds to run (as a background process) and graphically display the plume on the selected map.

**REFERENCES** - Gary Snyder, Puff Plume for Windows 95-NT, WSRC-MS-98-00403.

**ABSTRACT STATUS** - Released AS-IS 9/29/1998.

**SUBJECT CLASS CODE** - Z

**KEYWORDS** -  
COMPUTER PROGRAM DOCUMENTATION  
P CODES  
PLUMES

**EDB SUBJECT CATEGORIES** -  
990200

**SPONSOR** - DOE/DP

**PACKAGE TYPE** - AS - IS