

US EPA ARCHIVE DOCUMENT

## PRZM-AGRO SHELL VERSION 1.2f RELEASE AND INSTALLATION NOTES

### Summary

This version is an interim release of the PA5 shell and the CEMC-SFU AGRO model, and the first release of a utility to plot EXAMS output separately.

Besides this document the zip file should contain three additional files:

1. PA5\_v1.2f.pl – the shell script to run PRZM, EXAMS and AGRO and manage project files.
2. CEMC\_SFU\_AGRO\_1.2.4\_PA5\_Beta.xls (the CEMC-SFU AGRO model)
3. EXAMS\_GRAPHES\_v1.0.xls – a small utility spreadsheet to take standard PE5/PA5 EXAMS output (the .out files), plot the results and summarize the 1-in-10 year values.

### Installation

Unzip the contents of the zip file and place the files in the following locations (this assumes the root folder of your previous PA5 or PE5 installation is C:\MODELS, please adjust the destination locations for unpacking this zip file if necessary):

PA5\_v1.2f.pl into C:\MODELS\

CEMC\_SFU\_AGRO\_1.2.4\_PA5\_Beta.xls into C:\MODELS\AGRO

EXAMS\_GRAPHES\_v1.0.xls into C:\MODELS\AGRO

### Release Notes

This interim release of PA5 and AGRO adds some new functionality and corrects some minor errors in time step accounting in the model.

Changes from CEMC\_SFU\_AGRO\_1.2\_PA5\_Beta.xls to  
CEMC\_SFU\_AGRO\_1.2.4\_PA5\_Beta.xls

(at version 1.2.1) The time step routines in AGRO run on a sub-daily interval. Typically the interval is determined by the food web model and is much shorter than one day. To achieve computational efficiency the shortest interval is set to 3 hours. Checks on mass balance accounting at the daily time-step indicated that the very first time step (usually 3 hours of the first 24 hours of a model run) were not accounted for. The mass balance accounting and reporting has been checked and all time-steps are now accounted for.

(at version 1.2.3) EXAMS output now includes the sediment total (mg/kg) concentrations as well as the water column and sediment pore-water output (linked to change in PA5

script also). Annual sediment concentrations are also now plotted in chronological order to examine if build-up occurs.

(at version 1.2.4). The food web model output is now processed for six averaging periods within each year (1 day, 4 days, 21 days, 60 days, 90 days and one year) for the entire run. The modeled organism concentrations are tabulated and graphed on a new spreadsheet tab "FISHyearly". This output tab is saved as a separate spreadsheet in the project folder (\*\_FISH.XLS). The output is based on the same format as the exposure model concentration output (tab "DYNyearly", file \*\_AGRO.xls).

#### Summary of changes from PA5 version 1.0 to PA5 version 1.2f:

- New input options for specifying the application method have been added.
  - For the three regular options (aerial, ground and air-blast) the default spray drift and application efficiency values are entered, depending on the selection of the environment (farm pond or index reservoir).
  - Selecting one of the two standard environments also sets the correct drift and application efficiency values depending on the selected application method.
- A new information bar has been added to advise the user of defaults that are set automatically and to provide one-line help on most of the input areas on the screen.
- An option to exclude the AGRO model from the run is available (decreases the overall run time for a project). Default "on". Choice is not saved in project file.
- An option to save all temporary files is now available. This is useful for debugging and perhaps additional plotting. Default "off". Choice is not saved in project file.
- An option to specify the EXAMS parameter PRBEN has been added. Default 0.5.
- Minor changes to screen appearance and formatting.
- The script now looks for and runs the EXAMS plot utility (MS Excel based spreadsheet) automatically, even if AGRO is not run. (Previously EXAMS output was only processed as part of plotting AGRO output and therefore required AGRO to be run).
- A third EXAMS output file (\*\_bn2.out) is now produced containing the total sediment concentrations (linked to new plots in the plot utility)

Thursday, January 24, 2008