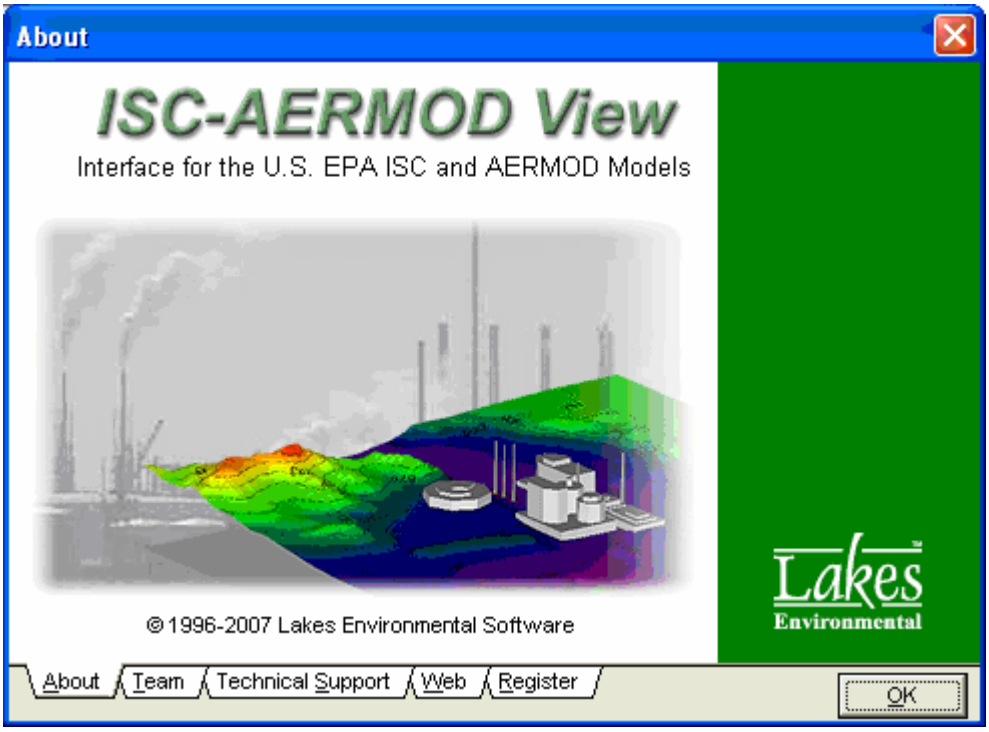
ISC-AERMOD View

Complete Air Dispersion Modeling System for AERMOD

Release Notes

ISC-AERMOD View - Version 5.6.0

February 1, 2007



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Topic	Feature Description
Models	**US EPA AERMOD Model Update – Dated 07026 of Jan/26/07** The latest release of the US EPA AERMOD model (AERMOD.EXE) dated 07026 is incorporated into the ISC-AERMOD View Version 5.6. Several new options were incorporated into this EPA model update.
Models	**US EPA AERMAP Model Update – Dated 06341 of Jan/09/07** The latest release of the US EPA AERMOD model executable (AERMAP.EXE) dated 06341 is incorporated into the ISC-AERMOD View Version 5.6. This AERMAP model version now supports the following new limits: **NREC=50000** (Max Number of Receptors) **NSRC= 5000** (Max Number of Sources) **NNET=20** (Max Number of Cartesian and/or Polar Receptor Networks) **IXM=2500** (Max Number of X-Coord. (Distance) Values Per Receptor Network) **IYM=2500** (Max Number of Y-Coord. (Direction) Values Per Receptor Network) **NDEM=MV*MH = 900** (Max Number of Digital Elevation MODEL(DEM) Terrain Data Files (MV*MH) **MAXNOD=2500** (Max Number of Elevation Nodes within a DEM Profile) **MAXPRF=2500** (Max Number of Elevation Profiles within a DEM File) **NARC = 50** (Max Number of Receptor Groupings ('ARCs') for EVALCART Keyword)
Models	**US EPA AERMET Model Update – Dated 06341 of Jan/17/07** The latest release of the US EPA AERMET model executable (AERMET.EXE) dated 06341 is incorporated into the ISC-AERMOD View Version 5.6. This model update contains bug fixes and introduces a new parameter for station base elevation which was implemented in Aermet View Version 5.6.
General	**Default Model** The default model when creating a new project in ISC-AERMOD View is now AERMOD.

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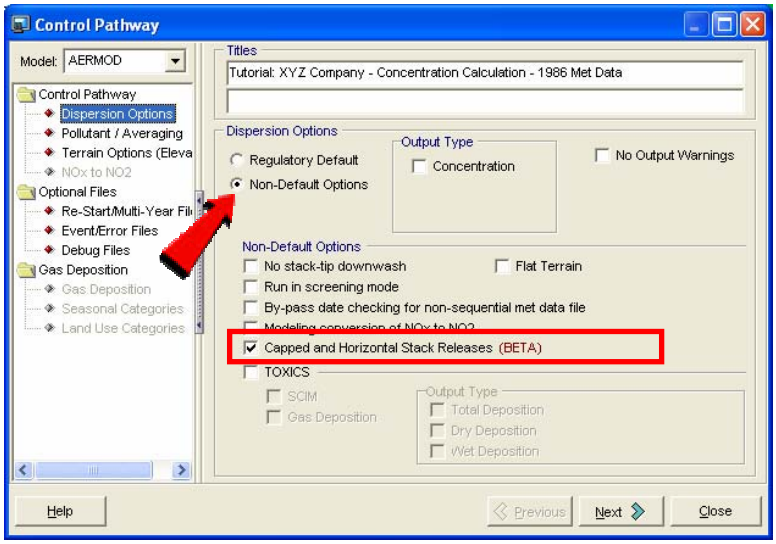
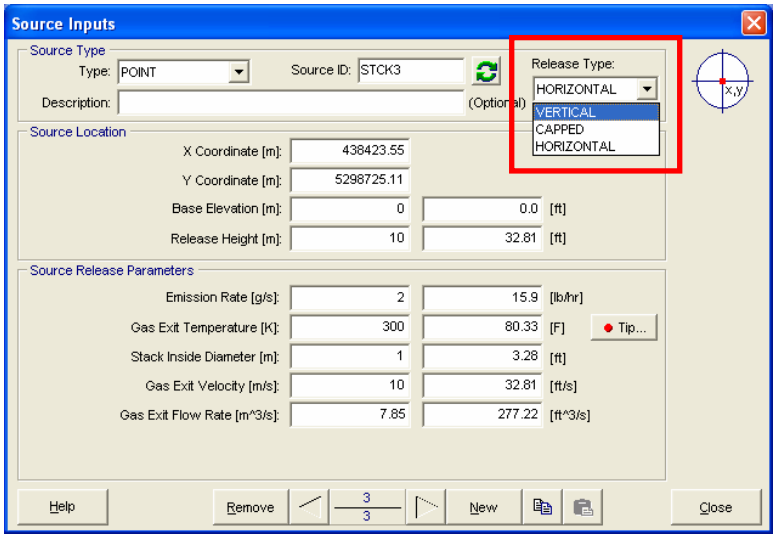
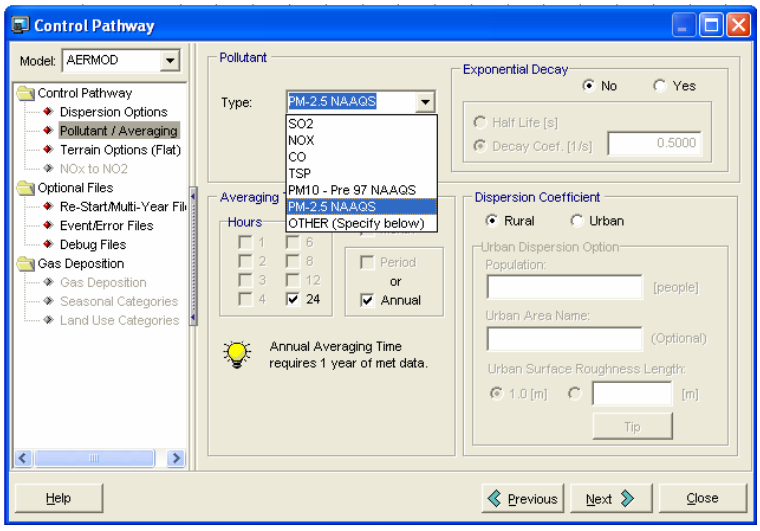
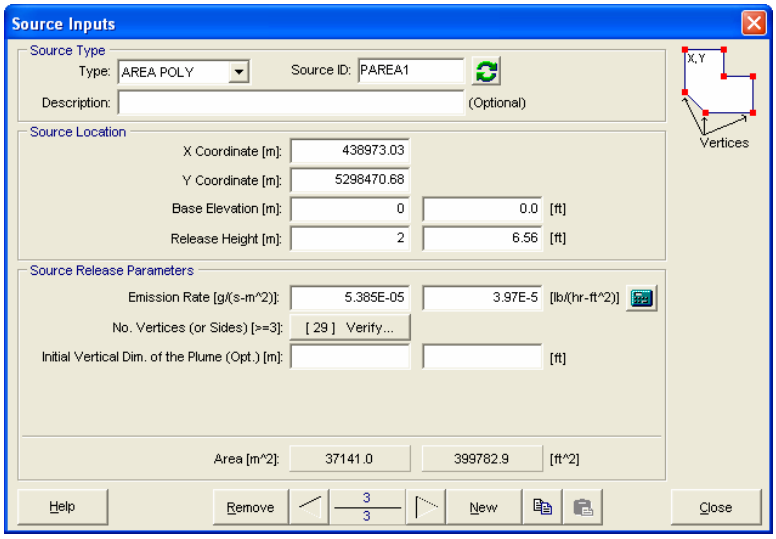
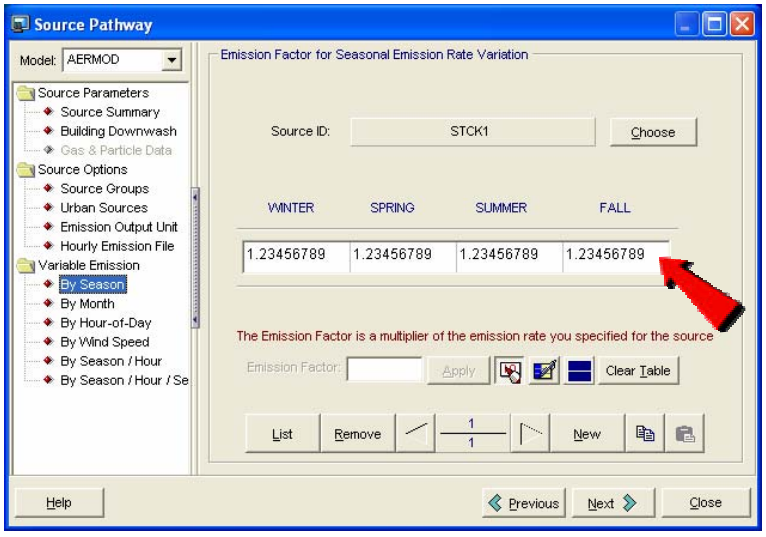
Topic	Feature Description
Control Pathway	**Capped and Horizontal Point Source Releases** The AERMOD model (dated 07026) supports capped and horizontal releases for point sources as a Non-Default BETA option. To use this option, you will need to select the Non-Default option and check the option for "Capped and Horizontal Stack Releases" as seen below.  Under the Source Inputs dialog, a new parameter was added to POINT sources where now the user can select from 3 options: Vertical, Capped, and Horizontal. The Release Type drop-down list box is only enabled if the Control Pathway options stated above are selected. When using the capped or horizontal options, the user should specify the actual stack parameters and the AERMOD model performs the necessary adjustments internally to account for plume rise and stack-tip downwash. 

Topic	Feature Description
Control Pathway	**Pollutant Type** The AERMOD model (dated 07026) incorporates the following changes: **PM-2.5 NAAQS:** This new option allows for modeling for PM-2.5 in accordance with the PM NAAQS. In summary, it consists of the following: ♦ Pollutant PM-2.5 ♦ 24-hour and Annual Averages ♦ 8th highest value for 24-hr average **PM10 – Pre 97 NAAQS:** This option allows for modeling for PM-10 in accordance with the PM NAAQS. In summary, it consists of the following: ♦ Pollutant PM10 ♦ 24-hour and Annual Averages ♦ 6th highest value for 24-hr average ♦ Single 5-year met data file **PM10 – Pos 97 NAAQS:** This option based on 4th highest value for 24-hr average has been removed since this standard was vacated. 

Topic	Feature Description
Source Pathway	**Increased Number of Vertices for AREAPOLY and AREACIRC Sources** With AERMOD model dated 07026, the maximum number of vertices for polygonal area sources (AREAPOLY) is now allocated dynamically at runtime. The previous version of the model was limited to 20. AREACIRC can have a maximum of 50 but if user has defined an AREAPOLY in the same project, the number of vertices for AREACIRC can be up to the number defined for AREAPOLY. 
Source Pathway	**Variable Emission Rates** You are now able to specify variable emission factors up to 8 decimal places under the Variable Emissions section in the Source Pathway. 

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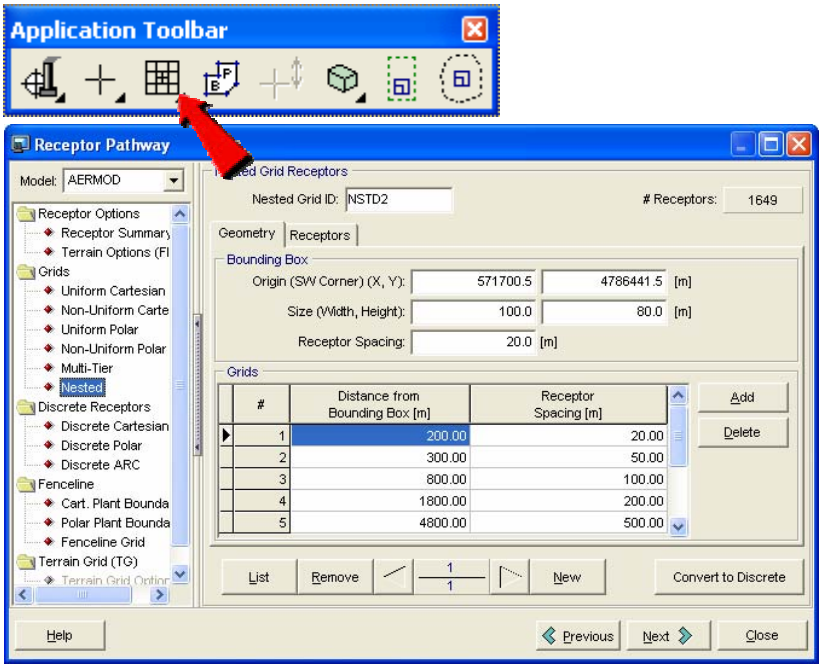
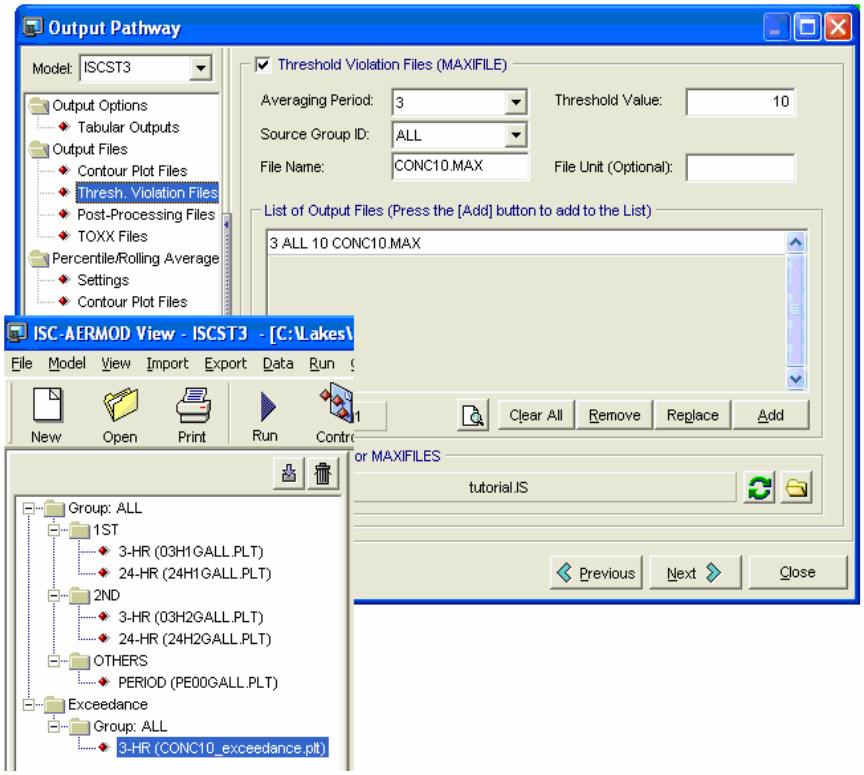
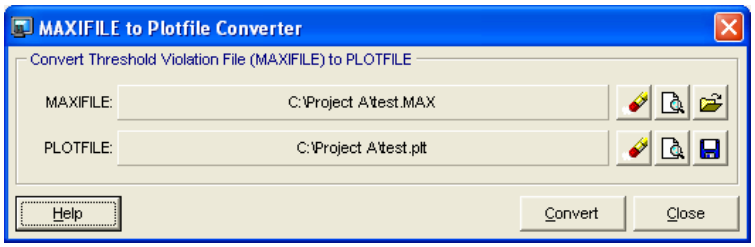
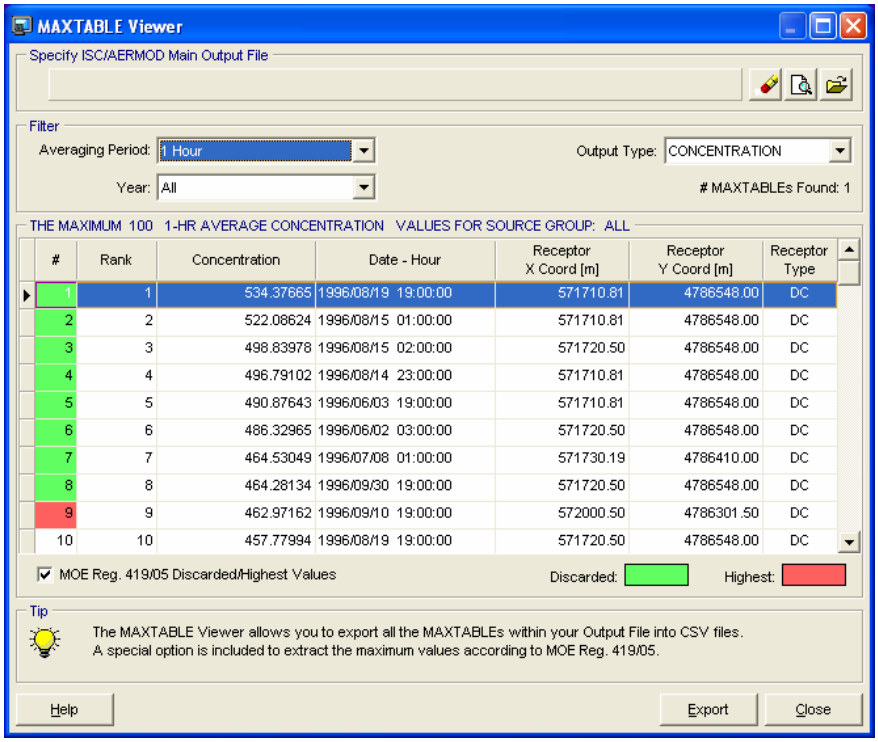
Topic	Feature Description
Receptor Pathway	**New Nested Grid Tool** The Nested Grid tool allows you to automatically create a nested grid with several tiers of spacing, centered on a bounding rectangle that contains all your sources. This nested grid is in accordance with the Ontario MOE Reg. 419/05 regulation. 
Output Pathway	**Plotfiles Created from Threshold Violation Files** Now when you create a Threshold Violation File (MAXIFILE), a plotfile is automatically created and saved to the same directory as the generated MAXIFILE (e.g., CONC10.MAX and CONC10_exceedance.PLT). Plotfiles (*.PLT) created from MAXIFILES (*.MAX) contain information on the number of times the specified threshold value was exceeded at each receptor location. If you open a project created in an older version of ISC-AERMOD View, this plotfile will be created as long as the MAXIFILE options are specified in the Output Pathway.

Topic	Feature Description
	
Tools	**MAXIFILE to PLOTFILE Converter** The MAXIFILE Converter allows you to convert any Threshold Violation Files (MAXFILEs) from any external projects into PLOTFILES. Plotfiles created from MAXIFILES contain information on the number of times a specified threshold was exceeded at each receptor location. 

Topic	Feature Description
Tools	**MAXTABLE Viewer** The MAXTABLE Viewer reads your ISC/AERMOD Output file and displays in al the available Maximum Value Tables within your output file allowing you to better analyze your results. A special option is included within this utility to highlight and discard the 8 hours with the highest 1-hour average predicted concentrations in a single met year, according to Ontario MOE Reg. 419/05 guidelines. The contents of this grid can than be exported into a CSV file that can be opened in Excel. 

#	Rank	Concentration	Date - Hour	Receptor X Coord [m]	Receptor Y Coord [m]	Receptor Type
1	1	534.37665	1996/08/19 19:00:00	571710.81	4786548.00	DC
2	2	522.08624	1996/08/15 01:00:00	571710.81	4786548.00	DC
3	3	498.83978	1996/08/15 02:00:00	571720.50	4786548.00	DC
4	4	496.79102	1996/08/14 23:00:00	571710.81	4786548.00	DC
5	5	490.87643	1996/06/03 19:00:00	571710.81	4786548.00	DC
6	6	486.32965	1996/06/02 03:00:00	571720.50	4786548.00	DC
7	7	464.53049	1996/07/08 01:00:00	571730.19	4786410.00	DC
8	8	464.28134	1996/09/30 19:00:00	571720.50	4786548.00	DC
9	9	462.97162	1996/09/10 19:00:00	572000.50	4786301.50	DC
10	10	457.77994	1996/08/19 19:00:00	571720.50	4786548.00	DC

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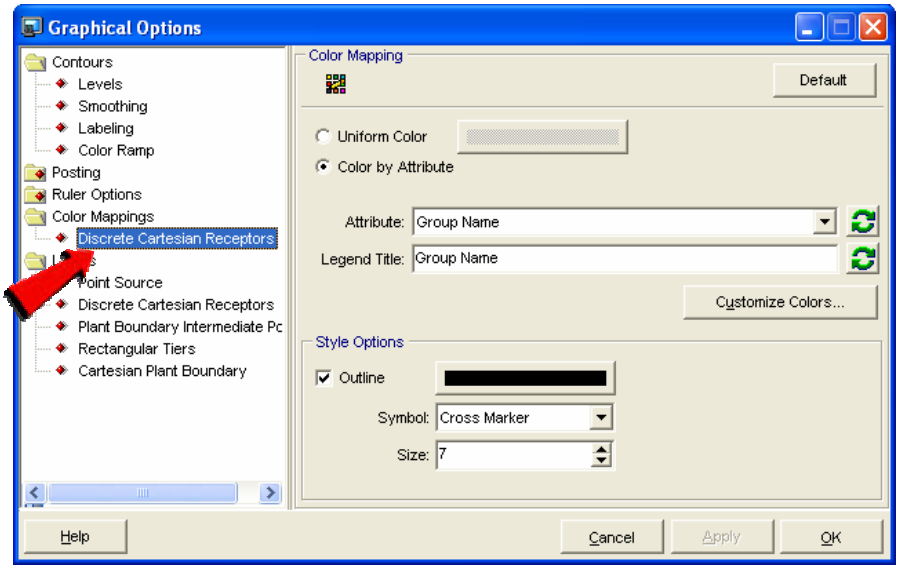
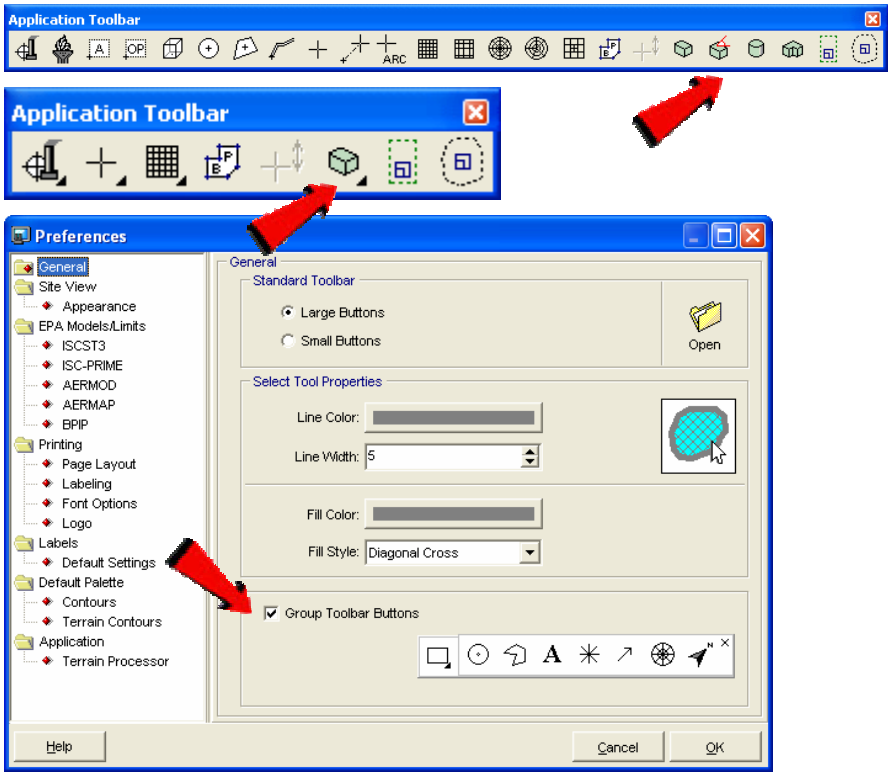
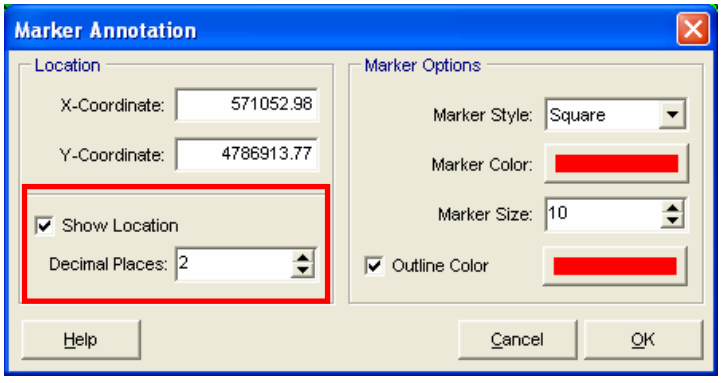
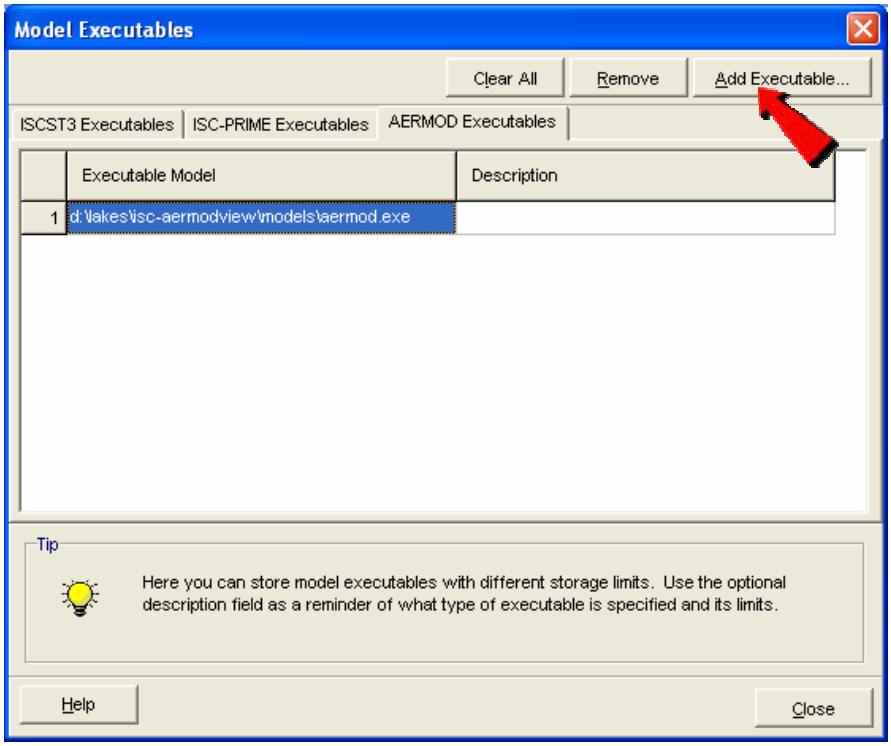
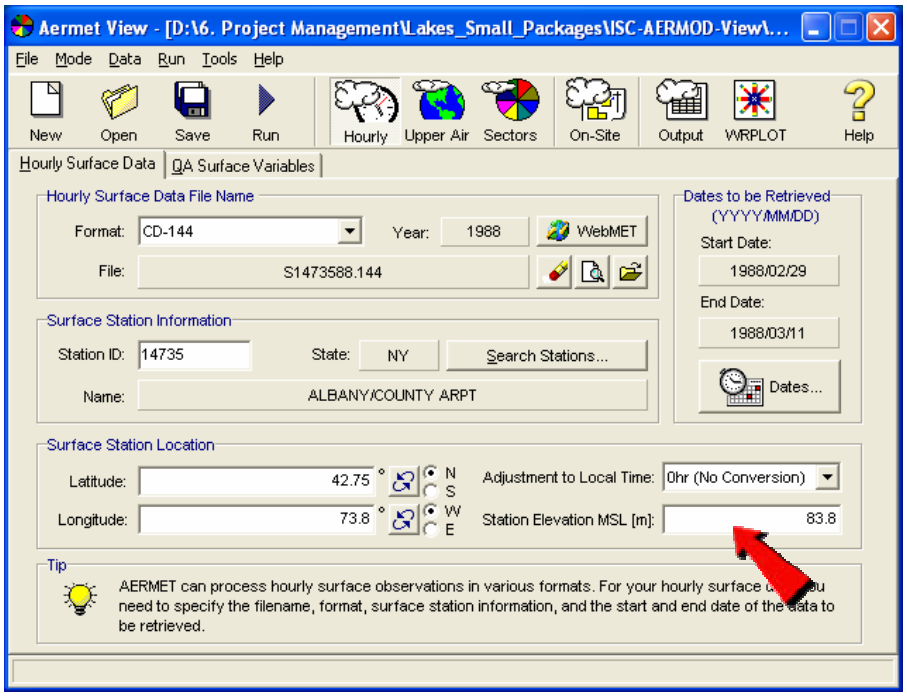
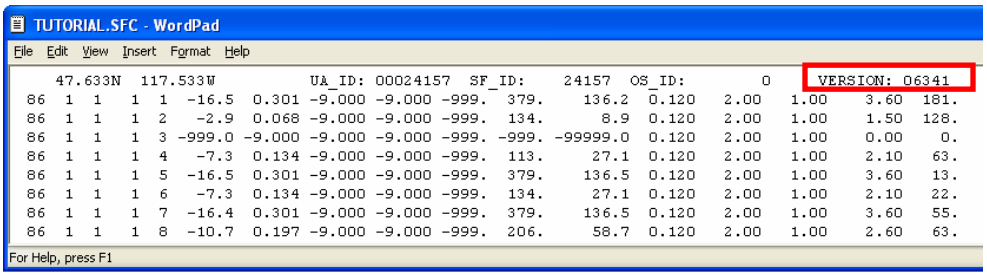
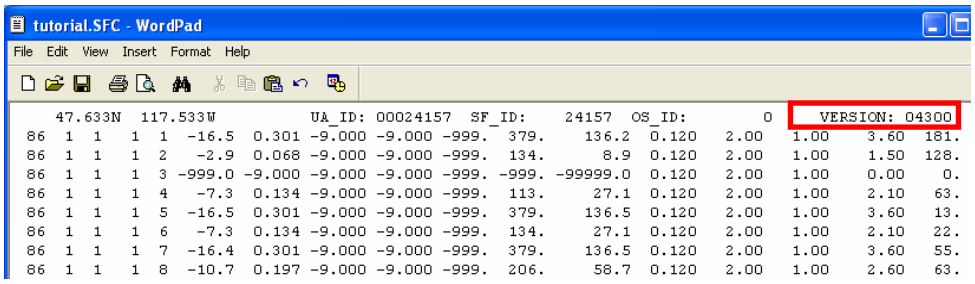
Topic	Feature Description
Graphical Options	**New Color Mappings Options for Discrete Cartesian Receptors** You can now apply different colors and markers to Discrete Cartesian Receptors, making it easier to identify special receptors in your project. These options can be accessed from the *Graphical Options* dialog, *Color Mappings* panel for Discrete Cartesian Receptors. 

Topic	Feature Description
Graphical Tool	**New Toolbar Grouping** A new option has been added to allow toolbar buttons to be grouped together based on common functionality. This allows for simplification of both the *Annotation* and *Application Toolbars*. This feature can be turned on or off from the *General* panel of the *Preferences* dialog. 
Graphical Tool	**Marker Annotation Coordinates** A new feature has been added to the Marker Annotation dialog, allowing you the option of displaying the coordinates where the marker is located. 

Topic	Feature Description
Batcher	**Model Executable Check** When specifying the model executable, Batcher now defaults to the Models folder and, in addition, performs a check to make sure the ISCAERView.exe is not accidentally selected. 

Topic	Feature Description
Aermet View	**New Station Elevation Parameter** The new parameter "Station Elevation above mean sea level" was implemented in the Hourly Surface, Upper Air and Onsite Data tabs in Aermet View. This parameter was introduced by the US EPA AERMET dated 06341 and it is currently used by the model for estimating surface pressure from sea level pressure in case this parameter is missing from the surface met data in the TD-3505 format (ISHD). A default value of 100 meters is assumed if this optional elevation parameter is not specified. For any other surface met data format (e.g., CD-144, SAMSON, etc.), this parameter is ignored. 

Topic	Feature Description
Aermet View	**Version in AERMET Surface Files** Every time the US EPA releases a new version of AERMET and AERMOD models, the model update version number is assigned to the header of meteorological surface data file (*.SFC) pre-processed by the AERMET model. When running AERMOD, the model checks for this version number and if incompatible it gives a fatal error message as shown below. For the Jan 2007 update release of the US EPA models, AERMOD will check for the Version: 06341. Pre-processing your surface and upper air met data files again using AERMET View Version 5.6 will produce new surface files containing the correct version number. ******** FATAL ERROR MESSAGES ******** ME E395 306 MEOPEN:Met. Data Error; Incompatible Version of AERMET: 04300  

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