ISC-AERMOD View Package

Interface for the US EPA ISC and AERMOD Models

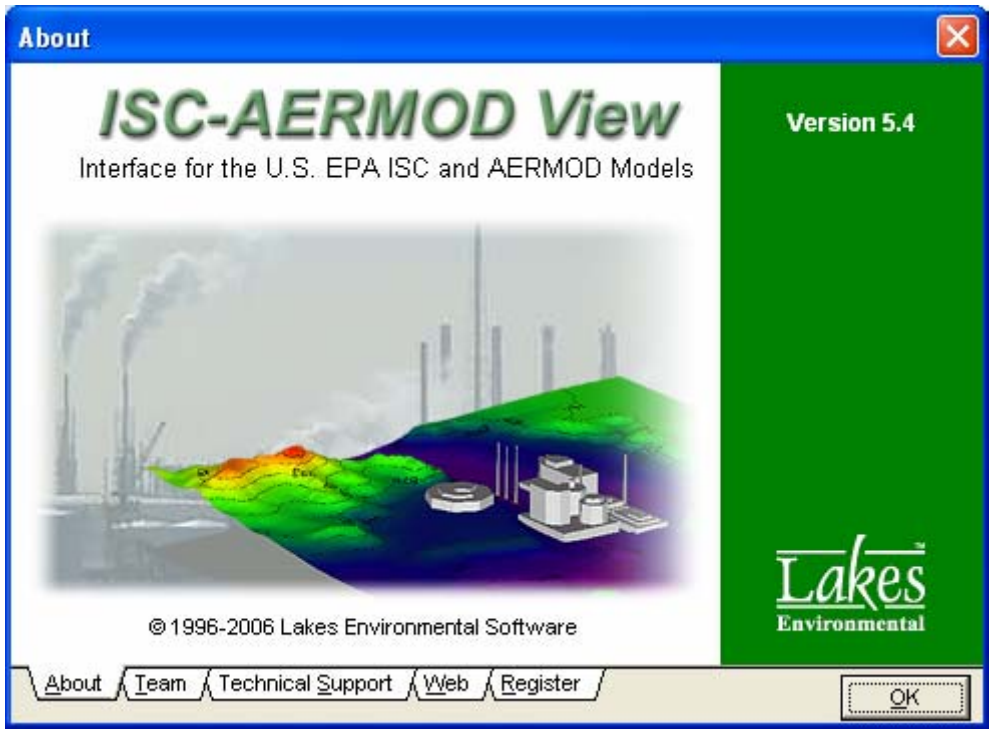
Release Notes

Release Notes – Version 5.4

Release Notes – Version 5.3

Release Notes – Version 5.1

Release Notes – Version 5.0



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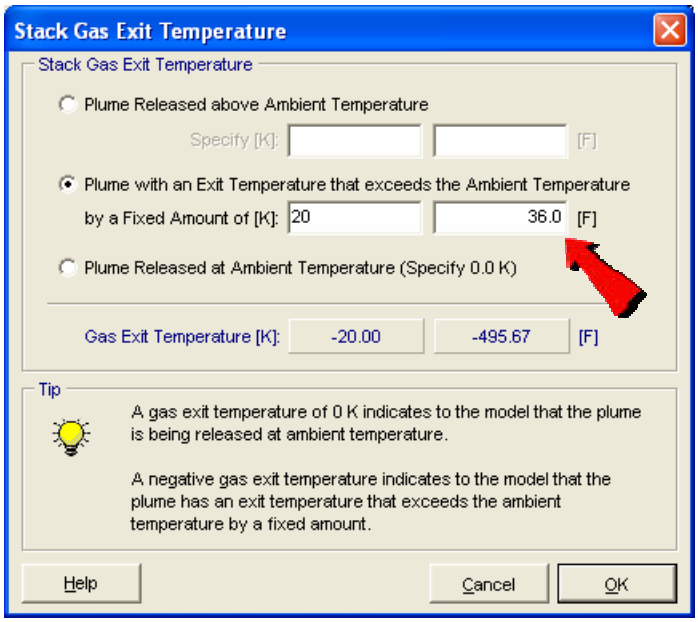
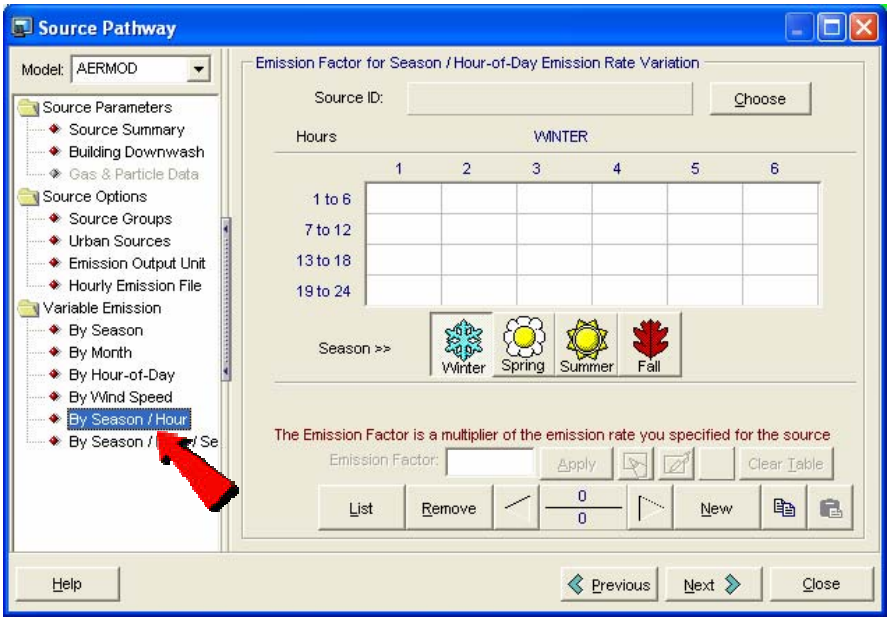
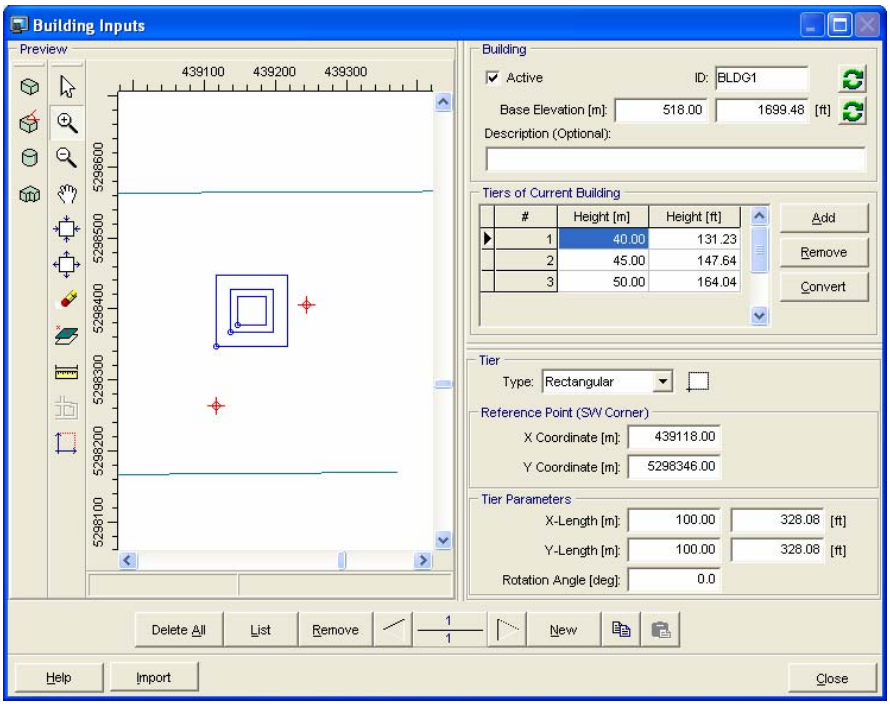
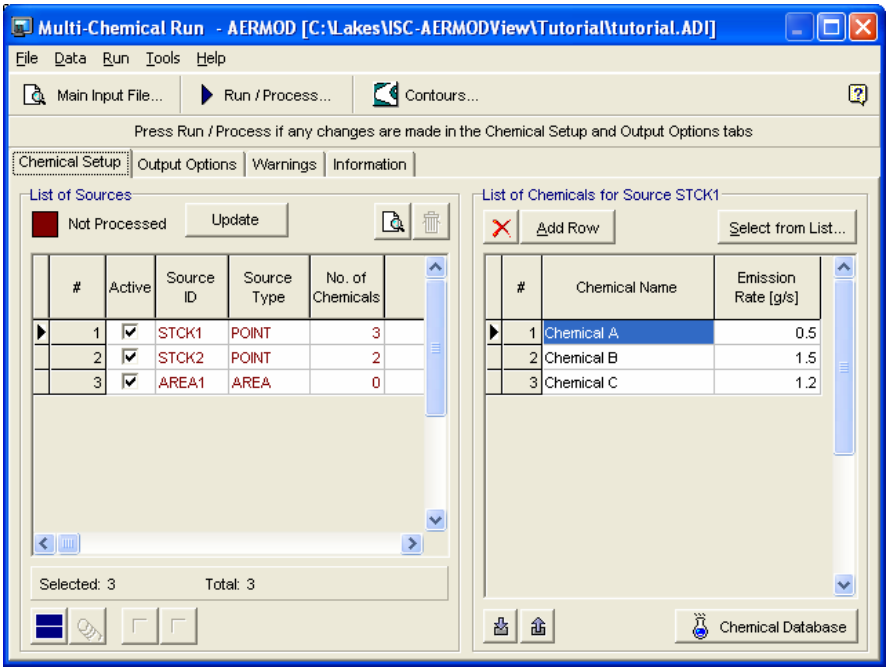
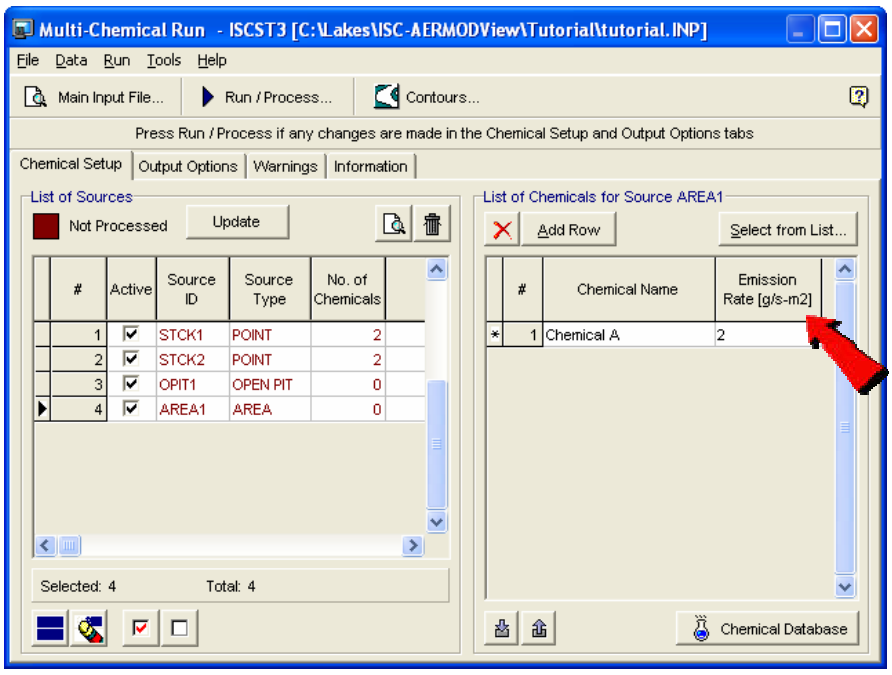
ISC-AERMOD View Package
Version 5.4

Release Notes
September 27, 2006

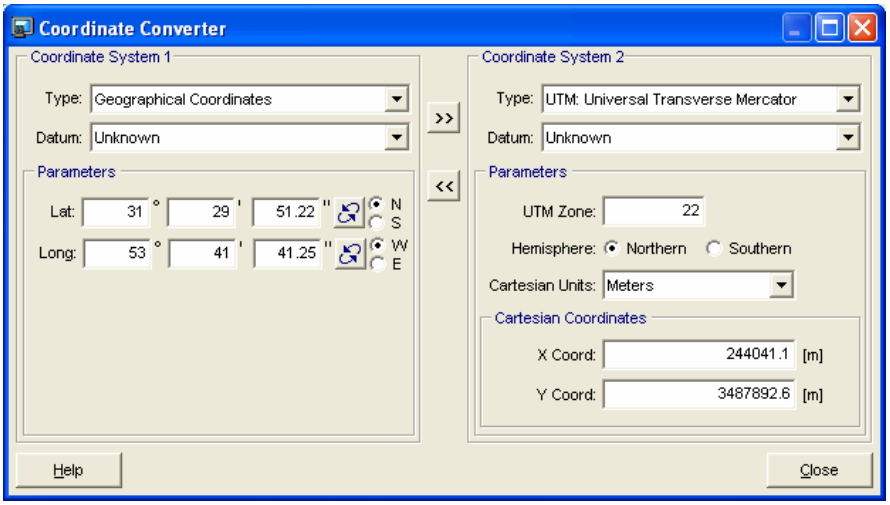
Topic	Feature Description
Source Pathway	**Stack Gas Exit Temperature Dialog** In the Stack Gas Exit Temperature tip dialog, a plume with an exit temperature that exceeds ambient temperature by a fixed amount may now be correctly entered in degrees F. 

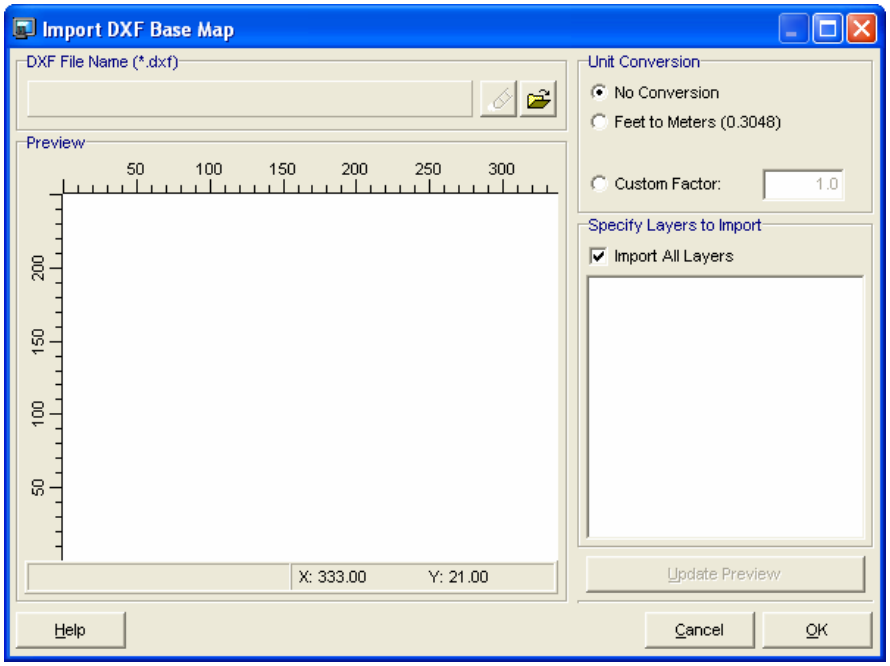
Topic	Feature Description
Source Pathway	**By Season By Hour Variable Emissions** The By Season By Hour Variable Emissions table has been updated to be more stable when editing after model runs. 
Building Inputs	**Building Inputs Preview Window** The Preview window of the Building Inputs dialog now displays any point and flare sources you have created in your project. 

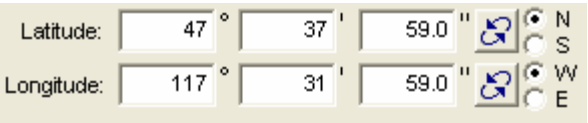
Topic	Feature Description
Multi-Chemical	**Negative Emissions and Calms** The Multi-Chemical utility has been updated to address minor inaccuracies when dealing with both calms and negative emission rates. 
Multi-Chemical	**Area Source Emission Label g/s-m^2** The Multi-Chemical utility now correctly displays the emission rate label of g/s-m^2 for all area and open pit sources. 

Topic	Feature Description

Multi-Chemical	**Deposition Plotfiles Imported into Interface**
	Deposition Plotfiles that have either TOTAL DEPO or DEPOS in the plotfile header are now imported into the main interface to allow viewing of the deposition contours created by different versions of the model.
	`* AERMOD (04300): Tutorial: XYZ Company - Concentration Calculation - 1986 Met Data`
	`* MODELING OPTIONS USED:`
	`* CONC DEPOS TOXICS FLAT`
	`* PLOT FILE OF HIGH 1ST HIGH 3-HR VALUES FOR SOURCE GROUP: ALL`
	`* FOR A TOTAL OF 441 RECEPTORS.`
	`* FORMAT: (4(1X,F13.5),3(1X,F8.2),3X,A5,2X,A8,2X,A4,6X,A8,2X, I`
	`* X Y AVERAGE CONC TOTAL DEPO ZELEV ZHILL ZFLAG`
	`*`
	`* AERMOD (04300): Tutorial: XYZ Company - Concentration Calculation - 1986 Met Data`
	`* MODELING OPTIONS USED:`
	`* CONC TOTAL DEPO TOXICS FLAT`
	`* PLOT FILE OF HIGH 1ST HIGH 3-HR VALUES FOR SOURCE GROUP: ALL`
	`* FOR A TOTAL OF 441 RECEPTORS.`
	`* FORMAT: (4(1X,F13.5),3(1X,F8.2),3X,A5,2X,A8,2X,A4,6X,A8,2X, I`
	`* X Y AVERAGE CONC TOTAL DEPO ZELEV ZHILL ZFLAG`
	`*`

Tools	**Coordinate Converter Utility** The Coordinate Converter utility is now non-modal, allowing you to easily cut and paste values from another window to this utility. Changes have also been made to the Coordinate Converter utility to permit users to enter a decimal value in the seconds field. This provides more accuracy during coordinate conversions. 

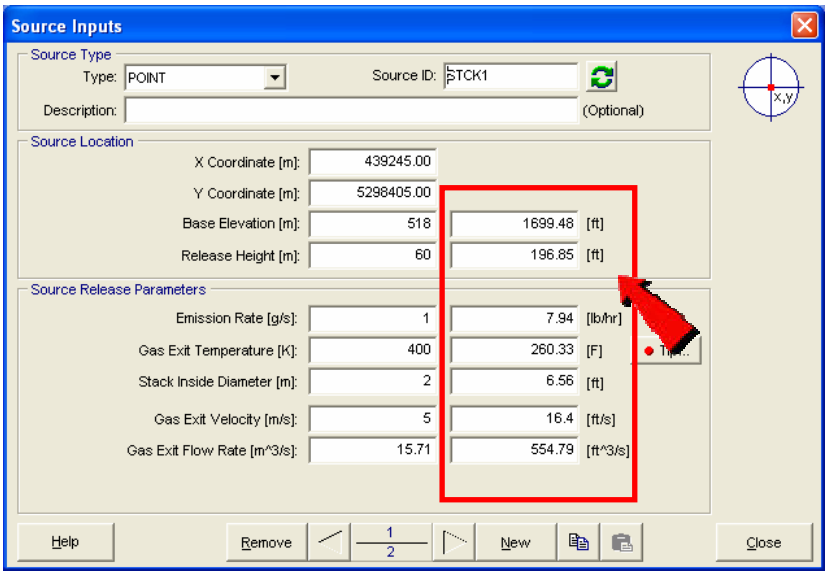
Topic	Feature Description
Input File	**Automatic Update** The model input file will now automatically update and save all changes to your project upon closing the project.
General	**Exporting Plotfiles to Surfer** Issues with the Export Plotfiles to Surfer function has now been resolved.
General	**DXF Import Options** The DXF Reader has been updated to allow import of more features such as ARC objects. 

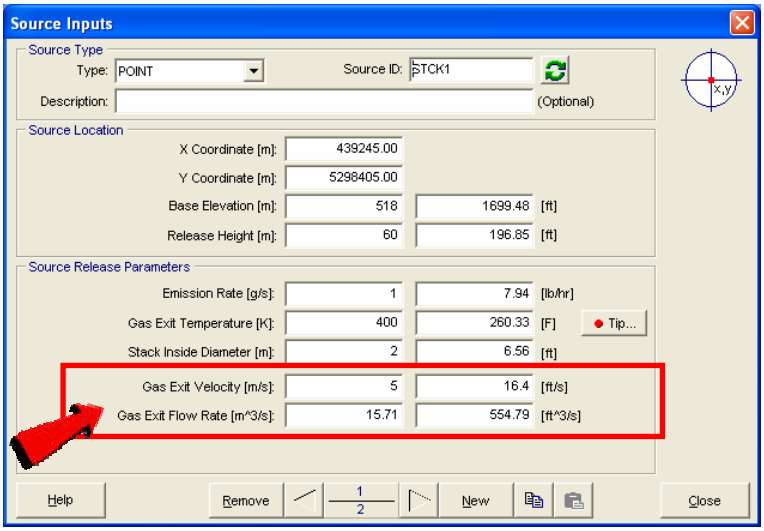
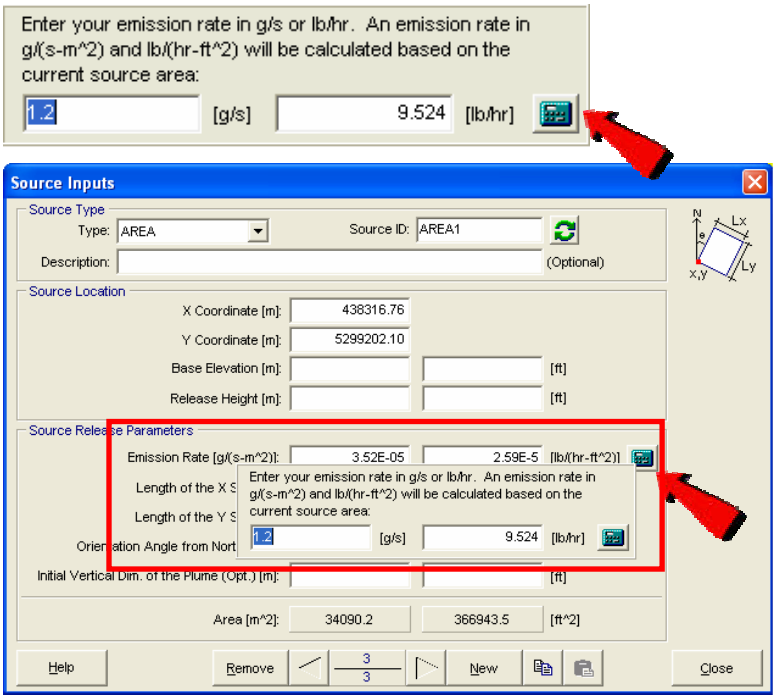
Topic	Feature Description
Installation	**Crystal Reports Installation Files** The Crystal Reports Installation Files have been updated to include the latest service pack.
Rammet View **Aermet View**	**Coordinates Panel** Changes have also been made to the Coordinates Panel to permit users to enter a decimal value in the seconds field, which provides more accuracy. 

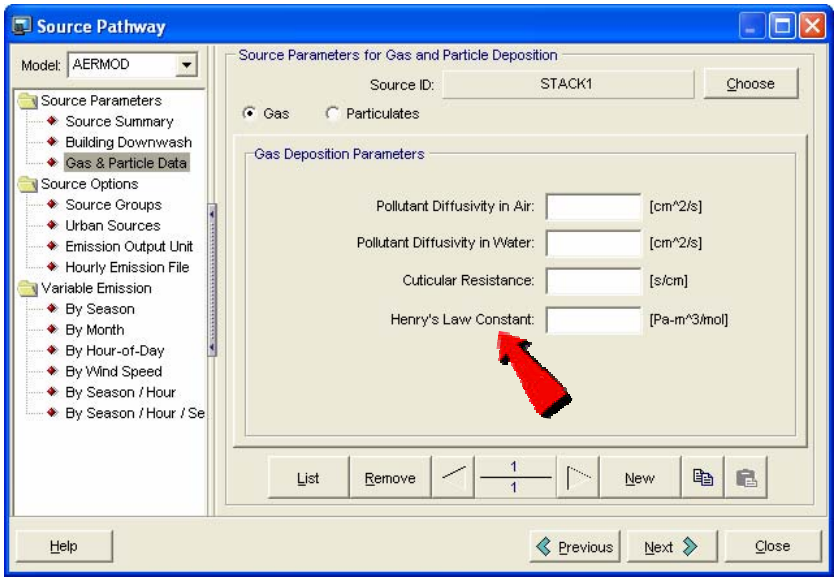
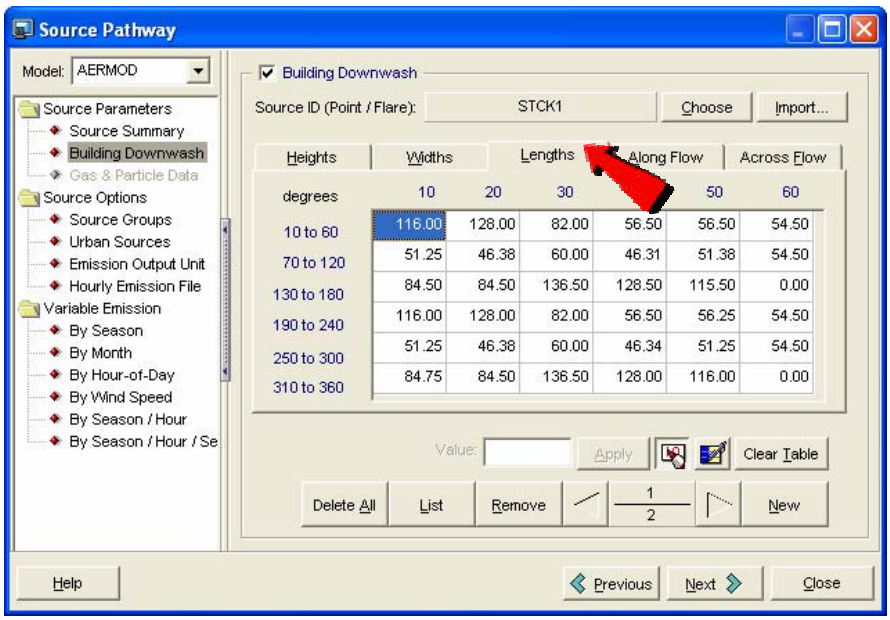
ISC-AERMOD View Package
Version 5.3

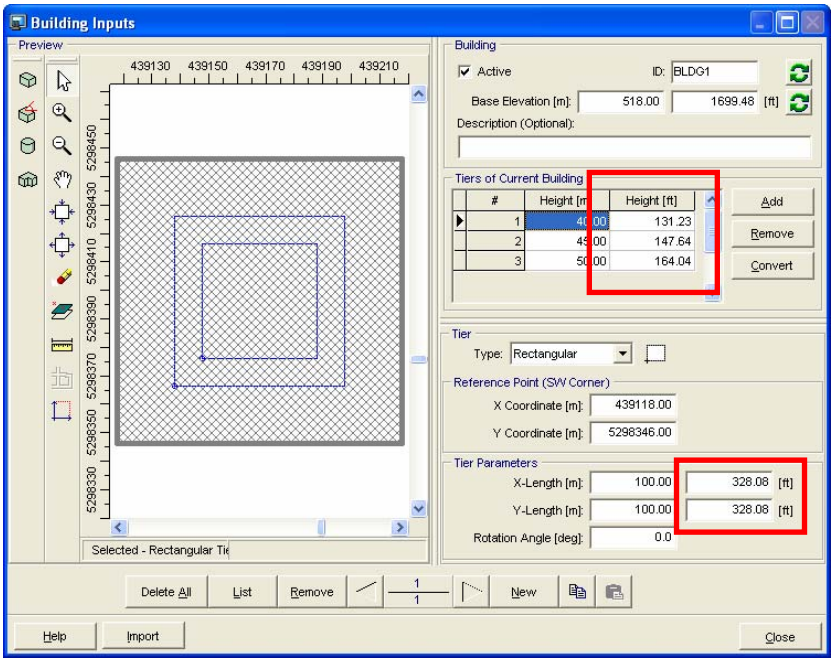
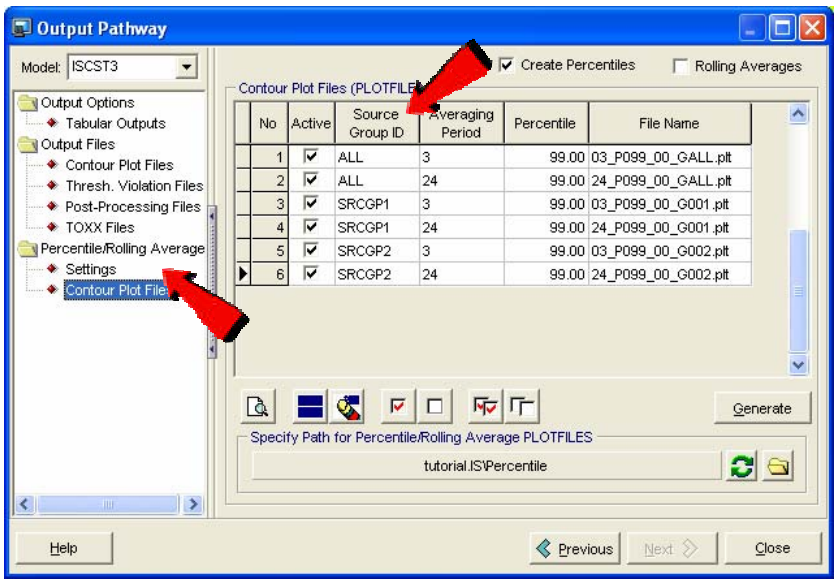
Release Notes

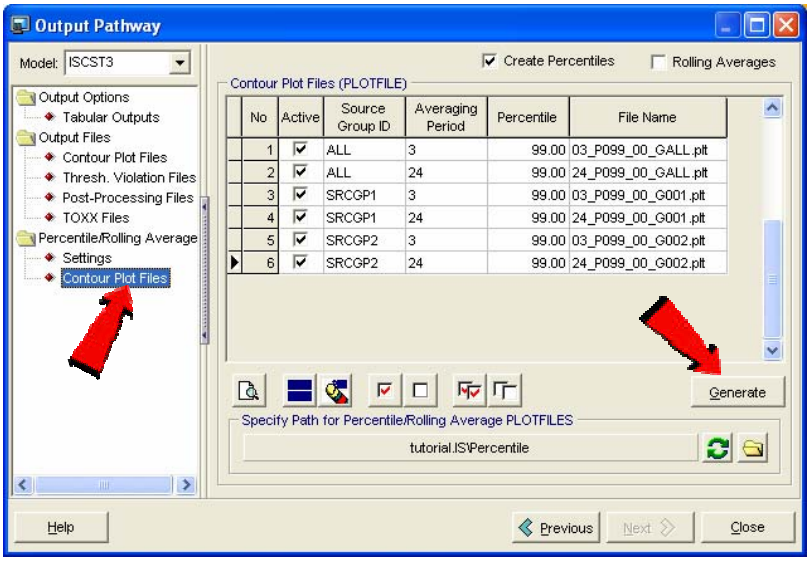
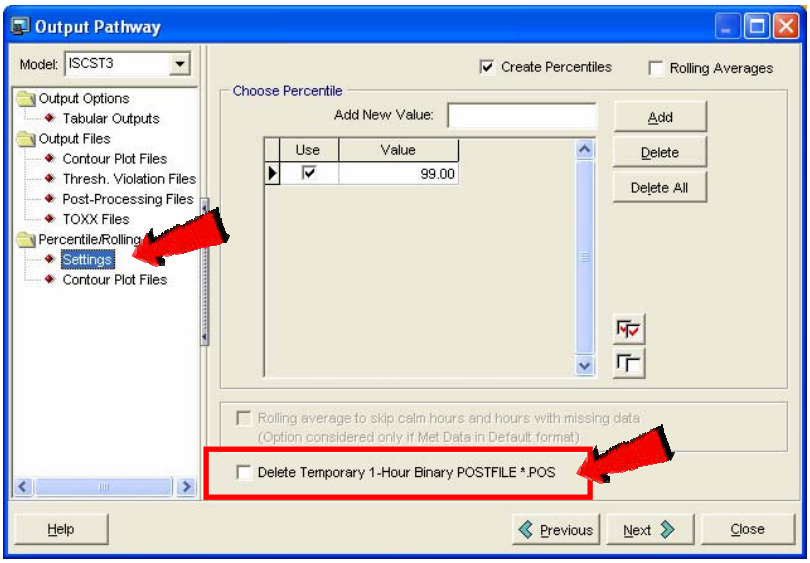
June 14, 2006

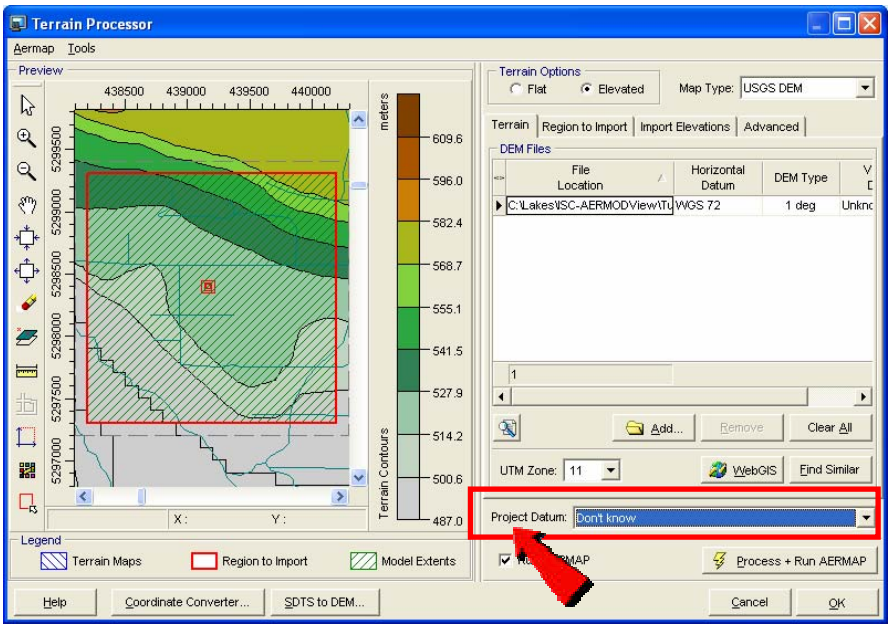
Topic	Feature Description
Source Pathway	**Source Input Data in Metric or English Units** Source parameters can now be entered in the interface in either metric or English units. You can enter a value as a metric unit and the value will be converted to an English unit and vice versa. Model input files are still written in metric units because of model limitations. 

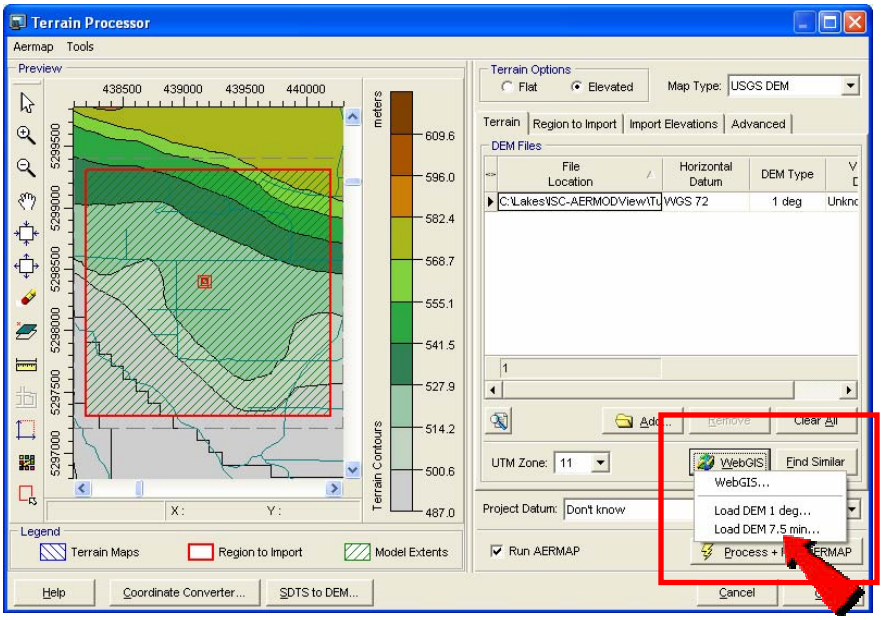
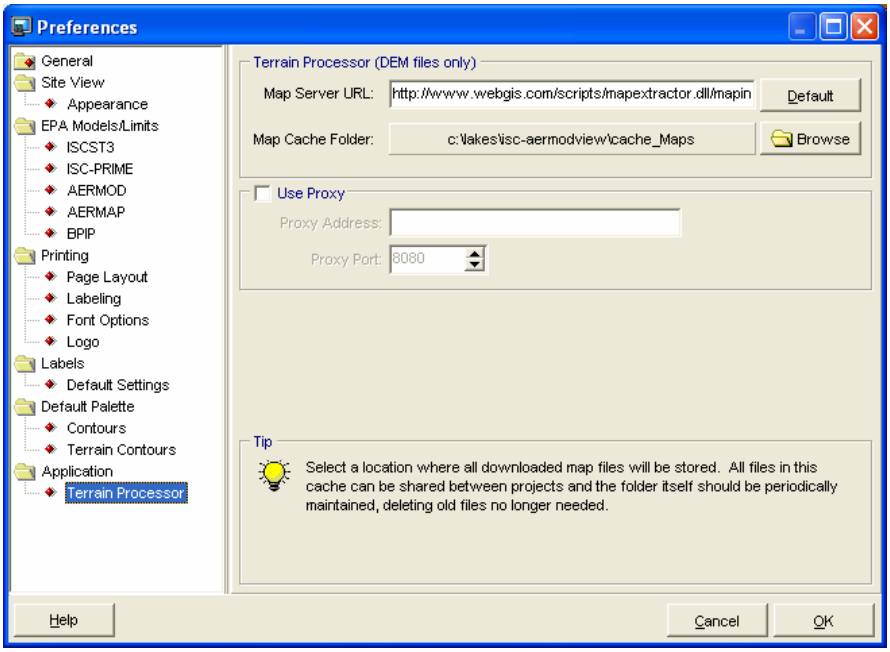
Topic	Feature Description
Source Pathway	**Option to Specify Stack Gas Exit Flow Rate** For Point Sources, you can now specify the Gas Exit Flow Rate and the Gas Exit Velocity will be automatically calculated and vice versa. 
Source Pathway	**Auto-Calculate Area Emissions in g/s-m^2** A tool to auto-calculate the emission rate for Area and Open Pit sources in g/s-m^2 was implemented in the *Source Inputs* dialog. The user can now specify emissions for the entire area in g/s and ISC-AERMOD View will calculate the emission rate in g/s-m^2 based on the specified area of the source. 

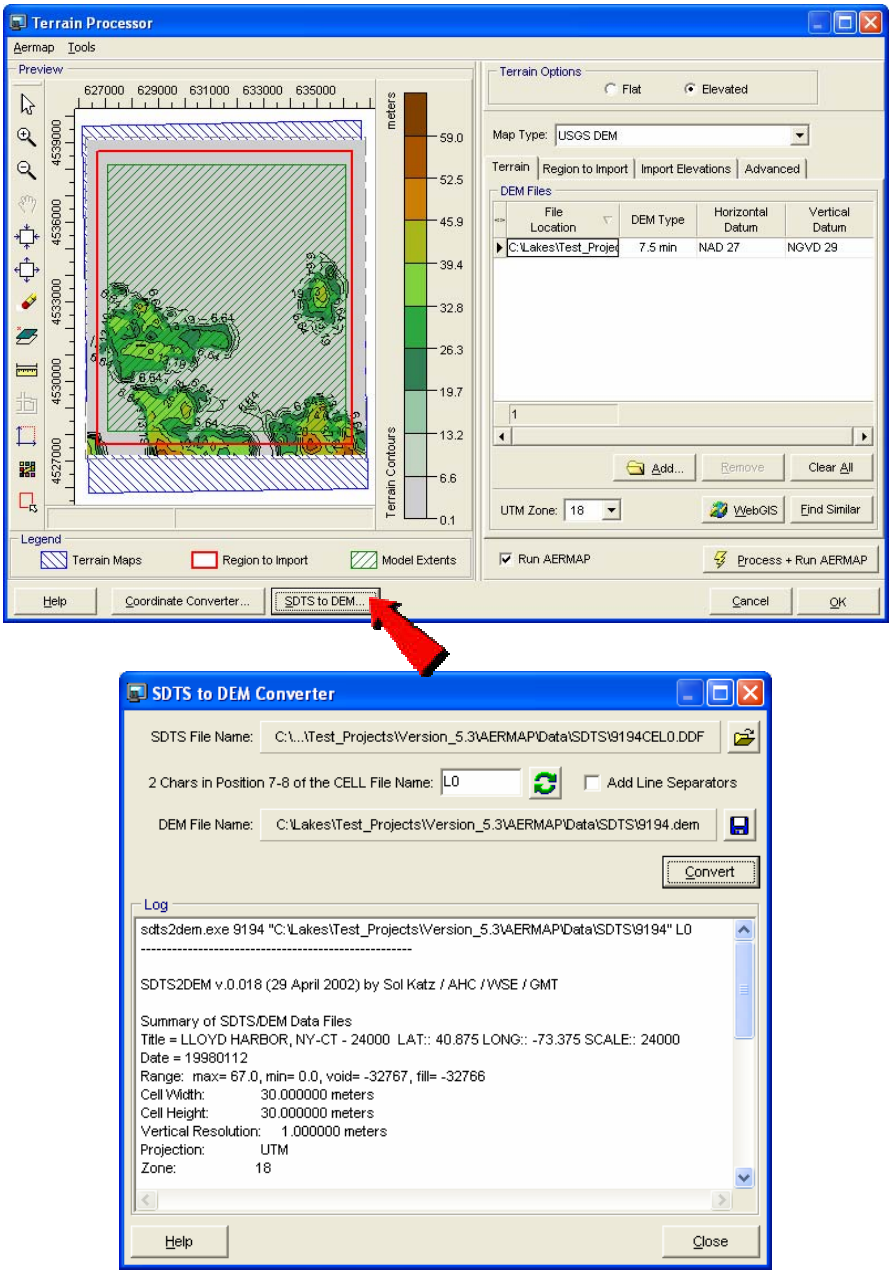
Topic	Feature Description
Source Pathway	**Henry's Law Constant under Gas & Particle Data** In order to accommodate values that exceed four decimal places, the Henry's Law Constant under the Gas Deposition Parameters, Gas & Particle Data section in the Source Pathway is now written to the AERMOD input file in scientific notation. 
Source Pathway	**Building Downwash Data for AERMOD** The building downwash table for AERMOD now displays the *Lengths* tab. Although the building length parameters were being imported and saved correctly in the project database and being written correctly into the AERMOD input file, the interface was not displaying this tab. 

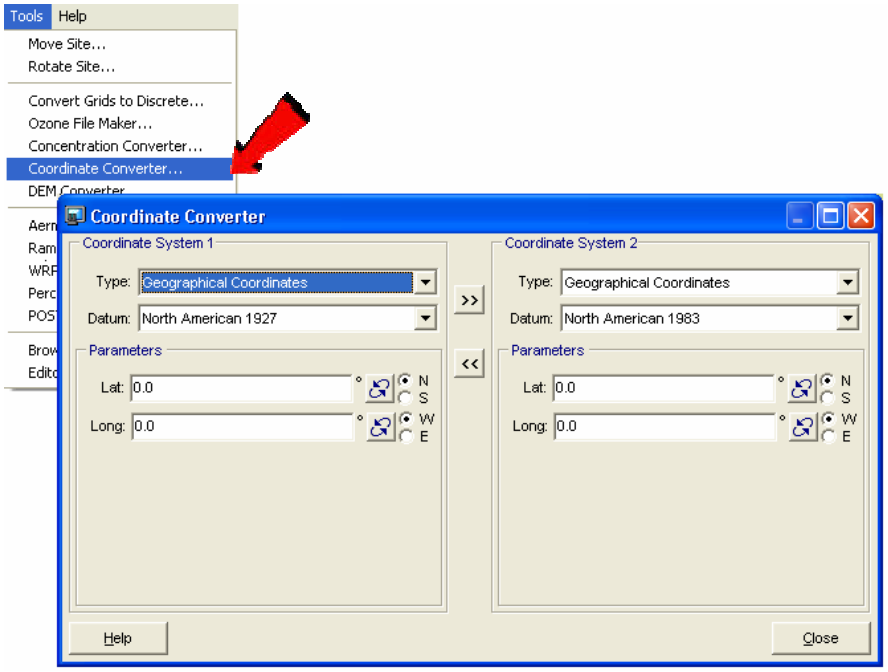
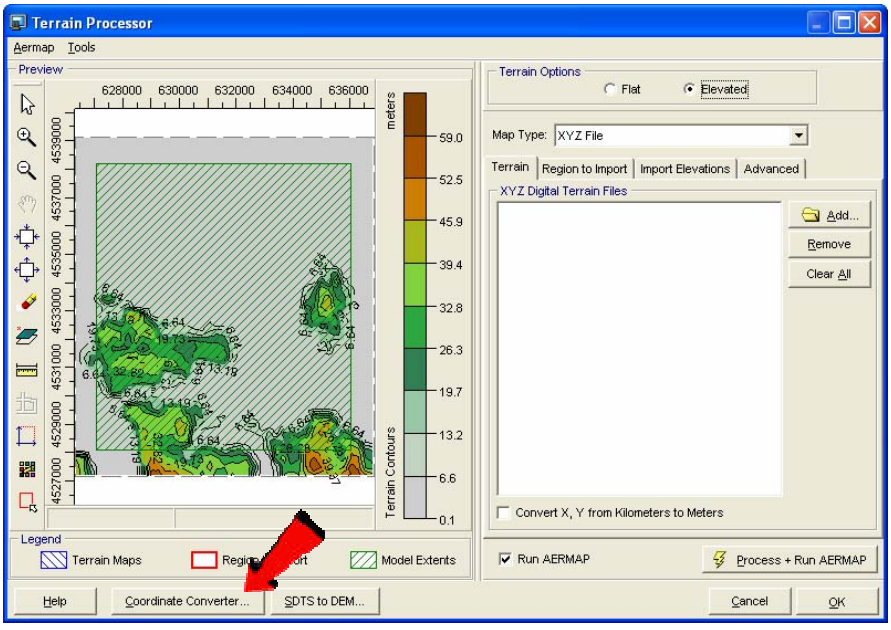
Topic	Feature Description
Building Inputs	**Building Input Data in Meters or Feet** Building dimensions, base elevation, and tier heights can now be entered in the interface in either metric or English units. Please note that the building location along with the X and Y coordinates can only be entered in meters because of model restrictions. 
Output Pathway	**Percentile Option Now Available for Any Source Group** The Percentile/Rolling Average option is now available for any source group. The Percentile option in previous versions of ISC-AERMOD View only supported Source Group ALL. 

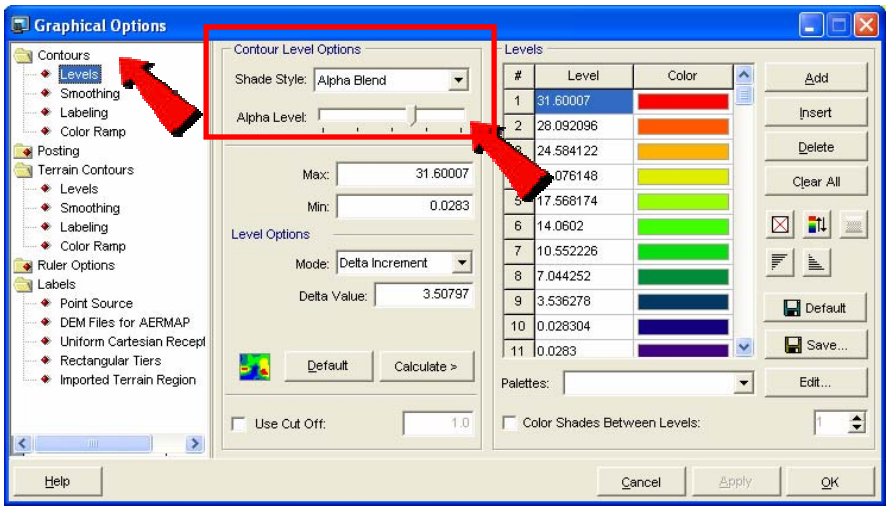
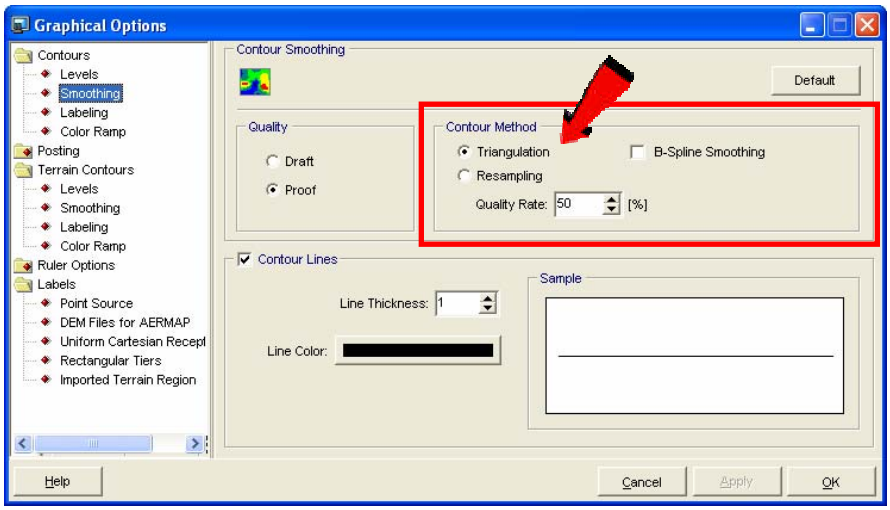
Topic	Feature Description
Output Pathway	**Re-Generate Percentile Contour Plot Files** This feature allows for the creation of percentile contour plot files without having to re-run the project. This feature will be particularly useful for users who want to create percentiles, but run the project through batcher and hence do not have percentiles created during the initial project run.  **IMPORTANT:** Do not check the option to *Delete Temporary 1-Hour Binary POSTFILE* under the Percentile *Settings* panel. ISC-AERMOD View generates the percentile contour plot files by extracting information from the model-generated POSTFILES. 

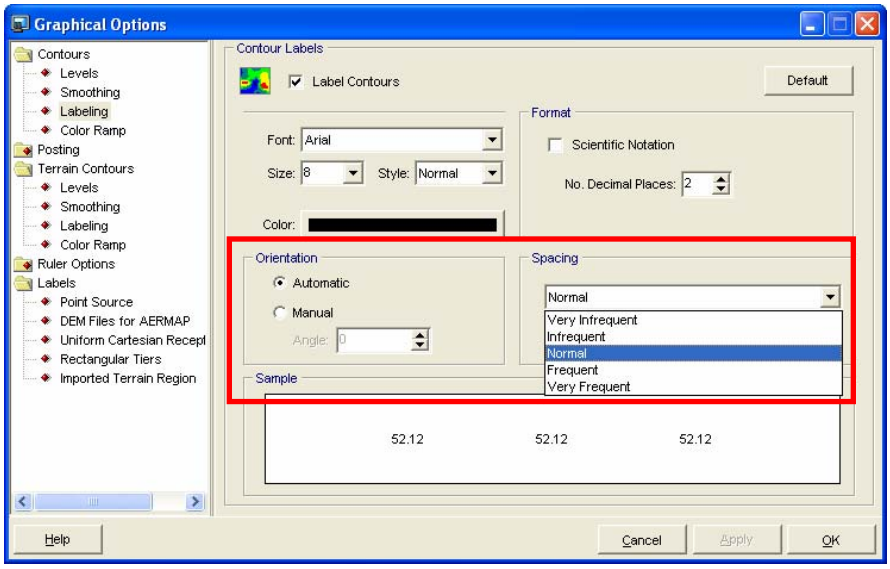
Topic	Feature Description
Terrain Processing	**AERMAP Version 04300** The latest release of the US EPA AERMAP Terrain Processor for AERMOD, version 04300, of December 22, 2005, now produces a series of output files in addition to the regular AERMAP summary file (*.ast), AERMAP Source (*.SOU) and AERMAP Receptor (*.ROU) output files. The list of files created by each AERMAP run is displayed below: 1) DOMDETAIL.OUT 2) MAPDETAIL.OUT 3) MAPPARAMS.OUT 4) RECDETAIL.OUT 5) RECELV.OUT 6) RECNDEM.OUT 7) SRCDETAIL.OUT 8) SRCNDEM.OUT
Terrain Processing	**Support for Project Datum** The option to specify the *Project Datum* is now available under the *Terrain Processor* dialog to support requirements of AERMAP version 04300 and the Lakes Environmental Terrain Processor. If project datum is not known, then AERMAP assumes that project datum is in NAD83 for 7.5 min DEMs or WGS84 for 1 deg DEMs. 
Terrain Processing	**XYZ Digital Terrain File Types** Lakes Environmental Terrain Processor now accepts XYZ terrain files that are space, tab, or comma delimited.

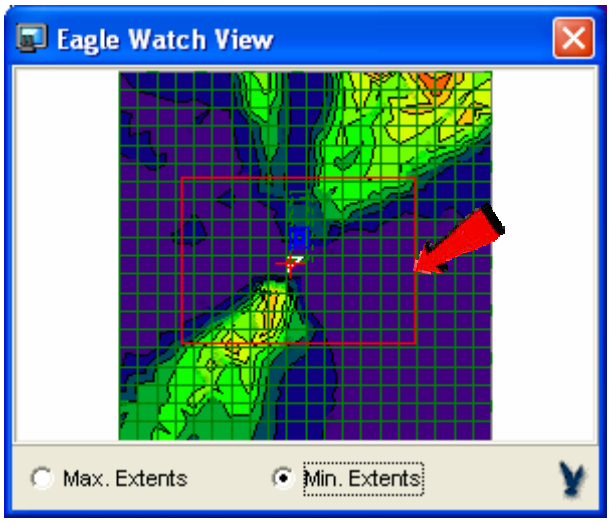
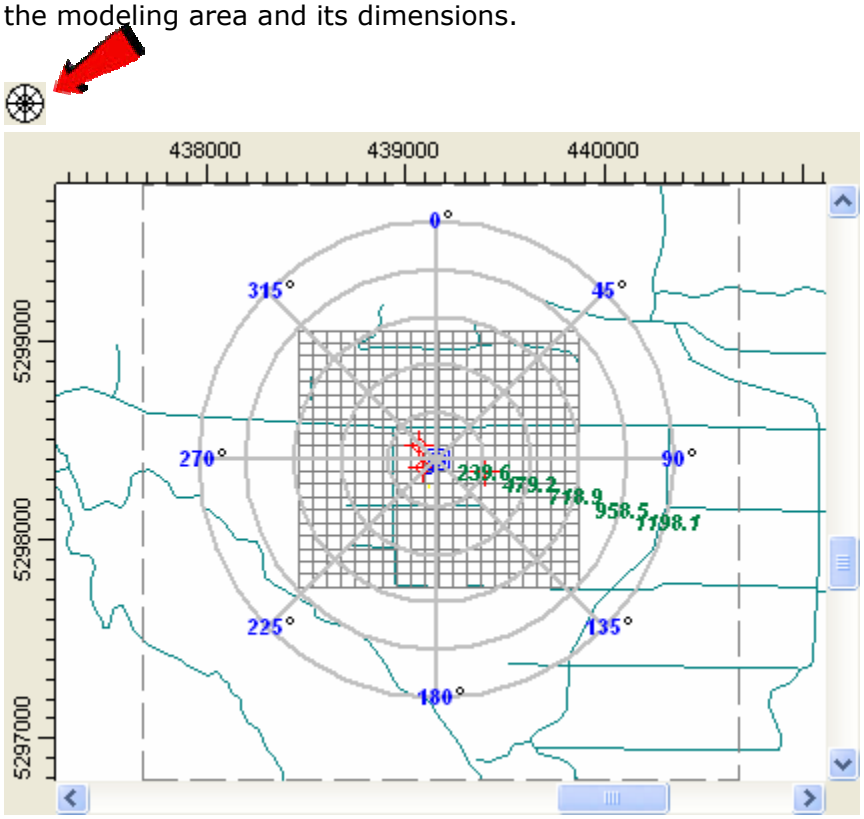
Topic	Feature Description
Terrain Processing	**Downloading Free DEM Terrain Files from WebGIS** A feature to automatically download free digital terrain files (DEMs) from www.webGIS.com was implemented under the *Terrain Processor* dialog. Currently, DEM files are only available for the United States in 7.5 min and 1 deg.  Under the *Preferences* dialog (File | Preferences menu option) you will be able to setup the Map Cache Folder and specify a Proxy address if needed. 

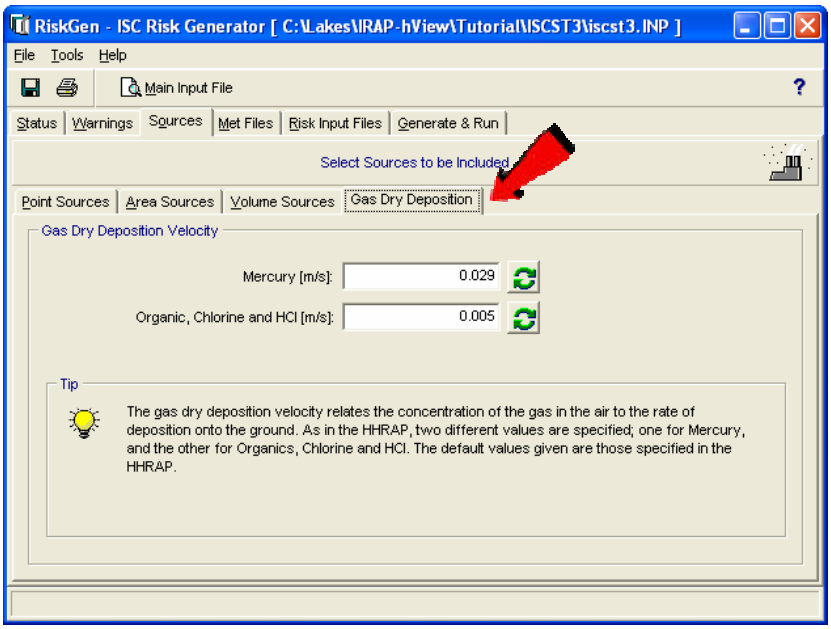
Topic	Feature Description
Terrain Processing	**SDTS to DEM Converter** The US EPA AERMAP does not read the new Spatial Data Transfer Standard (SDTS) formatted DEM data directly. Instead, the user is required to convert this format to the AERMAP-accepted DEM format. Lakes Environmental has implemented a user-friendly interface for the available SDTS2DEM.EXE program. The SDTS to DEM converter can be accessed from the *Terrain Processor* dialog by pressing the *SDTS to DEM* button. 

Topic	Feature Description
Tools	**Coordinate Converter Utility** The Coordinate Converter utility allows you to convert between geographic coordinates and projected Cartesian coordinates. You have access to this utility by selecting *Tools* | *Coordinate Converter...* from the menu or from the *Terrain Processor* dialog.  

Topic	Feature Description
Graphical Options	**Transparency Option for Contours Using Alpha Blending** Alpha Blending has been implemented to support real transparency of your concentration or terrain contours. You can access this option from the *Graphical Options* dialog, *Levels* panel, *Shade Style* drop-down list box. 
Graphical Options	**New Contour Method – Triangulation** A new contouring method, Triangulation, has been added to the Contour Smoothing options in the *Graphical Options* dialog. While the contours created by the *Triangulation* method may not be as smooth as those created by the *Resampling* method, they may be more representative in some cases. 

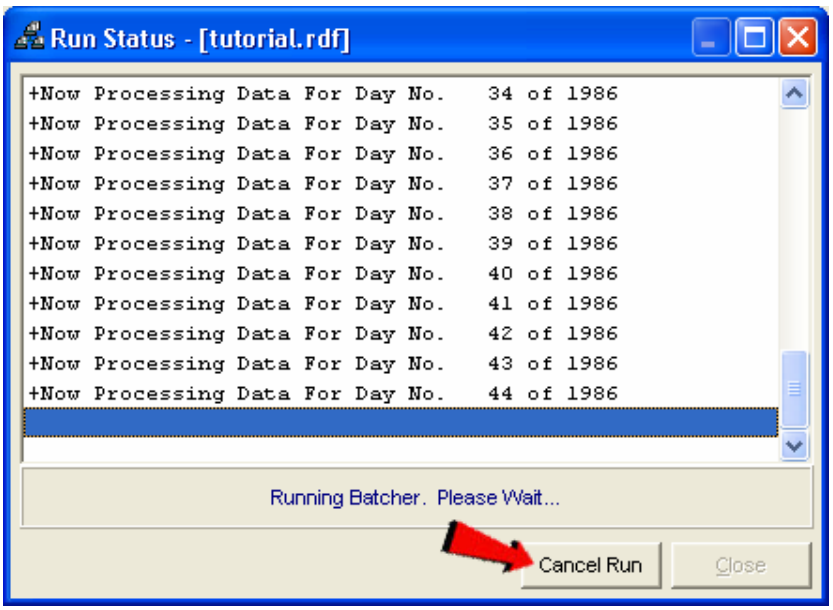
Topic	Feature Description
Graphical Options	**New Contour Label Options – Orientation and Spacing** Two new contour label options are available, *Orientation* and *Spacing*. You can now specify the orientation angle, as well as the spacing between labels, for contour labels. These options can be accessed from the *Graphical Options* dialog, *Labeling* panel for concentration or terrain contours. 
Graphical Tool	**New Eagle Watch View Tool** The Eagle Watch View tool displays a small window showing the full extents of your modeling domain with a red rectangle marking the area that is currently displayed in the main graphical area. In the Eagle Watch View window, you can use the mouse pointer to draw a new rectangle around the area that you would like to zoom in on. This will automatically updates the display in the main window to the area marked inside the Eagle Watch View window.

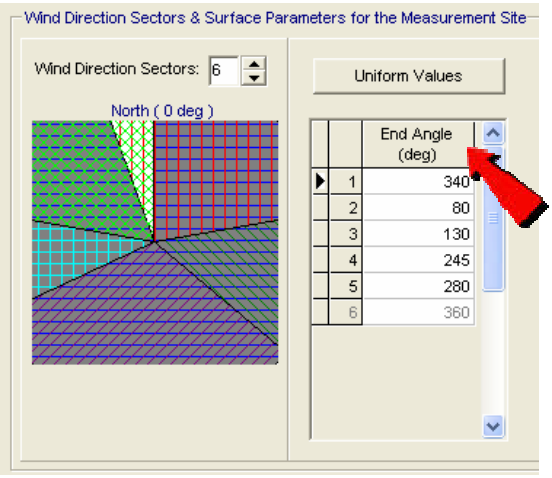
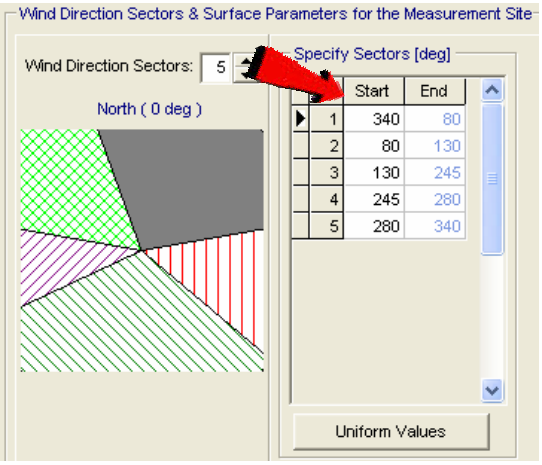
Topic	Feature Description
	
Graphical Tool	**New Web Annotation Tool** The Web Annotation tool allows you to draw a polar grid with the option to specify rings, rays, and labels at specific distances for annotation purposes only. This annotation tool can be especially useful when used as a scaling tool for graphical visualization of the modeling area and its dimensions. 

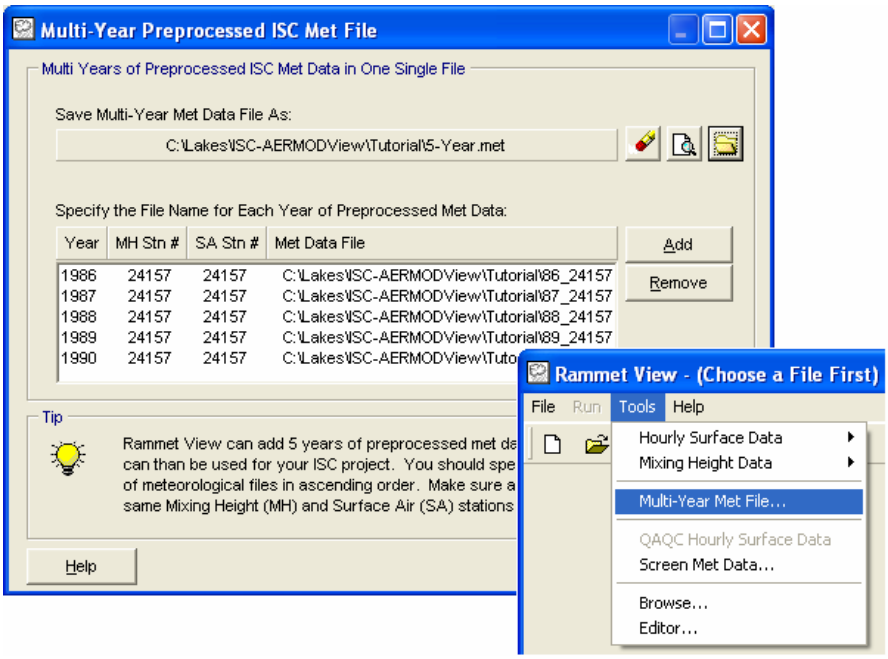
Topic	Feature Description
Graphical Tool	**Uniform Polar Grid with 360 Radials Every 1 deg - Bug Fix** The problem occurring in version 5.1, when a uniform polar grid with 360 radials spaced every degree was specified, and its graphical representation on the graphical area was not being displayed, has been resolved.
Graphical Tool	**Moving Multi-Tier Buildings – Bug Fix** In version 5.1, a problem occurred when all of the tiers of a multi-tier building were being graphically selected and moved to a new location. In such cases, only the base tier was being moved correctly. This bug has been fixed in version 5.3.
3D View	**Correct Display for Rotated Area Sources – Bug Fix** A bug has been corrected that was causing area sources with an orientation from north other than zero to be displayed incorrectly in 3D View.
RiskGen	**Updated RiskGen Options** The RiskGen Utility for the ISCST3 and ISC-PRIME models has been updated to process air modeling data in accordance with the 2005 Final US EPA-OSW Human Health Risk Assessment Protocol (HHRAP) (EPA530-R-05-006). This includes the addition of a separate Mercury vapor phase run, as well as fields to specify gas dry deposition velocities for Mercury and non-Mercury vapour phase runs. 

Topic	Feature Description

Multi-Chemical Run Utility	**Emission Output Unit**
	The user-defined emission output unit that is specified under the Source Pathway is now written to the input file for Multi-Chemical runs. This custom emission output unit was previously commented out in the input file being created by the Multi-Chemical Run utility and the model was calculating the concentration/deposition results in the default units of:
	
	`CONCUNIT ug/m^3`
	`DEPUNIT g/m^2`

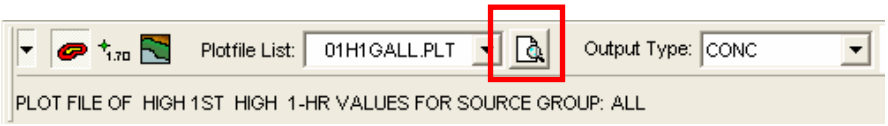
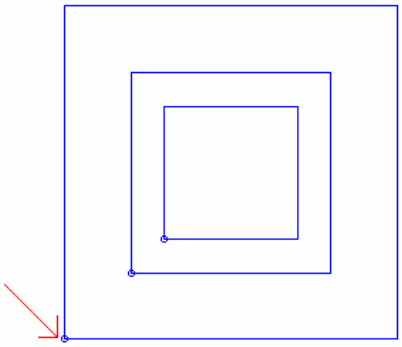
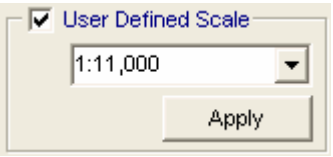
Batcher	**Cancel Run Option in Batcher** AERMOD and ISC-PRIME model runs through Batcher can now be aborted. This is particularly useful when a multi-chemical run needs to be stopped before it is completed. The Cancel Run button will be automatically disabled if the interface detects that the US EPA model executable currently being used does not support this cancel feature. The US EPA ISCST3 model executable (ISCST3.EXE dated 02035) was compiled with a 16-bit compiler and does not support this feature. 

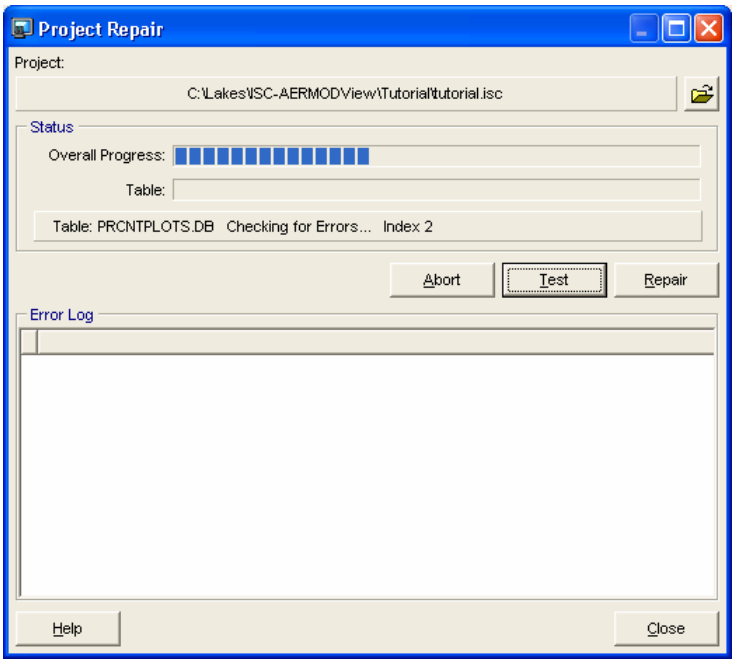
Topic	Feature Description
Aermet View	**Start and End Angles for Sectors in Aermet View** Up to Aermet View Version 5.1, the wind direction sectors were specified in the interface by giving the End angle. This approach had a limitation that the first sector always had to start at 0 degrees (North). In Version 5.3 instead of the End angle, the user is now requested to specify the Start angle and the End angle is automatically calculated. This allows for greater flexibility. **Old Way:**  **New Way:**  **Warning:** Once your Aermet View projects created in Version 5.1 and below are opened using Version 5.3, the project database is updated to the new sector angle schema. This means that any project created and opened in Version 5.3 and above will not be compatible with older versions of Aermet View (Version 5.1 and below).

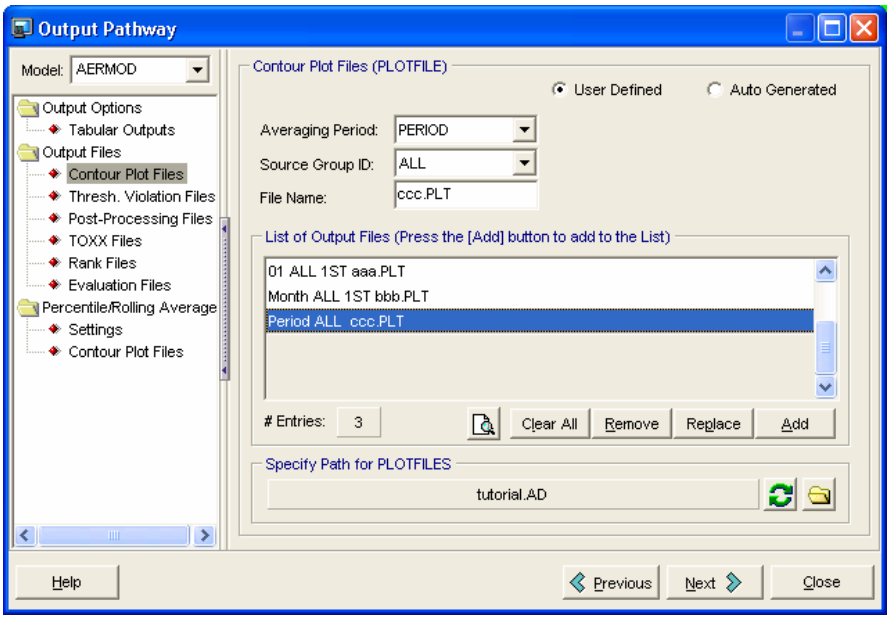
Topic	Feature Description
Rammet View	**Multi-Year Met File Utility** This utility is now being incorporated again under the *Tools* menu for Rammet View. This utility combines single year pre-processed ISC met data files into a combined multi-year met data file. 
WRPLOT View	**Calm Hours with TD-3505 Surface Data** In the TD-3505 format, calm hours are indicated in column 65 with the letter "C". WRPLOT now registers these hours as calms, instead of indicating them to be missing.
Percent View	**Percentile Option Available for Any Source Group** Now Percent View accepts POSTFILES for source group other than Source Group ALL. When asked to specify the PLOTFILE, make sure to specify the 1-Hour PLOTFILE for the same Source Group and for the same project. This way, Percentile Plotfiles can be created with the proper receptor locations and Source Group references.

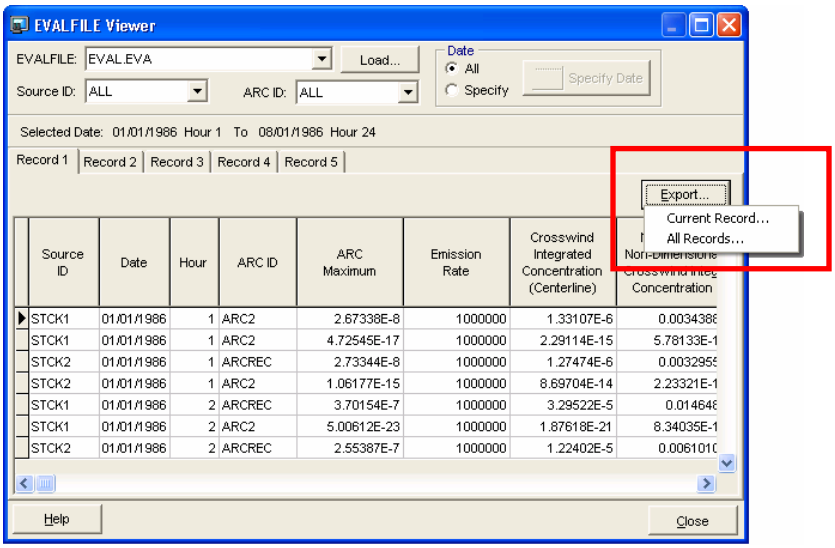
ISC-AERMOD View Package
Version 5.1

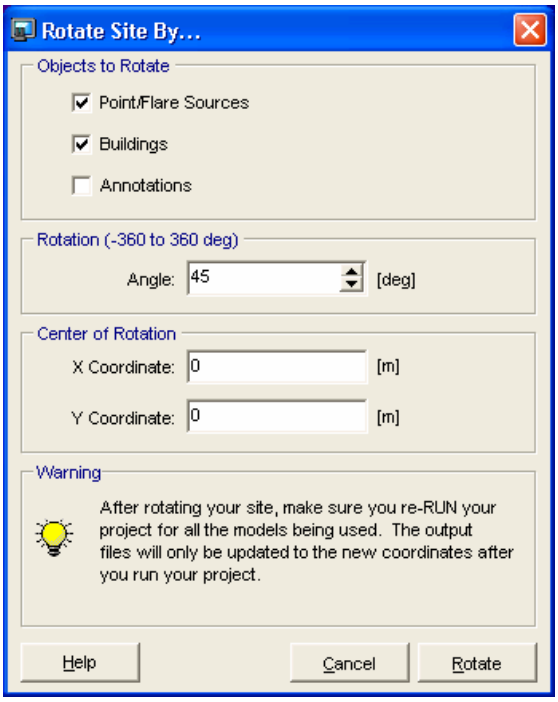
Release Notes
August 17, 2005

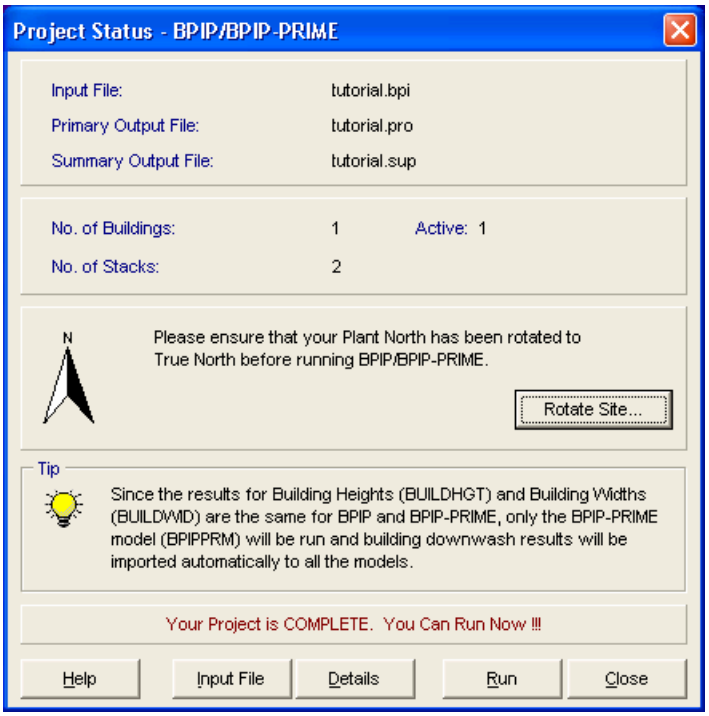
Topic	Feature Description
Graphical	**New Preview Button for Plotfiles** A preview button is now available beside the plotfiles combo box on the panel located at the bottom of the main window. This allows the user to preview the contents of the selected plotfile in WordPad. 
Graphical	**Smaller Building Anchors** Building anchors are now smaller in size. 
Printing	**Print Preview – User Defined Scale Option** In the User Defined Scale box, when specifying a custom print scale, the backspace keyboard button can now be used to delete the current value. 

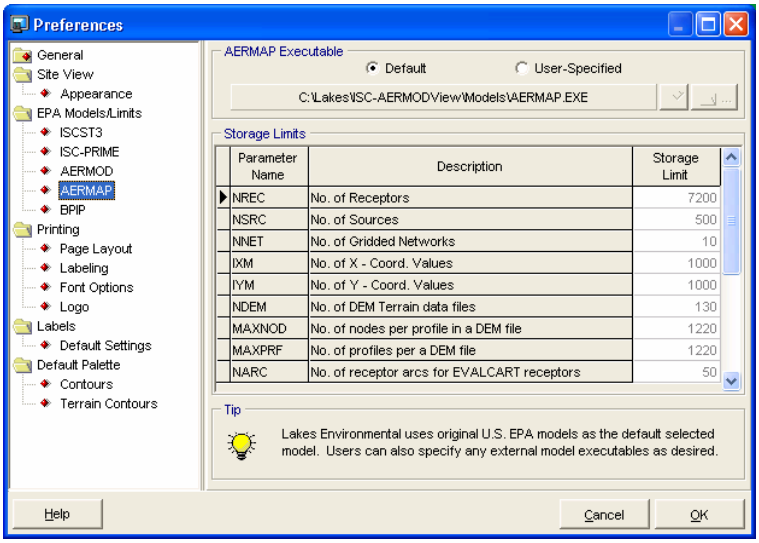
Topic	Feature Description
Save As	**Save Project As Option Improved** The Save Project As option was revised and now more files are being saved/copied to the new project location. A complete list of all the files that are automatically copied into the new project location can be found in the help file by searching for "Save Project As".
Repair Option	**Improved Project Repair Option** The project repair option was improved with more functionality. For example, now you can run a test to check if your project needs to be repaired. 
Receptor Pathway	**Bug Fixed when specifying a Plant Boundary or Discrete Receptors in Text Mode** An earlier problem existed whereby you could not define a plant boundary (Cartesian or Polar) or any type of discrete receptor in text mode unless you used the graphical option first.

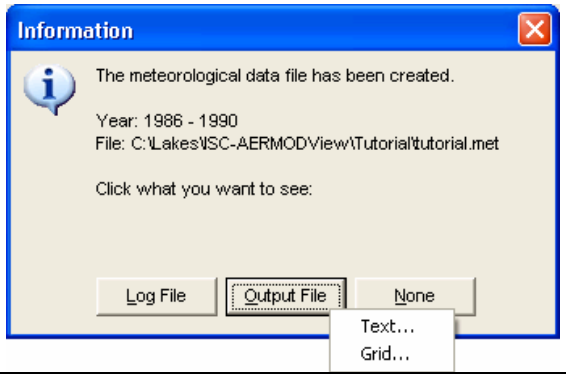
Topic	Feature Description
Output Pathway	**Fixed Bug in User-Defined Contour Plotfile Options** When using the user-defined contour plotfile option in Output Pathway, the program was inappropriately inserting a high value to the list for Annual and Period averages.  Example: PLOTFILE PERIOD ALL **1ST** FileName.PLT instead of PLOTFILE PERIOD ALL FileName.PLT

Topic	Feature Description
Output Pathway	**New Export Option for EVALFILE** From the EVALFILE Viewer (Output Pathway – Evaluation Files Option), you can now export the selection displayed on the grid into a comma delimited file that can be opened in Excel for further analysis, graphing, etc. 

Topic	Feature Description
Rotation Option	**New Rotation Tool for Buildings** The rotation tool that was available in BPIP View is now available in ISC-AERMOD View. This option can be accessed by selecting Tools | Rotate Site. 

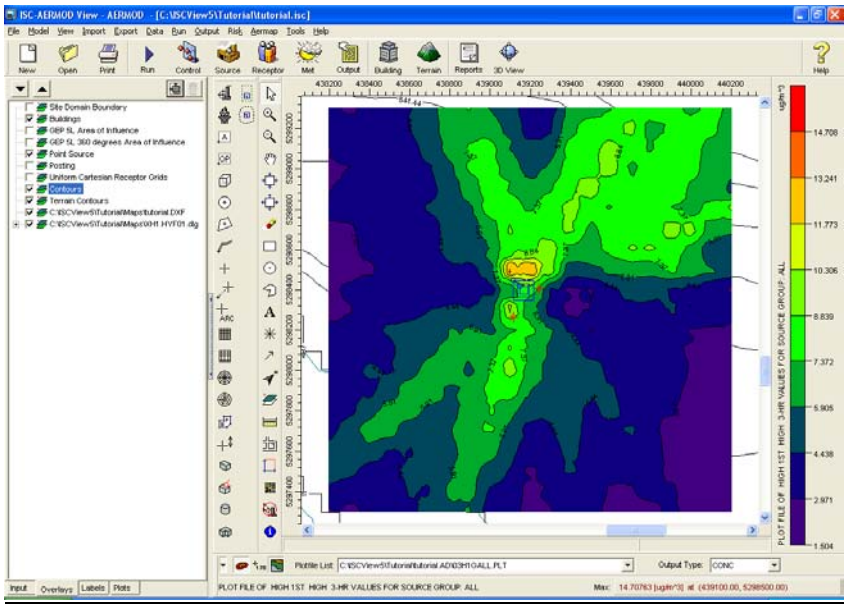
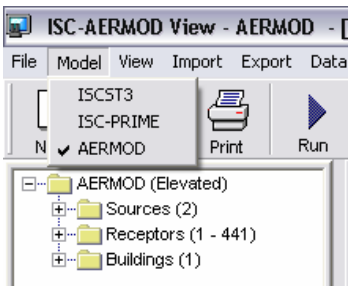
Topic	Feature Description
BPIP Run	**New Messages in BPIP/BPIP-PRIME Project Status** A message and a tip were added to the BPIP/BPIP-PRIME Project Status dialog. The message is to remind the user that Plant North has to be rotated to True North before running BPIP/BPIP-PRIME. If rotation is required, the user can use the new Rotation Tool. The Tip explains that since the results for Building Heights (BUILDHGT) and Building Widths (BUILDWID) are the same for BPIP and BPIP-PRIME, only the BPIP-PRIME model (BPIPPRM) will be run and building downwash results will be imported automatically to all the models. 

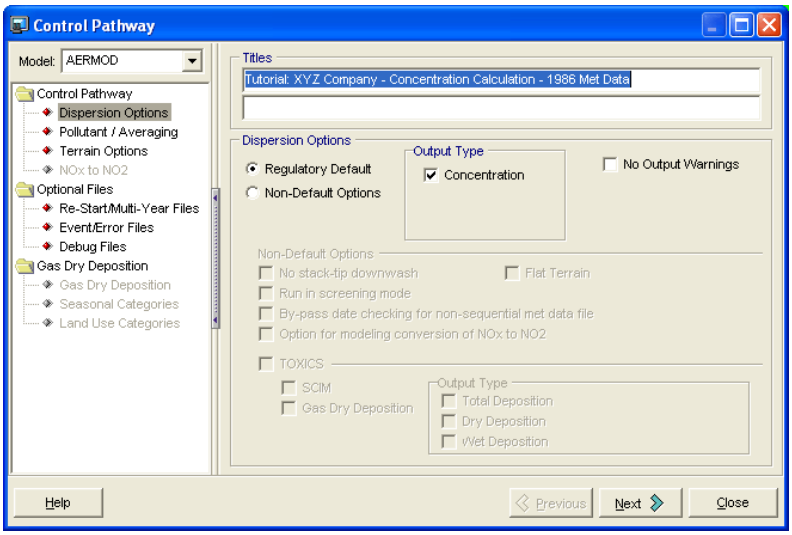
Topic	Feature Description
AERMAP	**Message in the Details Dialog Appears when AERMAP Model Limits are Surpassed** AERMAP model limits are checked before running AERMAP and messages are displayed in the Details dialog when one or more model limits were surpassed. AERMAP model limits for the original US EPA AERMAP model are displayed in Preferences. If the project exceeds these limits, then the user needs to specify a new executable for AERMAP that has been recompiled to allow higher limits. Please contact Lakes Environmental if you require a recompiled version of the AERMAP model. 
Terrain Processor	**Bug Fixed in Terrain Processor for Conversion of XYZ files into DEM** The routines to convert XYZ terrain files into DEM files were optimized and a bug was fixed allowing AERMAP to run successfully. The fatal error message received when trying to run AERMAP was: *"Domain Coordinate is NOT Inside a DEM File"*

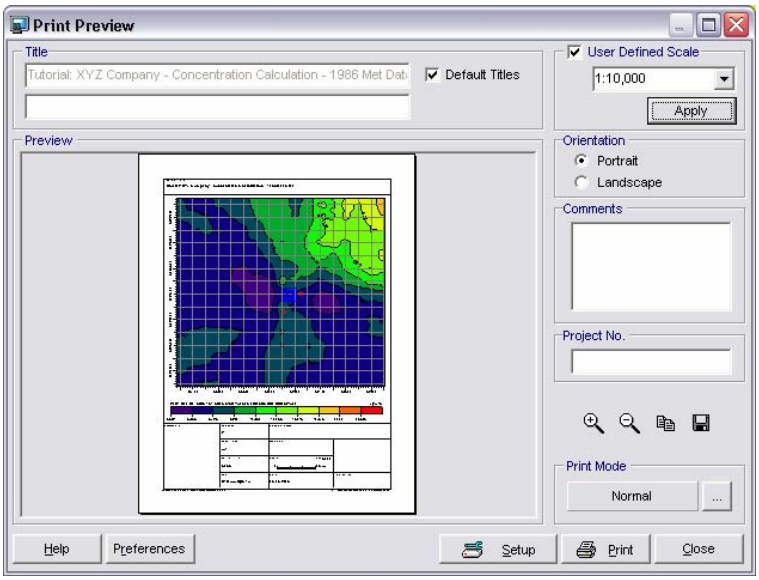
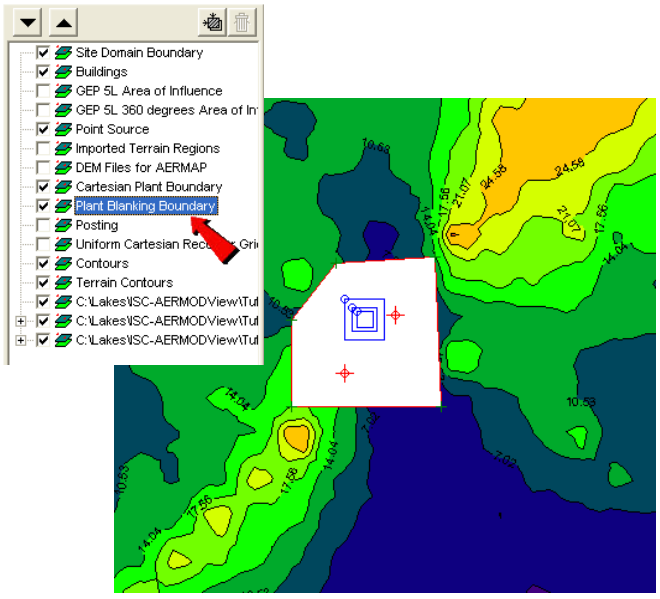
Topic	Feature Description
Input File	**Bug Fixed in Input File for projects using AERMOD + Default + Flat Terrain + Flagpole + Discrete Receptors** This bug was introduced in version 5.0 and is only applicable to projects that used the following options: 1) AERMOD 2) Regulatory Default option 3) Flat Terrain 4) Flagpole Heights 5) Discrete receptors In the input file, the parameters for any discrete receptors are now being written as follows: X Y Zelev Zhill Zflag X Y 0 0 Zflag instead of X Y Zflag
Aermet View	**AERMET Failed to Run if Project had Long Path** A workaround was implemented in Aermet View to allow projects with long paths to run successfully.
Rammet View	**View Output in Grid or Text Option after Run Completed** When a run completes successfully, users have the option to view the Log file or the output file in text of grid view format. 

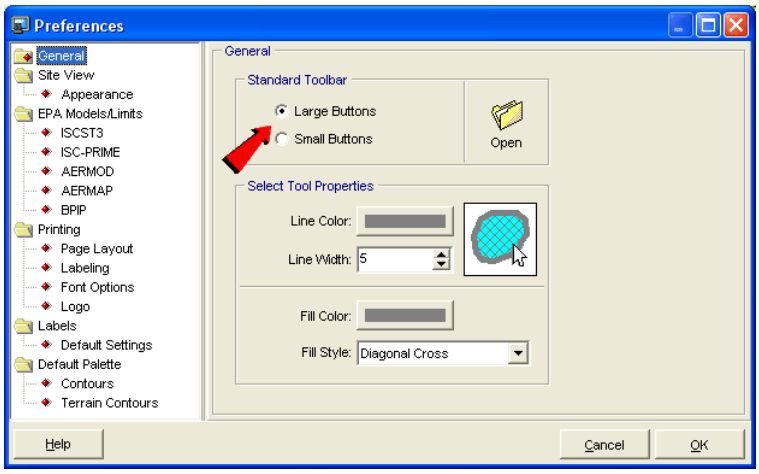
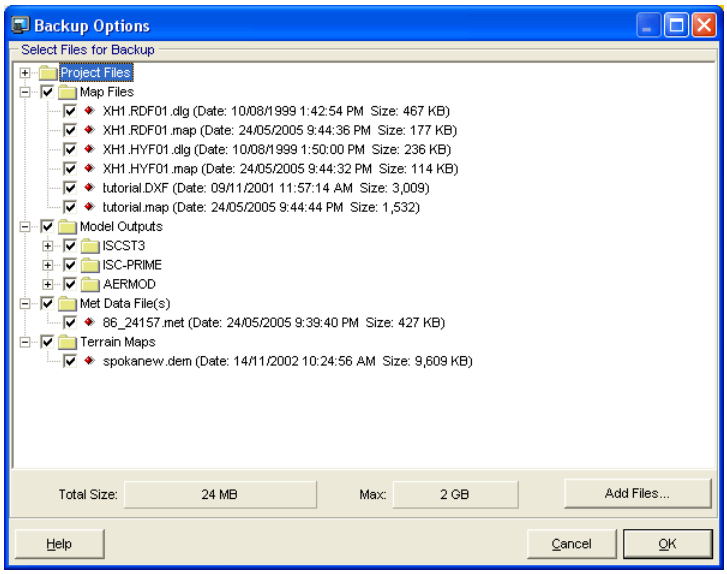
ISC-AERMOD View Package
Version 5.0

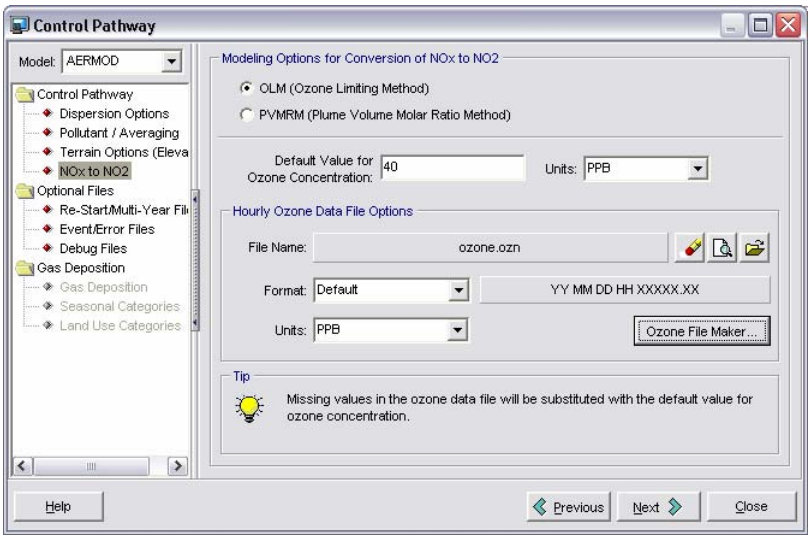
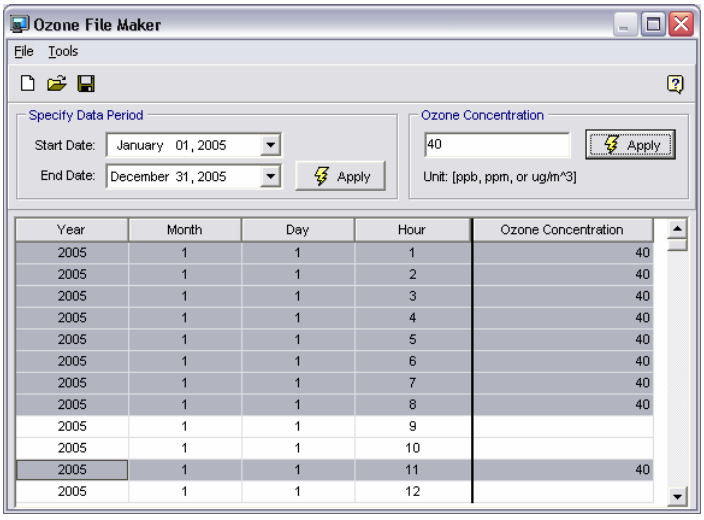
Release Notes
June 06, 2005

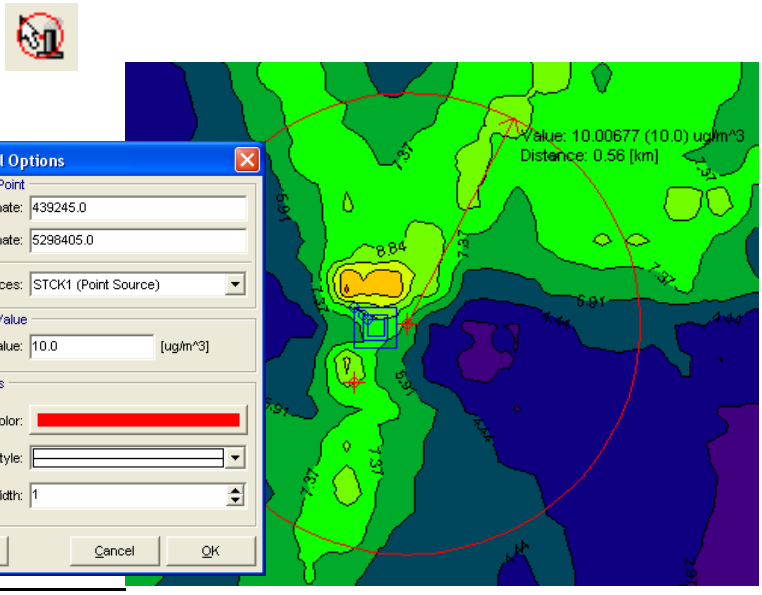
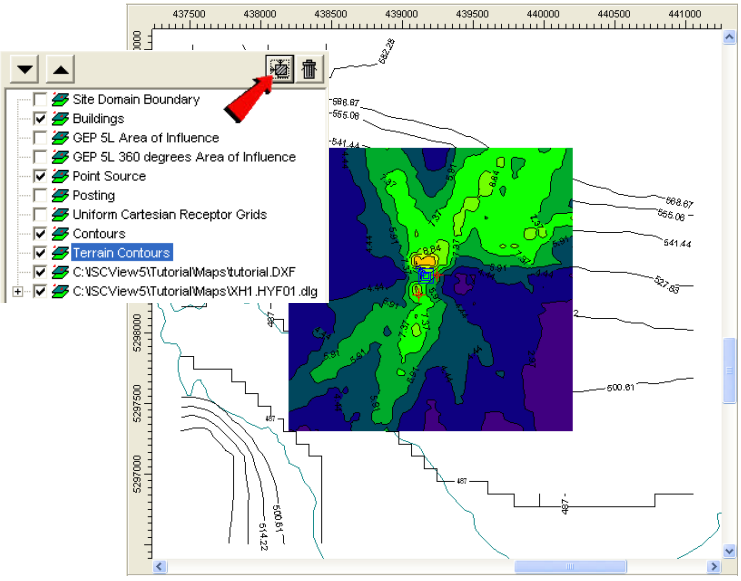
Topic	Feature Description
General	**Integrated Interface** BPIP View and POST View have been integrated into the main ISC-AERMOD View interface, making the ISC-AERMOD View package even simpler to use. 
General	**AERMOD and AERMOD-DEP Combined** Now only the latest US EPA AERMOD model (04300) is available. This model includes PRIME algorithms and deposition options. 

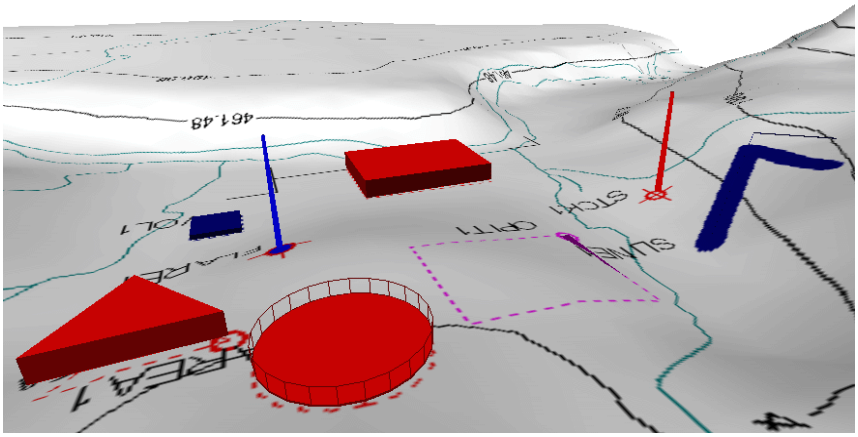
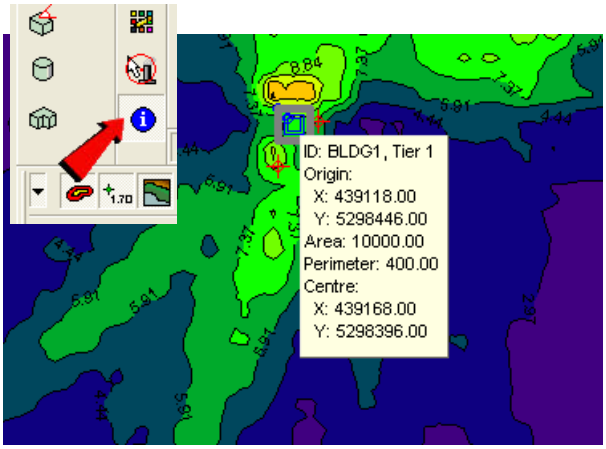
Topic	Feature Description
General	**Separate Dialogs for Each Pathway** Each of the pathways has its own dialog with a tree view for easy navigation. 
General	**Cartesian Plant Boundary Receptors (Fenceline)** Multiple fencelines may be specified.
General	**Polar Grid** Improved Polar Grid dialog allows for more simplified method to specify the grid.
General	**Discrete Receptors** Multiple discrete receptors may be specified in quick succession without opening the Receptor Pathway dialog each time. This is achieved by pressing the Shift or Ctrl key while graphically specifying the discrete receptors.

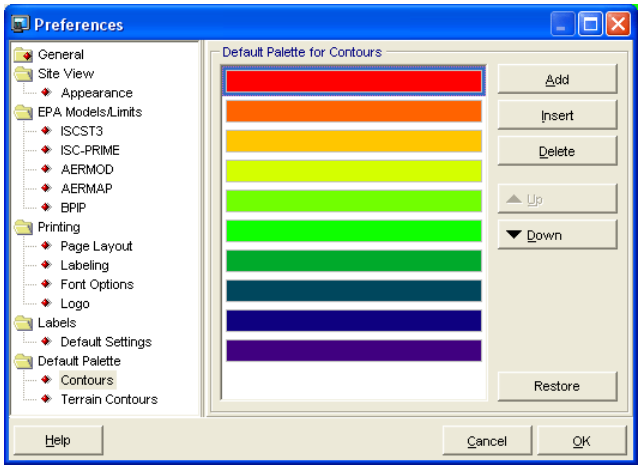
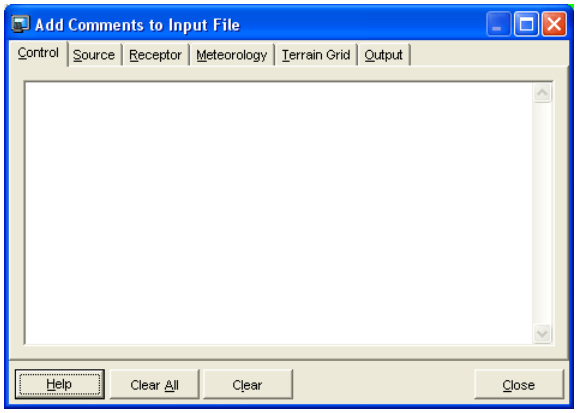
Topic	Feature Description
General	**Printing to Scale** You can now specify the scale for your printouts. Select from a pre-defined list or type in the desired scale. 
General	**Plant Boundary Blanking Overlay** Plant boundary blanking overlays are automatically created, and can be easily turned on and off from the overlay control. 

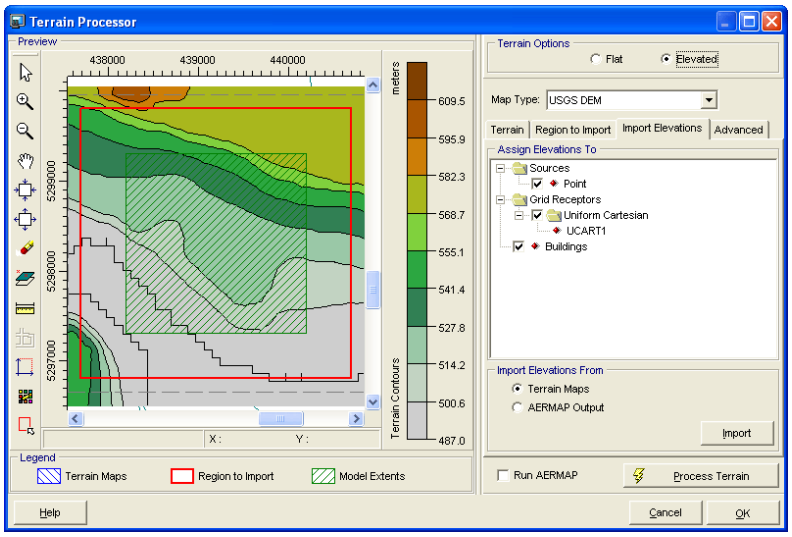
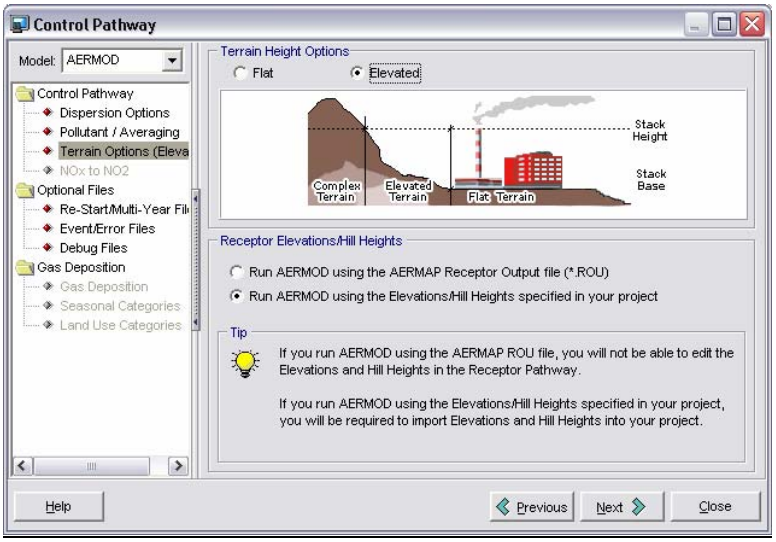
Topic	Feature Description
General	**Button Control** Option to switch from large toolbar buttons to small toolbar buttons. 
General	**Backup Option** The backup option is expanded to allow the user to automatically include maps, met files and other additional files in the backup. 
General	**Concentration Converter** The improved Concentration Converter allows detection of the averaging time for the specified plotfile and an option to specify averaging time in hours or minutes.

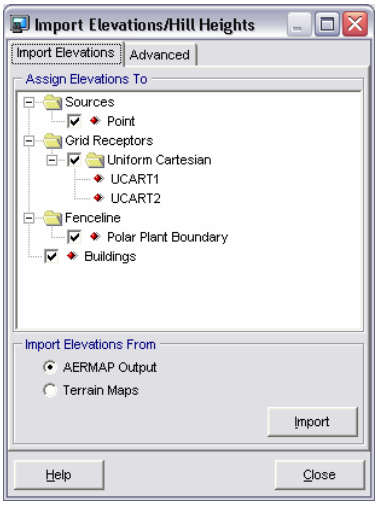
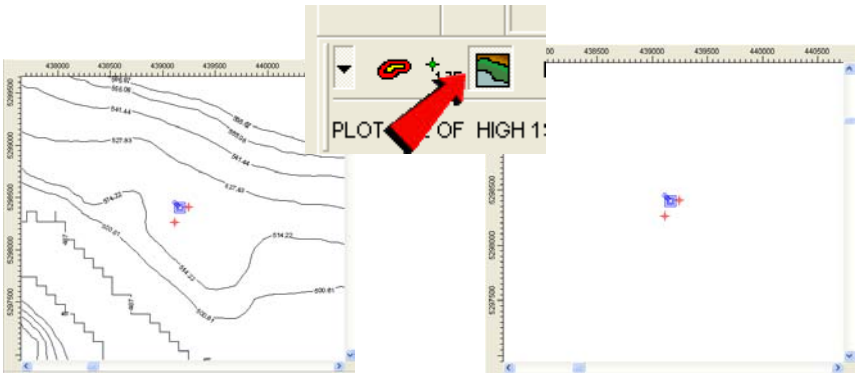
Topic	Feature Description
General	**New Ozone Options in Control Pathway** The new ozone options from AERMOD Version 04300 are implemented in the Control Pathway dialog under the NOx to NO2 section. This is a Non-Default option. 
General	**Ozone File Maker** The new Ozone File Maker allows you to build your own hourly ozone file.  Year | Month | Day | Hour | Ozone Concentration 2005 | 1 | 1 | 1 | 40 2005 | 1 | 1 | 2 | 40 2005 | 1 | 1 | 3 | 40 2005 | 1 | 1 | 4 | 40 2005 | 1 | 1 | 5 | 40 2005 | 1 | 1 | 6 | 40 2005 | 1 | 1 | 7 | 40 2005 | 1 | 1 | 8 | 40 2005 | 1 | 1 | 9 | 2005 | 1 | 1 | 10 | 2005 | 1 | 1 | 11 | 40 2005 | 1 | 1 | 12 |

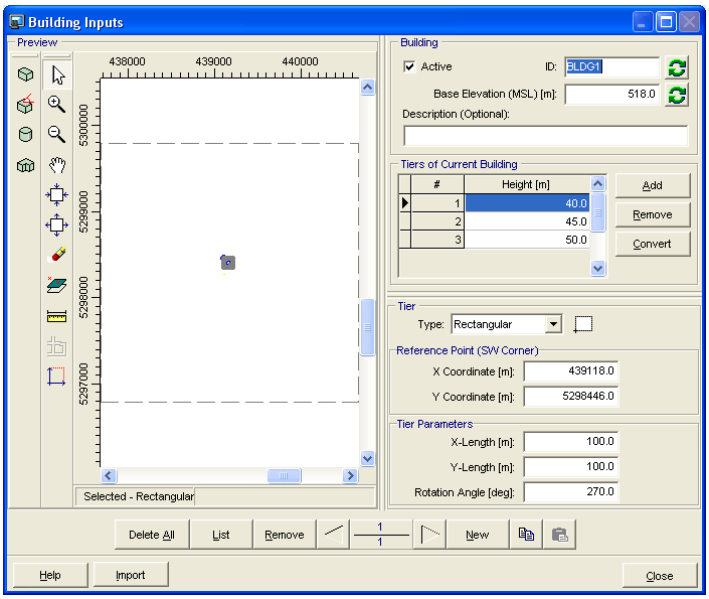
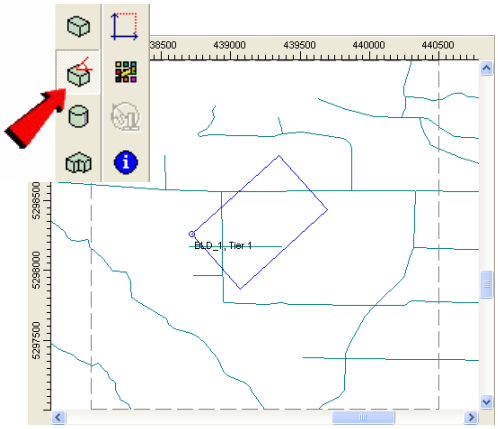
Topic	Feature Description
General	**Impact Tool** Graphically display the impact of a specified threshold pollutant concentration over distance. 
General	**Zoom Overlay Tool** A zoom to overlay option has been added to the Overlays tab of the Tree View, allowing you to zoom to a specified layer. 

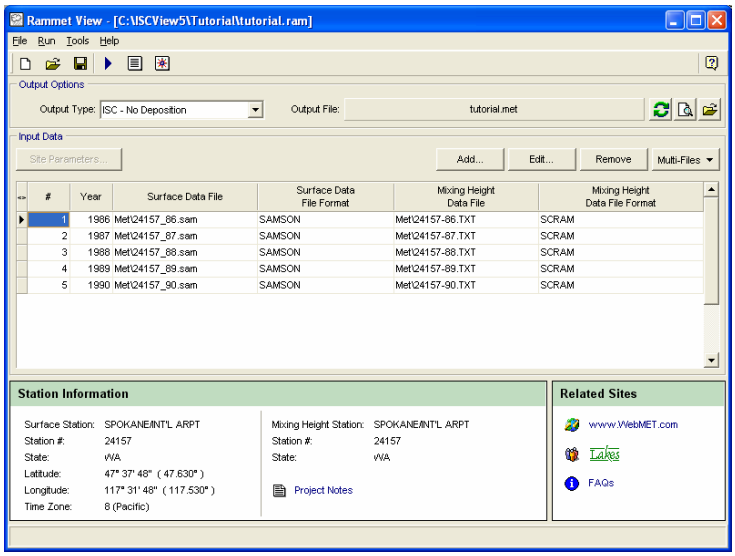
Topic	Feature Description
General	**Reports** Reports were updated to include the new AERMOD options.
General	**3D Visualization of Sources** All source types may now be visualized in 3D View. 
General	**Identification Tool** Easily identify objects in your project with this useful tool. 

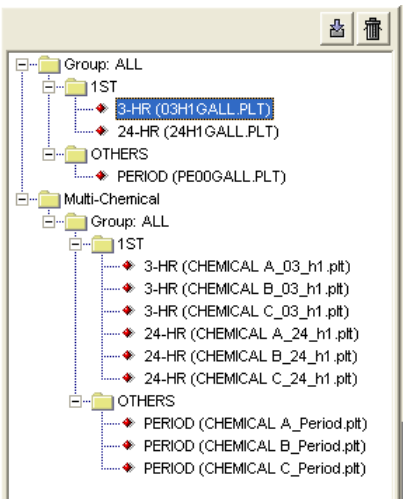
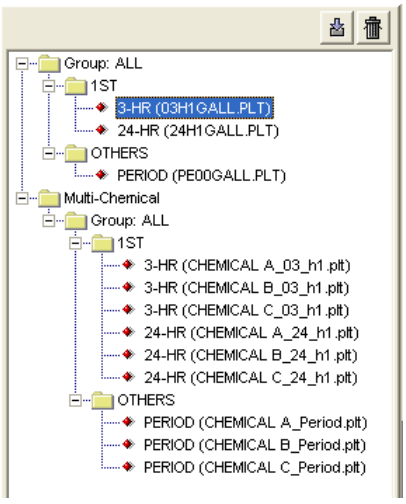
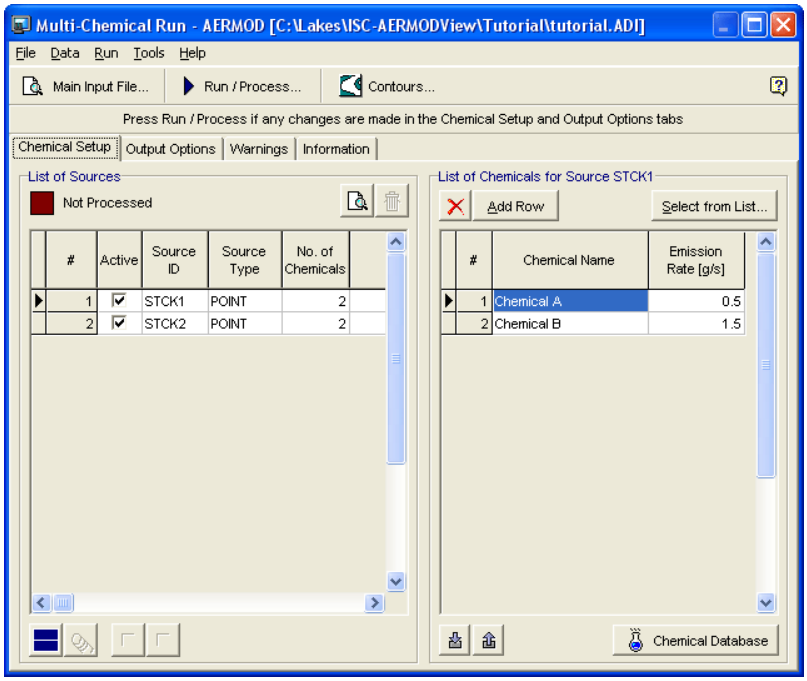
Topic	Feature Description
General	**Palettes** Default palettes may be set to the user's preferences for both concentration and terrain contours. 
General	**Comments** Comments may now be added to any pathway in the input file from one simple dialog. 

Topic	Feature Description
Terrain Processing	**Terrain Processor** All terrain processing, elevation importing, and AERMAP runs are now conveniently located in one dialog. 
Terrain Processing	**AERMAP Receptor Elevation Options** You can now choose to import receptor elevations from the .ROU file so that they can be adjusted within the interface, or read them directly from the .ROU file. 

Topic	Feature Description
Terrain Processing	**ISCST3 & ISC-PRIME Terrain Elevations** Elevations for the ISCST3 and ISC-PRIME models can now be imported from AERMAP source and receptor output files (*.SOU, *.ROU). 
Terrain Processing	**Show Terrain** A Show Terrain button allows you to quickly show and hide terrain contours in the graphical area. 
BPIP	**BPIP Integration** BPIP is incorporated into the main interface. There is no need to open a second application, you can view and update your building information and run BPIP at any time throughout the project. The BPIP View interface is no longer part of the ISC-AERMOD View package.

Topic	Feature Description
BPIP	**Building Input** Improved building inputs dialog with preview section, which allows you to graphically specify your buildings and then check the text input values. Circular buildings can now be specified by center and diameter, rectangular buildings are now specified by a reference point, X and Y length, and an optional rotation angle. 
BPIP	**Angled Rectangular Buildings** A new building tool allows you to graphically create angled rectangular buildings in a simple step. 
BPIP	**SIZ and GEP** The SIZ and GEP 5L Zone of Influence are now computed for each tier separately.

Topic	Feature Description
AERMET	**AERMET** The latest version of AERMET (Version 04300) is in use.
AERMET	**Start and End Dates** A problem with the reading of the start and end dates has been rectified.
RAMMET	**Multi-Year Rammet View** Rammet View can now easily process multiple years of data in its completely redesigned interface. You have the option to output a combined multi-year file in addition to individual year files. 
Post-Processing	**POST View Integration** Most POST View functions are available directly in the main ISC-AERMOD View interface, largely removing the need to open a separate POST View window. POST View is still being distributed as an additional post-processing tool.

Topic	Feature Description
Post-Processing	**Plots Tab** The new Plots tab in the Tree View facilitates access to the various plotfiles available after running the model. 
Post-Processing	**Plotfiles Units** Plotfiles now carry the concentration and deposition units that were selected at the time of the run, allowing the correct units to be displayed automatically.
Multi-Chemical	**Viewing Results** Multi-Chemical plotfiles are automatically loaded into ISC-AERMOD View under the Multi-Chemical node in the Plots tab - Tree View. 

Topic	Feature Description
Multi-Chemical	**Multi-Chemical Utility** The Multi-Chemical utility is now available to all users under the menu option Run | Multi-Chemical Run. Please check the help file and the Information tab for options that are not supported under the Multi-Chemical Run.