

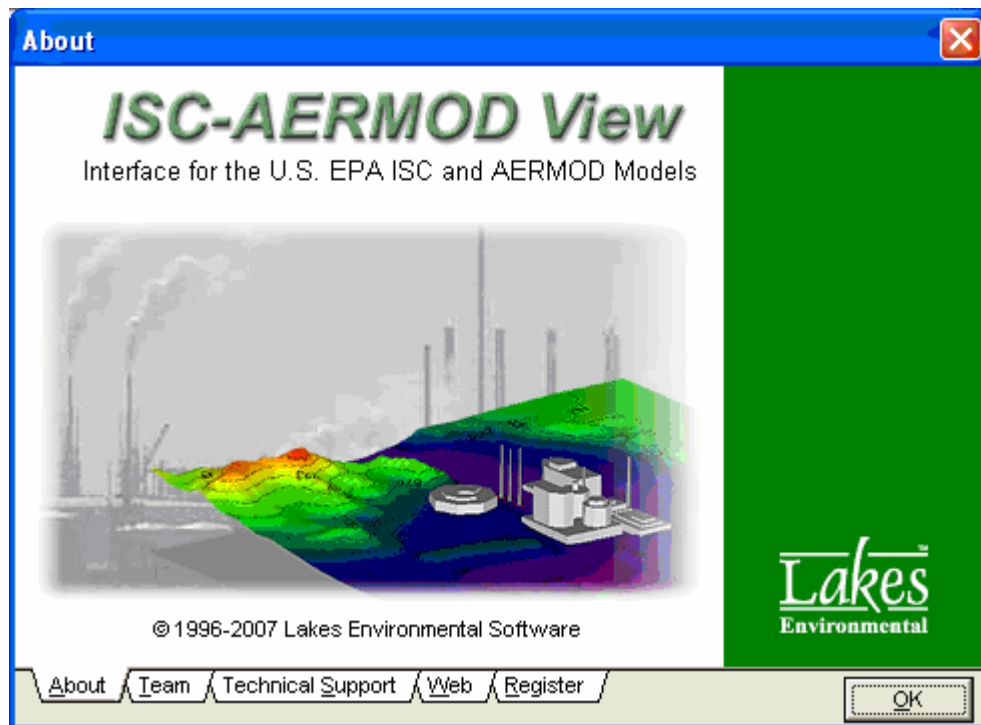
ISC-AERMOD View

Complete Air Dispersion Modeling System for AERMOD

Release Notes

[Version 5.8.0](#)

[Version 5.7.0](#)



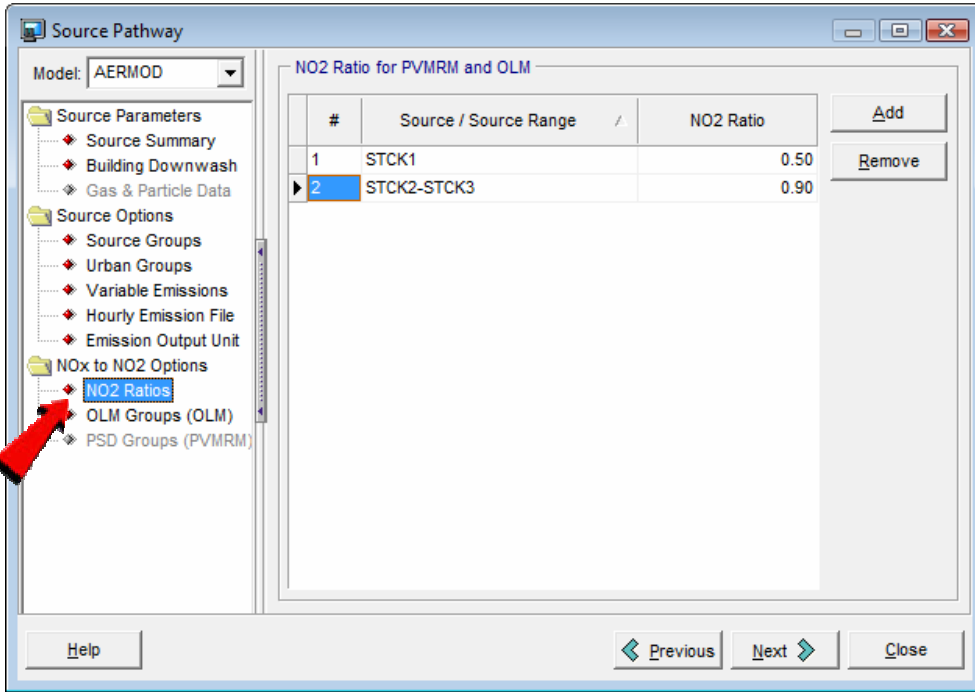
Lakes Environmental Software
Tel: (519) 746-5995 - Fax: (519) 746-0793
e-mail: support@weblakes.com
web site: www.weblakes.com



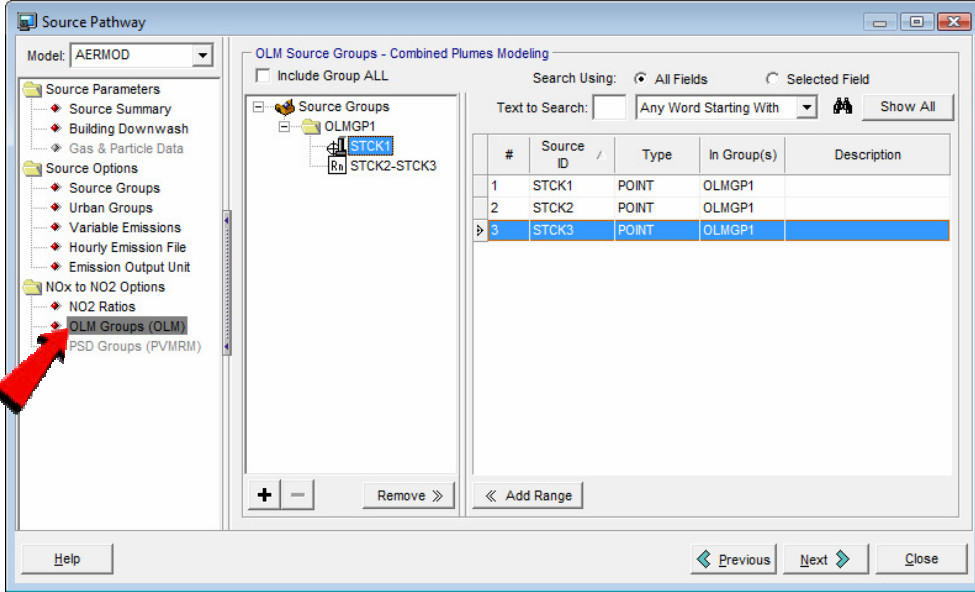
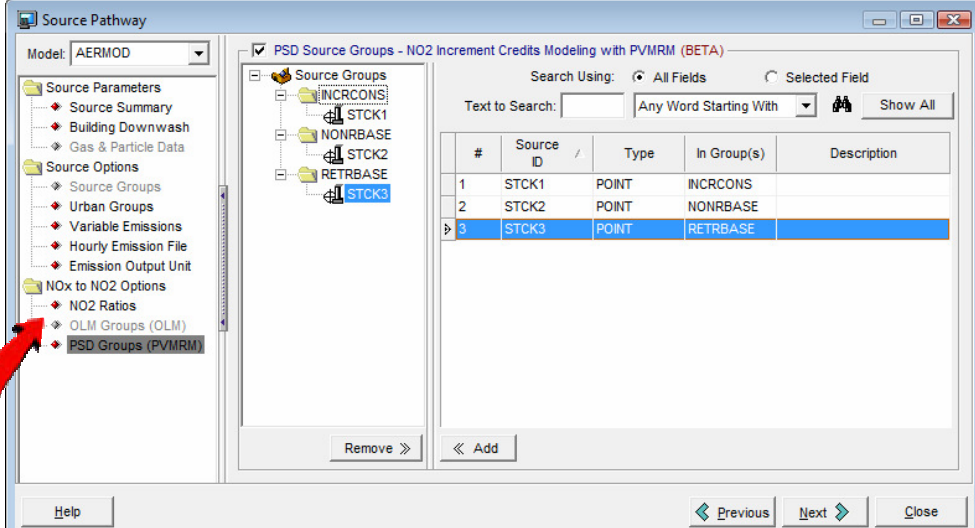
ISC-AERMOD View™ Version 5.8.0

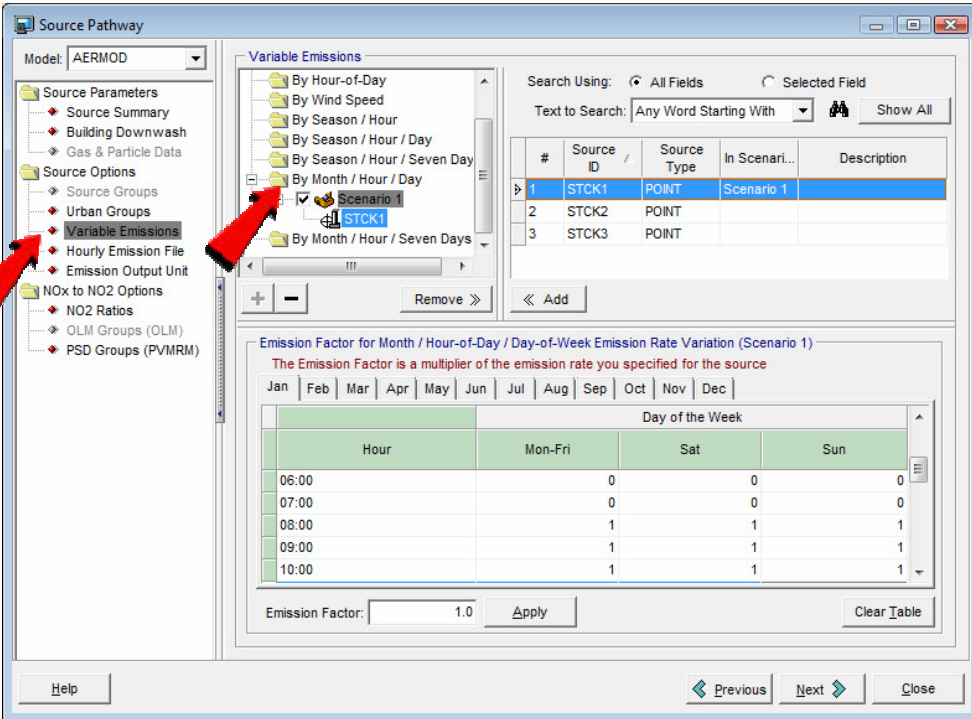
Release Notes

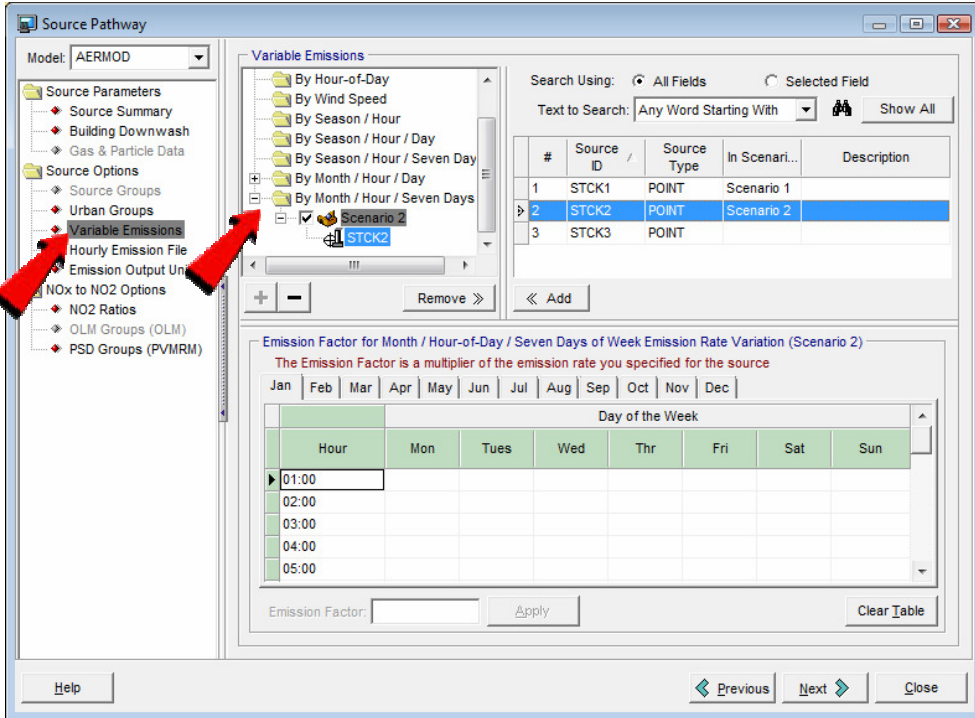
October 30, 2007

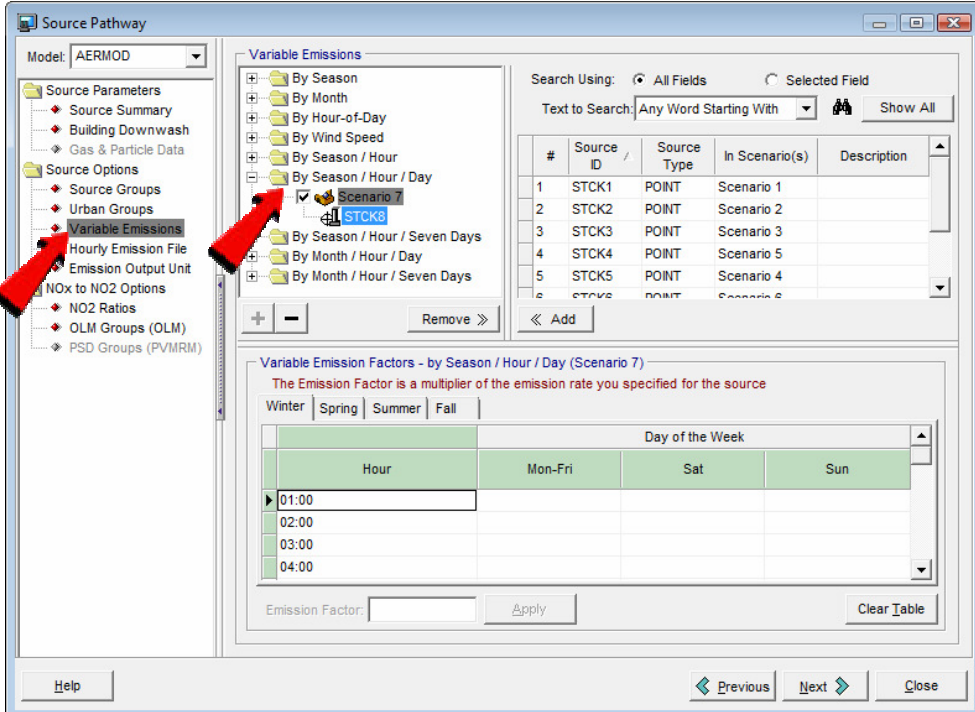
Topic	Feature Description
Source Pathway	<p>NO2/NOx Ratio for PVMRM and OLM Options</p> <p>The AERMOD in-stack NO2/NOx Ratio option (keyword SO NO2RATIO) for the transformation of NOx to NO2 is now available in the <i>Source Pathway – NO2 Ratios</i> screen. It allows the NO2 ratio to be set for both single sources and source ranges.</p>  <p>Important Note: The NO2/NOx Ratio field has been removed from the <i>Source Inputs</i> dialog in order to more easily manipulate data. Rather than having to set the ratio for each individual source, the new screen – <i>NO2 Ratios</i> – will allow you to specify NO2/NOx ratios easily for single sources or source ranges in one single location.</p>

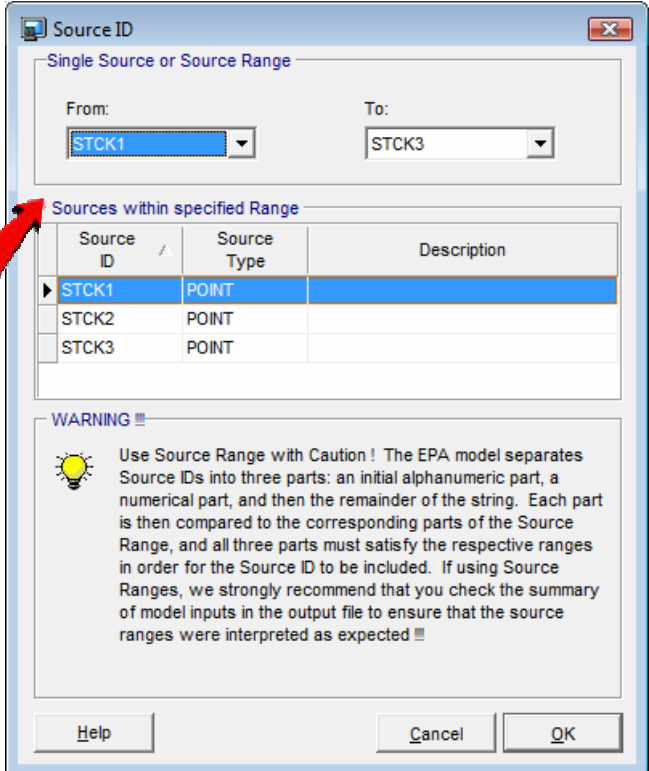
Topic	Feature Description																				
	<div><div><div><div><div>Source Inputs</div><div><div>Source Type</div><div>Type: <div>POINT</div> Source ID: <div>STCK1</div> <div><div></div></div></div><div>Description: <div></div> (Optional)</div></div><div><div>Source Location</div><div><div>X Coordinate [m]: <div>439245.00</div></div><div>Y Coordinate [m]: <div>5298405.00</div></div><div>Base Elevation [m]: <div>518</div> <div>1699.48</div> [ft]</div><div>Release Height [m]: <div>60</div> <div>196.85</div> [ft]</div></div><div><div>Source Release Parameters</div><div><div>Emission Rate [g/s]: <div>1</div> <div>7.94</div> [lb/hr]</div><div>Gas Exit Temperature [K]: <div>400</div> <div>260.33</div> [F] <div>Tip...</div></div><div>Stack Inside Diameter [m]: <div>2</div> <div>6.56</div> [ft]</div><div>Gas Exit Velocity [m/s]: <div>5</div> <div>16.4</div> [ft/s]</div><div>Gas Exit Flow Rate [m³/s]: <div>15.71</div> <div>554.72</div> [ft³/s]</div><div><div>NO2/NOx Ratio: <div>15.71</div></div> <div>< Field Removed</div></div></div></div></div><div><div>Help</div><div>Remove</div><div><div>1</div><div>3</div></div><div>New</div><div><div></div></div><div><div></div></div><div>Close</div></div></div></div></div></div>																				
Source Pathway	<div><div><div>Multiple Urban Groups</div><div>The option to specify multiple urban areas introduced in AERMOD dated 06341 (keyword CO URBANOPT) is now available in the <i>Source Pathway</i> – <i>Urban Groups</i> screen.</div></div><div><div><div>Source Pathway</div><div><div>Model: AERMOD</div><div><div>Source Parameters</div><div>Source Summary</div><div>Building Downwash</div><div>Gas & Particle Data</div><div>Source Options</div><div>Source Groups</div><div>Urban Groups</div><div>Variable Emissions</div><div>Hourly Emission File</div><div>Emission Output Unit</div><div>NOx to NO2 Options</div><div>NO2 Ratios</div><div>OLM Groups (OLM)</div><div>PSD Groups (PVMRM)</div></div><div><div>Urban Groups</div><div><div>URBGP1</div><div><div>STCK1</div></div><div>URBGP2</div><div><div>Rn</div><div>STCK2-STCK3</div></div></div></div><div><div>Search Using: All Fields Selected Field</div><div>Text to Search: Any Word Starting With <div></div> <div>Show All</div></div><div><table><tr><th>#</th><th>Source ID</th><th>Type</th><th>In Group(s)</th><th>Description</th></tr><tr><td>1</td><td>STCK1</td><td>POINT</td><td>URBGP1</td><td></td></tr><tr><td>2</td><td>STCK2</td><td>POINT</td><td>URBGP2</td><td></td></tr><tr><td>3</td><td>STCK3</td><td>POINT</td><td>URBGP2</td><td></td></tr></table></div><div><div>+ -</div><div>Remove »</div><div>« Add</div></div><div><div>Urban Dispersion Option for Selected Group (URBGP1)</div><div>Population: 100000 Name (Optional): Urban 1</div><div>Roughness Length (Optional): 1.0 [m] <div></div> <div>Tip</div></div></div><div><div>Help</div><div>Previous</div><div>Next</div><div>Close</div></div></div></div></div></div></div>	#	Source ID	Type	In Group(s)	Description	1	STCK1	POINT	URBGP1		2	STCK2	POINT	URBGP2		3	STCK3	POINT	URBGP2	
#	Source ID	Type	In Group(s)	Description																	
1	STCK1	POINT	URBGP1																		
2	STCK2	POINT	URBGP2																		
3	STCK3	POINT	URBGP2																		

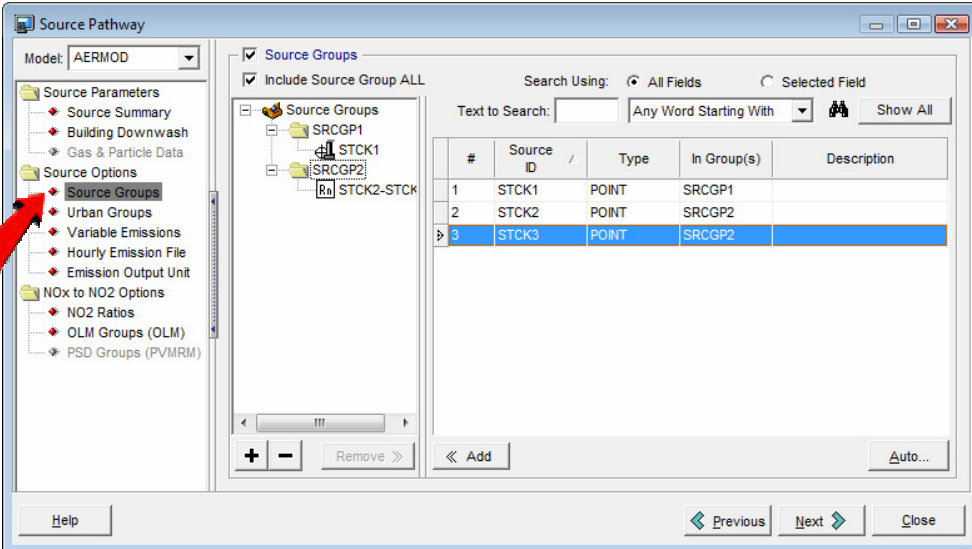
Topic	Feature Description
Source Pathway	<p>OLM Source Groups</p> <p>The option to specify multiple sources to be modeled as combined plumes when using the OLM option for modeling NO₂ (keyword SO OLMGROUP) is now available in the <i>Source Pathway – OLM Groups</i> screen. This non-default option was introduced in AERMOD dated 06341.</p> 
Source Pathway	<p>PSD Source Groups</p> <p>The option to group sources to correctly calculate the increment consumption with the PVMRM option (keyword SO PSDGROUP) is now available in the <i>Source Pathway – PSD Groups (PVMRM)</i> screen. This non-default option was introduced in AERMOD dated 06341 as a BETA option.</p> 

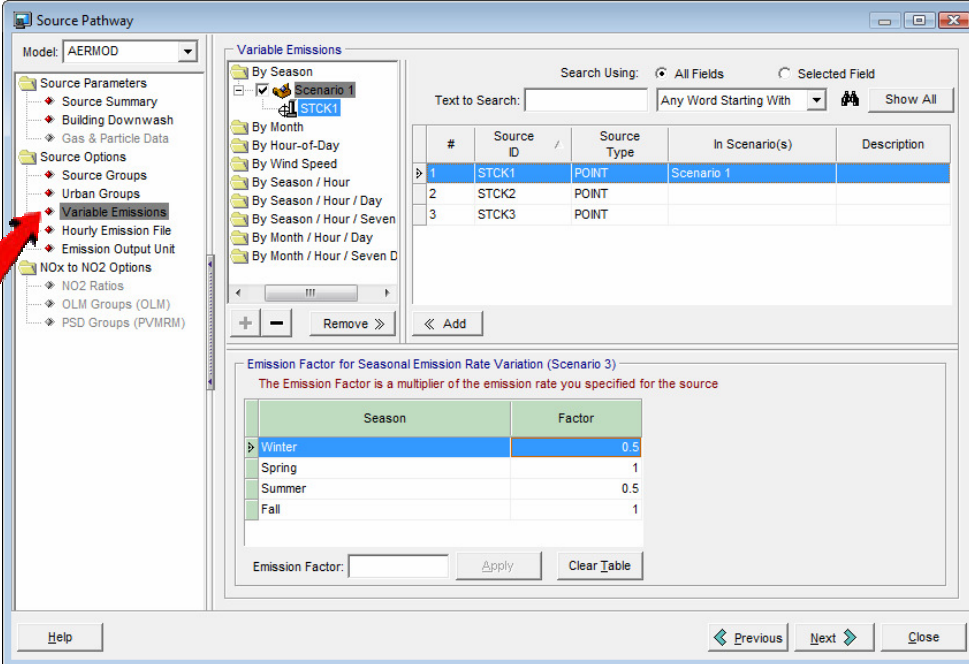
Topic	Feature Description
Source Pathway	<p>Variable Emission by Month / Hour / Day</p> <p>The option to specify variable emissions by month, hour-of-day, and day-of-week (Keyword: SO MHRDOW) is now available in the <i>Source Pathway – Variable Emissions</i> screen. This option was introduced in AERMOD dated 06341.</p>  <p>The screenshot shows the 'Source Pathway' window with the 'Variable Emissions' tab selected. The left pane shows a tree view with 'Variable Emissions' highlighted. The main pane shows a list of sources (STCK1, STCK2, STCK3) and a table for 'Emission Factor for Month / Hour-of-Day / Day-of-Week Emission Rate Variation (Scenario 1)'. The table has columns for Hour (06:00 to 10:00) and Day of the Week (Mon-Fri, Sat, Sun). The emission factor is set to 1.0.</p>

Topic	Feature Description
Source Pathway	<p>Variable Emission by Month / Hour / Seven Days</p> <p>The option to specify variable emissions by month, hour-of-day, and the seven days of the week (Keyword: SO MHRDOW7) is now available in the <i>Source Pathway – Variable Emissions</i> screen. This option was introduced in AERMOD dated 06341.</p> 

Topic	Feature Description
Source Pathway	<p>Variable Emission by Season / Hour / Day</p> <p>The option to specify variable emissions by season, hour-of-day, and day-of-week (Keyword: SO SHRDOW) is now available in the <i>Source Pathway – Variable Emissions</i> screen.</p> 

Topic	Feature Description
Source Pathway	<p>Feature to Check which Sources are within a Source Range</p> <p>ISC-AERMOD View now contains a feature to display all sources that are within any specified source range. This is a great feature, since the US EPA models (AERMOD, ISCST3, and ISC-PRIME) have a special method for detecting sources within a source range using the source IDs. With this feature, you can be sure that the source range you specified only contains the sources you want.</p> <p>This new feature is available under the Source ID dialog which can be accessed from any Source Pathway option that allows the use of source ranges.</p> 

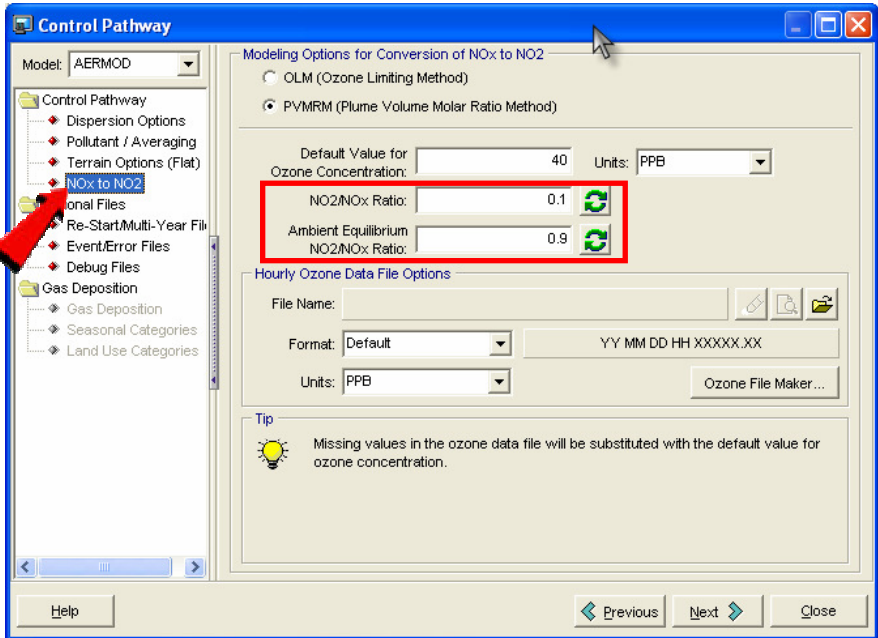
Topic	Feature Description
Source Pathway	<p>Enhanced Interface for Source Groups</p> <p>The <i>Source Pathway – Source Groups</i> screen was completely re-designed in order to make grouping sources easier to set up and manage. You can filter the list of sources using the new search function and easily drag and drop the sources into the source groups.</p> 

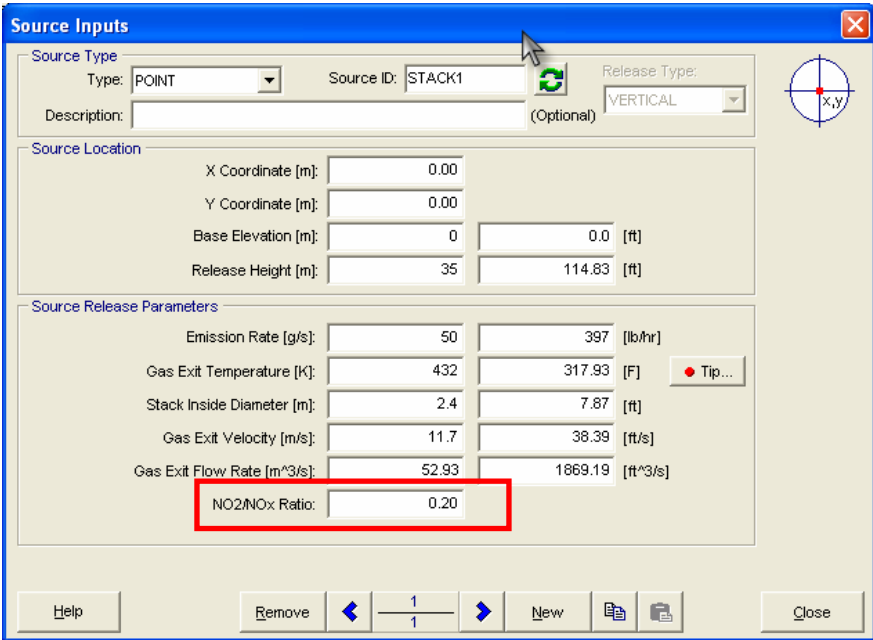
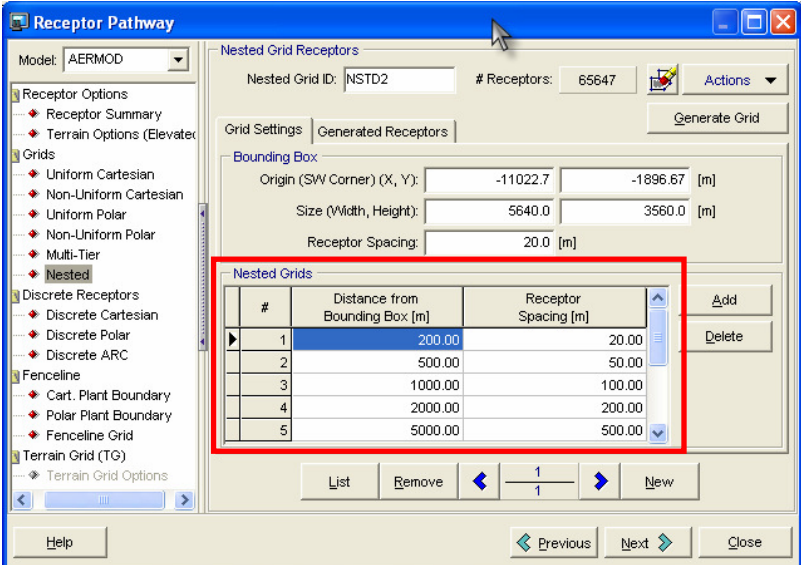
Topic	Feature Description
Source Pathway	<p>Enhanced Interface for Variable Emissions</p> <p>The several Variable Emissions screens are now combined under one location - <i>Source Pathway – Variable Emission</i> screen. The variable emissions options were completely redesigned for ease of use. You can filter the list of sources using the new search function and easily drag and drop the sources into the emission scenarios.</p> 
Help	<p>Updated Help File</p> <p>The help file was updated to include description of the latest features included in this release.</p>

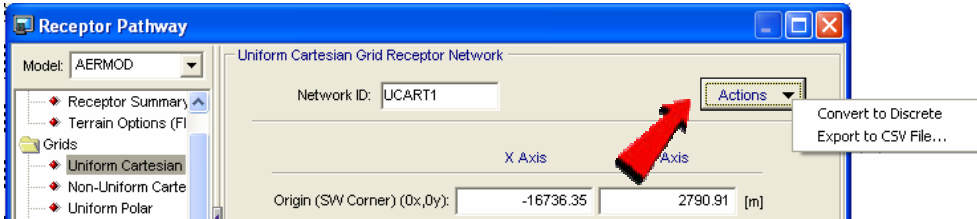
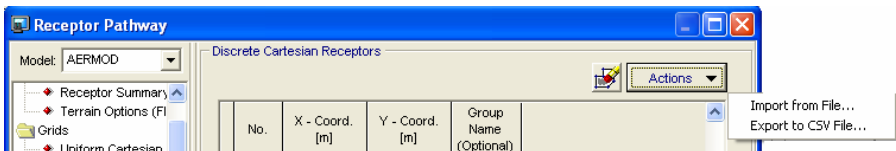
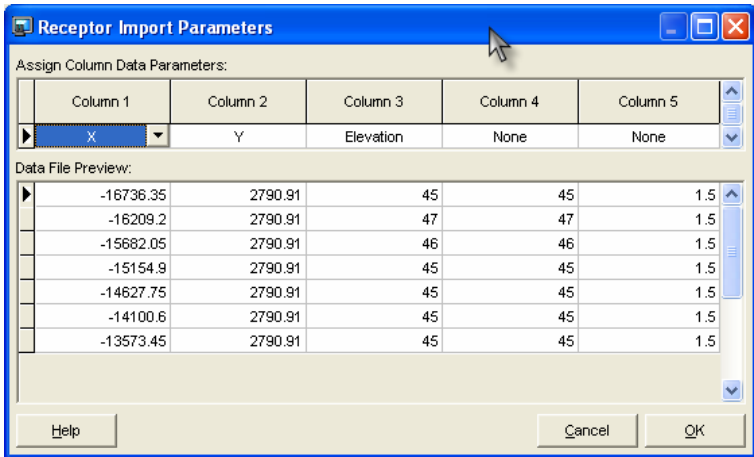
ISC-AERMOD View™ Version 5.7.0

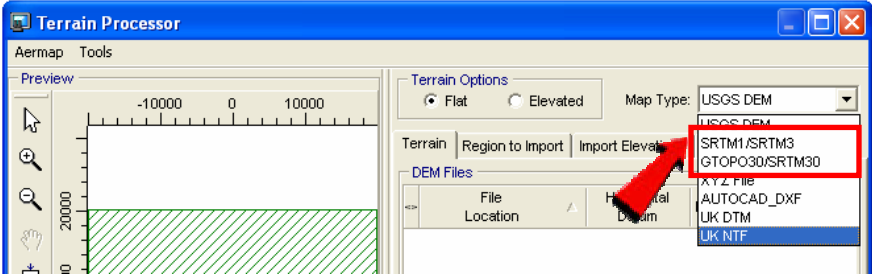

Release Notes




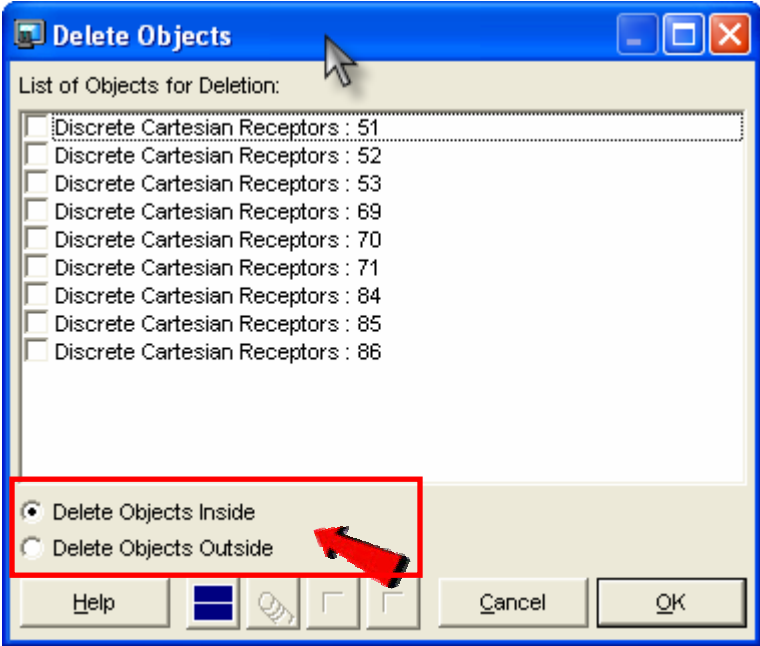
August 23, 2007

Topic	Feature Description
Control Pathway	<p>Default NO₂/NO_x Ratio and Ambient Equilibrium Options</p> <p>The latest AERMOD options for the transformation of NO_x to NO₂ are now included in ISC-AERMOD View. These options were implemented in the <i>Control Pathway – NO_x to NO₂</i> window and include the keywords NO₂RATIO and NO₂EQUIL.</p> 

Topic	Feature Description																		
Source Pathway	<h3>NO2/NOx Ratio Options</h3> <p>NOTE: This feature has been replaced in version 5.8.0 with the Source Pathway – NO2 Ratios</p> <p>The AERMOD in-stack NO2/NOx Ratio option (keyword NO2STACK) for the transformation of NOx to NO2 is now available in the Source Pathway – Source Inputs dialog.</p> 																		
Receptor Pathway	<h3>Nested Grid Defaults</h3> <p>The default values for the Nested Grid have been adjusted to comply with the MOE Reg.419/05 guidance. Distances from the bounding box were corrected.</p>  <table><thead><tr><th>#</th><th>Distance from Bounding Box [m]</th><th>Receptor Spacing [m]</th></tr></thead><tbody><tr><td>1</td><td>200.00</td><td>20.00</td></tr><tr><td>2</td><td>500.00</td><td>50.00</td></tr><tr><td>3</td><td>1000.00</td><td>100.00</td></tr><tr><td>4</td><td>2000.00</td><td>200.00</td></tr><tr><td>5</td><td>5000.00</td><td>500.00</td></tr></tbody></table>	#	Distance from Bounding Box [m]	Receptor Spacing [m]	1	200.00	20.00	2	500.00	50.00	3	1000.00	100.00	4	2000.00	200.00	5	5000.00	500.00
#	Distance from Bounding Box [m]	Receptor Spacing [m]																	
1	200.00	20.00																	
2	500.00	50.00																	
3	1000.00	100.00																	
4	2000.00	200.00																	
5	5000.00	500.00																	

Topic	Feature Description
Receptor Pathway	<h3>New Actions Button in Receptors Pathway Windows</h3> <p>For consistency throughout the Receptor Pathway windows, the <i>Actions</i> button was introduced. The <i>Actions</i> button, when pressed, displays a pop up menu with action items such as:</p> <ul style="list-style-type: none">• Convert to Discrete• Import• Export to CSV File 
Receptor Pathway	<h3>Import/Export Receptors Options Improved</h3> <p>In each of the Receptor Pathway windows, you can now export all types of receptors (including grids) to a file. The default format for exporting receptor parameters is the Comma Separated Values (CSV) with the following header parameters:</p> <pre>X, Y, ELEV, HILL, FLAG 100.00, 100.00, 2.5, 2.5, 3.0 200.00, 200.00, 3.5, 3.5, 3.0</pre>  <p>When importing receptors that are not in the default CSV format (see above), you can specify the headers for each column using the <i>Receptor Import Parameters</i> dialog.</p> 

Terrain Processor	<div>Support for SRTM Terrain Data Formats</div> <div>The Terrain Processor now supports the Shuttle Radar Topography Mission terrain data (SRTM) in the following formats:</div> <table><thead><tr><th>Format</th><th>Coverage</th><th>Resolution</th><th>File Extension</th></tr></thead><tbody><tr><td>SRTM1 - Version 2</td><td>USA</td><td>1 arc-sec, ~30m</td><td>*.hgt</td></tr><tr><td>SRTM3 - Version 2</td><td>Global</td><td>3 arc-sec, ~90m</td><td>*.hgt</td></tr><tr><td>SRTM30</td><td>Global</td><td>30 arc-sec, ~1km</td><td>*.hdr</td></tr></tbody></table> <div>You can download the above terrain data files, free of charge, from our web site at:</div> <div>http://www.weblakes.com/lakesdem.html</div> <div></div>	Format	Coverage	Resolution	File Extension	SRTM1 - Version 2	USA	1 arc-sec, ~30m	*.hgt	SRTM3 - Version 2	Global	3 arc-sec, ~90m	*.hgt	SRTM30	Global	30 arc-sec, ~1km	*.hdr
Format	Coverage	Resolution	File Extension														
SRTM1 - Version 2	USA	1 arc-sec, ~30m	*.hgt														
SRTM3 - Version 2	Global	3 arc-sec, ~90m	*.hgt														
SRTM30	Global	30 arc-sec, ~1km	*.hdr														
Terrain Processor	<div>AERMAP Runs with Open Pit Sources</div> <div>The US EPA AERMAP model (dated 06341) does not support Open Pit sources although the AERMOD model (dated 07026) does. Projects that contained one source of type, Open Pit, would experience a failed AERMAP run. The ISC-AERMOD View Terrain Processor now checks for this case and runs the AERMAP model just for your receptors. In this case, please make sure to assign a base elevation for the Open Pit sources manually.</div>																
Graphical Tools	<div>Angled Area Sources Tool</div> <div></div> <div>A graphical tool has been added to create angled area sources. An angled area source can be created either by clicking on the new 'Angled Area Source' button in the Application toolbar, or by creating a 'regular' area source and specifying a non-zero 'Orientation Angle from North'. The rotation takes place clockwise around the southwest corner of the area source (the X and Y coordinates specified for the area source).</div>																

Graphical Tools	<p>Additional Delete Tools</p> <p>Additional Delete tools were implemented. See the functionality of each one of these tools below:</p> <p> Point/Rectangular Delete Tool: This tool allows you to delete a specific object or objects inside or outside a user specified rectangle.</p> <p> Circular Delete Tool: This tool allows you to delete a specific object or objects inside or outside a user specified circle.</p> <p> Polygonal Delete Tool: This tool allows you to delete a specific object or objects inside or outside a user specified polygon.</p> <p>A new option was implemented in the <i>Delete Objects</i> dialog that allows you to specify if objects to be deleted are inside or outside the shape (rectangular, circular, or polygonal) digitized using one of the delete tools described above.</p> 
Site Domain	<p>Nested Grid Site Domain Bug Resolved</p> <p>In Version 5.6 of ISC-AERMOD View, the site domain was not automatically including all receptors in a nested grid. This issue has been resolved.</p>
MAXTABLE Viewer	<p>Quality Assurance</p> <p>The MAXTABLE Viewer has been reviewed and some minor issues have been resolved in order to make the results consistent with the Ontario Ministry of Environment (MOE) Reg. 419/05.</p>

MAXTABLE Viewer**Source Groups**

The MAXTABLE Viewer now supports source groups other than "All". The *Source Group* field in the MAXTABLE Viewer allows you to specify the source group for which you would like to see the maximum concentrations.

Specify ISC/AERMOD Main Output File
E:\Training\ISC-Aermod\temp3.ADO

Filter
Averaging Period: 1 Hour
Year: All
Output Type: CONCENTRATION
Source Group: SRCGP2

THE MAXIMUM 100 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SRCGP2
MAXTABLEs Found: 1

#	Rank	Concentration	Date - Hour	Receptor X Coord [m]	Receptor Y Coord [m]	Receptor Type
1	1	33.30539	1986/05/31 14:00:00	439115.56	5298294.00	DC
2	2	32.74977	1986/05/31 14:00:00	439115.56	5298269.00	DC
3	3	32.45477	1986/05/31 14:00:00	439115.56	5298319.00	DC
4	4	32.17687	1986/07/30 10:00:00	439115.56	5298269.00	DC
5	5	31.38175	1986/07/30 10:00:00	439115.56	5298294.00	DC
6	6	31.36337	1986/05/31 14:00:00	439100.00	5298300.00	GC
7	7	31.32767	1986/07/30 10:00:00	439150.81	5298319.00	DC

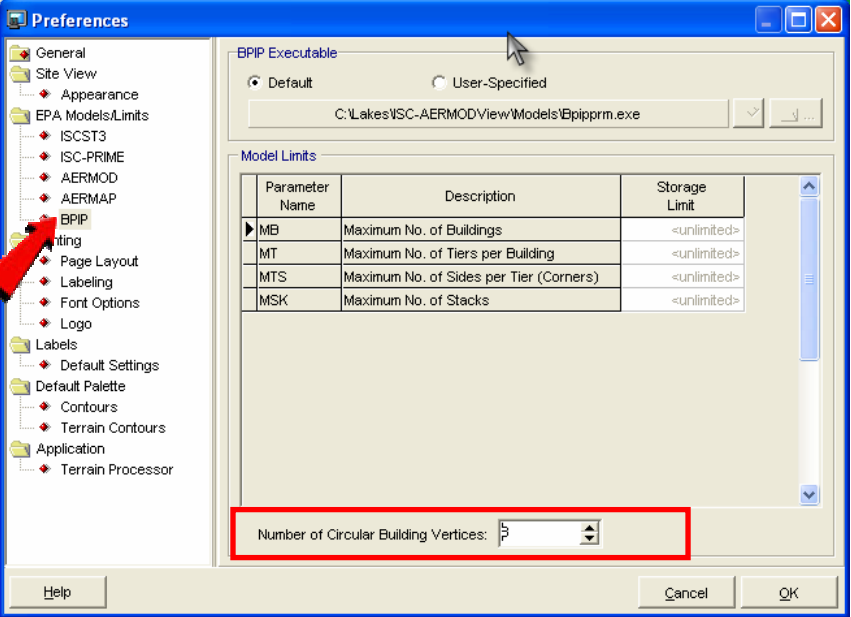
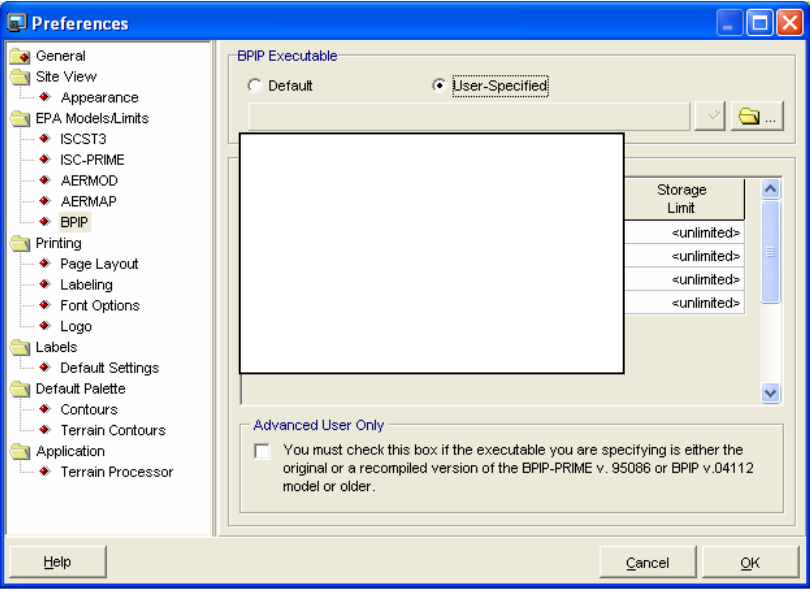
☒ MOE Reg. 419/05 Discarded/Highest Values
Discarded: Highest:

Tip
The MAXTABLE Viewer allows you to export all the MAXTABLEs within your Output File into CSV files. A special option is included to extract the maximum values according to MOE Reg. 419/05.

Help Export Close

Preferences**Default Number of Vertices for Circular Buildings**

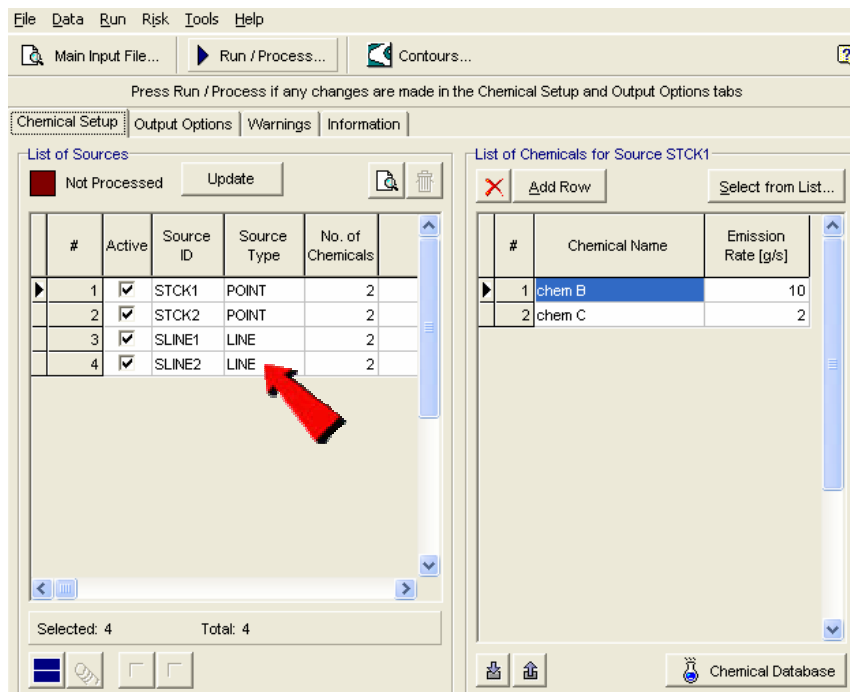
In the BPIP input file, circular buildings (e.g., tanks) are represented as uniform polygons. An option was added to the *Preferences* dialog (**File | Preferences | EPA Models/Limits | BPIP**) to allow for the specification of the number of polygon vertices (corners) that should be used when representing a circular building. The default number is 8. Please note that the higher the number of vertices, the longer the time BPIP will need to run.

	 <p>The screenshot shows the 'Preferences' dialog box with the 'BPIP Executable' tab selected. The 'User-Specified' radio button is chosen, and the file path 'C:\Lakes\ISC-AERMODView\Models\Bpipprm.exe' is entered. Below this, a table titled 'Model Limits' lists parameters: MB (Maximum No. of Buildings), MT (Maximum No. of Tiers per Building), MTS (Maximum No. of Sides per Tier (Corners)), and MSK (Maximum No. of Stacks), all with storage limits of '<unlimited>'. At the bottom, a red box highlights the 'Number of Circular Building Vertices' set to 3. The left sidebar shows various preference categories, with 'BPIP' highlighted by a red arrow.</p>
<p>Preferences</p>	<p>BPIP Executable – Advanced User Only Option Removed</p> <p>In the <i>Preferences</i> dialog, the option to specify the US EPA BPIP executables dated 95086, 04112, or older was eliminated. These executables are no longer necessary since the BPIP executable dated 04274 is the recommended program for building downwash calculations.</p>  <p>This screenshot shows the 'Preferences' dialog box with the 'BPIP Executable' tab. The 'User-Specified' radio button is selected. A large white rectangular box obscures the file path input field. Below the main settings, the 'Advanced User Only' section is visible, containing a checkbox and text: 'You must check this box if the executable you are specifying is either the original or a recompiled version of the BPIP-PRIME v. 95086 or BPIP v.04112 model or older.'</p>
<p>BPIP</p>	<p>Building Import Bug</p> <p>In some situations, multi-tiered buildings imported from DXF were separated into individual buildings. This bug has been corrected.</p>

Batcher	Run Time Bug In previous versions of AERMOD View, if a Batcher run spanned two days, the reported run time would be incorrect. This issue has been resolved.
Plotfiles	Incorrect Grouping of Plotfiles In some circumstances, plot files were being grouped incorrectly in the left hand tree view list. The issue has been resolved.

Multi-Chemical Utility**Support for Line Sources**

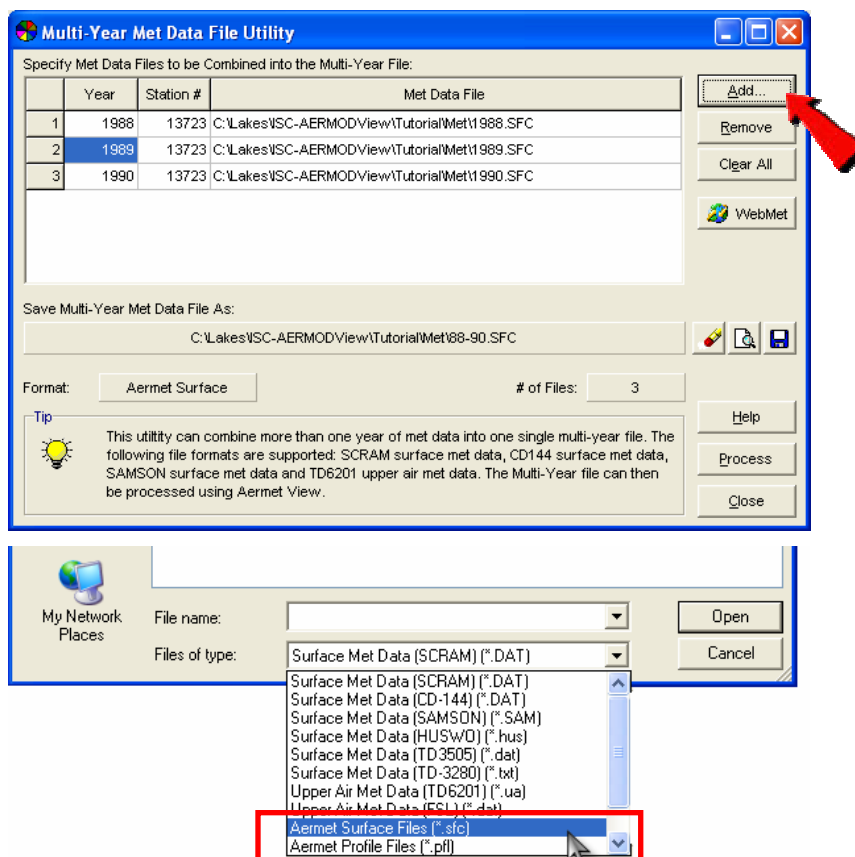
Line sources are now supported by the Multi-Chemical Utility. The group of volume sources that represent an individual line source will be processed in a single input file, but each line source will be processed separately.

**Multi-Chemical Utility****Automatic Batcher Close**

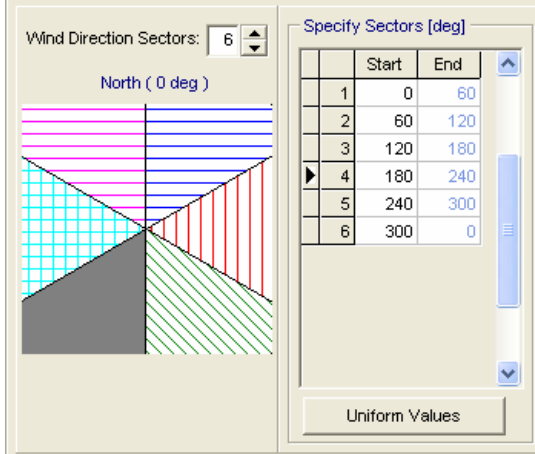
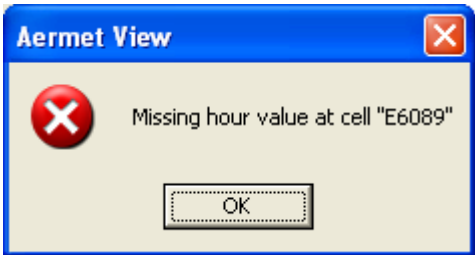
When running through Multi-Chemical Utility, the Batcher will now automatically close once all runs have finished successfully. This allows for the creation of chemical specific plotfiles without any further user action.

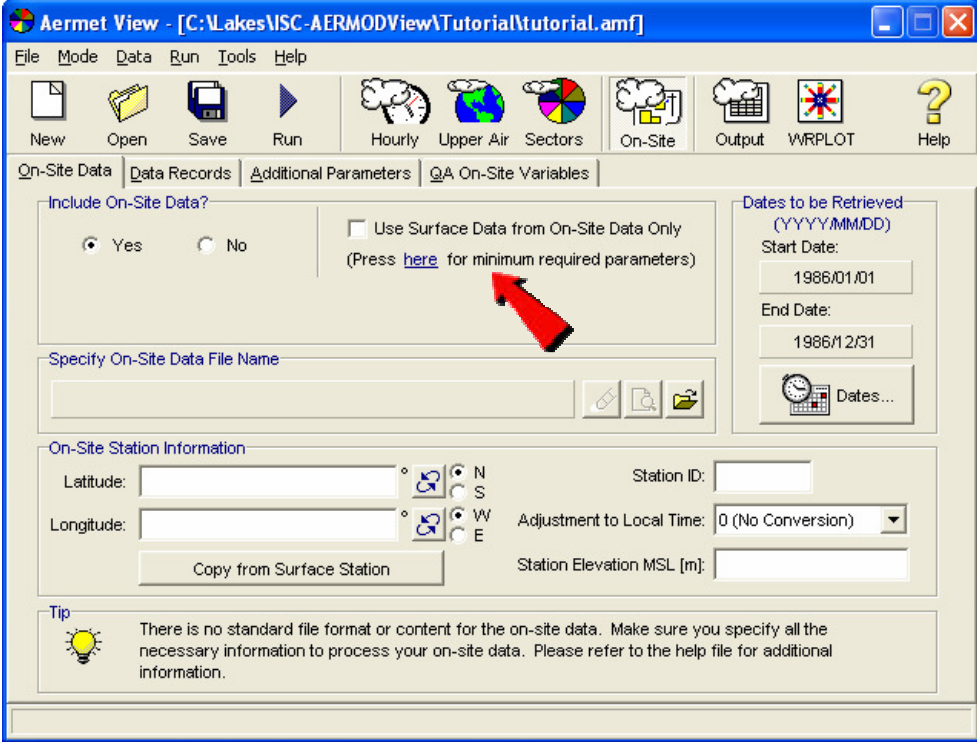
Aermet View**Multi-Year Met Data File Utility**

The Multi-Year Met Data File Utility has been enhanced. It now supports AERMET Surface (*.SFC) and Profile (*.PFL) output files. This utility allows you to combine several single-year met files into one combined file. You have access to this utility by selecting Tools | Multi-Year Data from the Aermet View menu.

**Aermet View****Sector Display**

Under the Sectors and Surface Parameters tab, some sectors were being displayed with incorrect starting and ending angles. This has been corrected.

	
Aermet View	<p>Import From Excel Tool</p> <p>The Import from Excel tool now has added checks for missing and incorrect date and time values.</p> 
Aermet View	<p>On-Site Data – Variables to Read</p> <p>Previously, if there were many variables in the on-site data records, the input file may have been written with a line that exceeded 80 characters; this causes the US EPA AERMET model to fail.</p> <p>Aermet View will now put the variables to read on multiple lines if necessary.</p>
Aermet View	<p>On-Site Only Option</p> <p>The US EPA AERMET model has an option to use on-site data without using a standard hourly surface file. Until now, this option was hidden in the Aermet View interface; it is now available for all users.</p>

	
Aermet View	Project Backup In some project backups, the surface and upper air files were corrupted when the backup file was unzipped. This issue has been resolved.