RAIMI Tools–AIR2GIS User's Manual

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AIR2GIS User's Manual

Introduction 1

This chapter gives you a brief overview of the AIR2GIS program and shows you how to navigate through AIR2GIS, giving you a quick start in analyzing the data you need.

In this chapter, you will learn to:

- Understand AIR2GIS
- Understand naming conventions
- Understand who should use this manual

Understanding AIR2GIS

U.S. Environmental Protection Agency (U.S. EPA) Region 6 developed AMP under the Regional Air Impact Modeling Initiative (RAIMI) to consolidate the large plot files generated by each ISCST3 run into a single file for each source to input into the Risk-MAP Node Array Index Table.

The core capability of AIR2GIS provides the air modeler with a tool to prepare source-specific output files from the ISCST3 air model plot files. As each source may have up to four air model runs, one for each contaminant phase, consolidating the run results into a single file provides for logistically tracking and simplified integration of air model results into Risk Management Analysis Platform (Risk-MAP) to support further analysis.

The air model generates air parameter values at each grid node (approximately 7,500-8,000 nodes) with a discrete value for the one-hour average air concentration for use in acute risk assessment, and for the annual average air concentration, dry deposition and wet deposition for use in chronic risk assessment.

AIR2GIS addresses the four potential phases of the emitted constituents, including volatile vapor, particle, particle-bound and mercury vapor phases. For each contaminant phase modeled, ISCST3 outputs the air parameter values into two separate plot files, a one-hour and an annual, for each source modeled. AIR2GIS extracts the sixteen air parameter values from the eight air model plot files based on grid node location and merges them into a single air parameter value file for each source. This file for each source, referred to as the 'A2G' file, is imported into Risk-MAP to support further analysis.

Naming Conventions

AIR2GIS must read air model results from numerous sources and create a concatenated air parameter value file. The file naming convention is based on the unique source ID assigned to each source in the inventory. The air model runs are named for the unique source ID, with extensions identifying the file type. The following table shows the naming conventions for each phase:

Phase	Plotfile	Extension
vapor	annual	.vpa
vapor	one-hour	.vp1
particle	annual	.ppa
particle	one-hour	.pp1
particle-bound	annual	.bpa
particle-bound	one-hour	.bp1
mercury vapor	annual	.hpa
mercury vapor	one-hour	.hp1

Who Should Use This Manual

This manual is intended for air modelers experienced in performing ISCST3 air dispersion modeling.
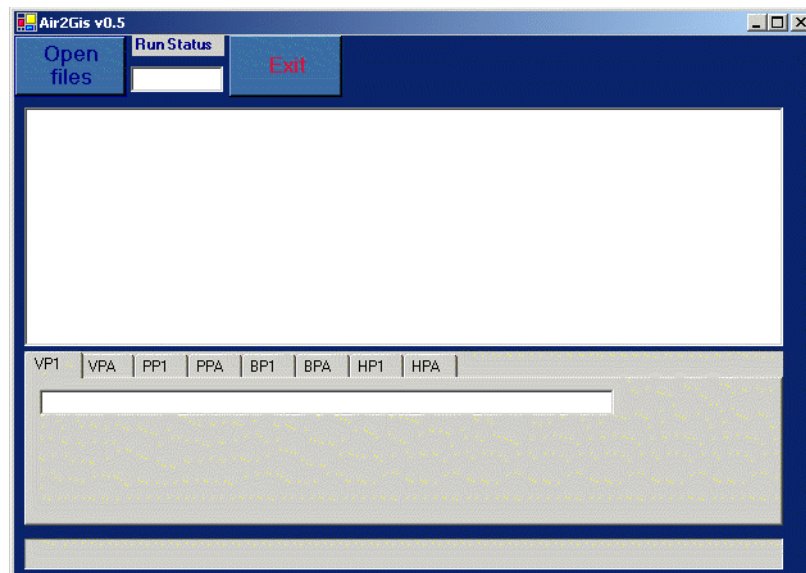
Starting and Running AIR2GIS **2**

This chapter guides you through the basic steps for starting AIR2GIS. In this chapter, you will learn to:

- Start AIR2GIS
- Process files

Starting AIR2GIS
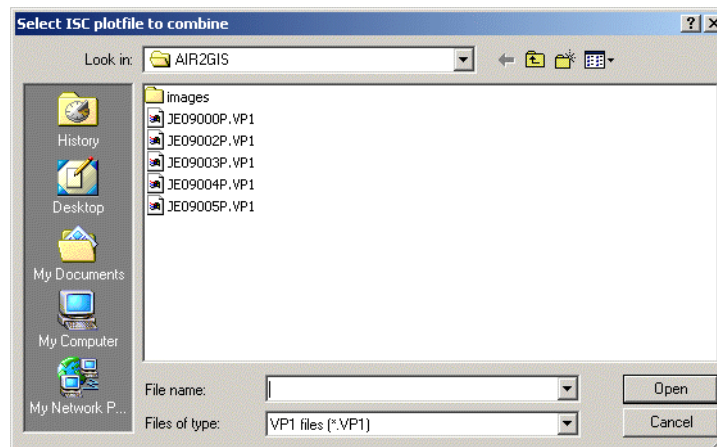
Perform the following step to start AIR2GIS.

Step 1   Double-click on the AIR2GIS.exe file. The **AIR2GIS** window appears.

Processing Files

To process files, perform the following steps.

Step 1   Click Open Files. The Select ISC plotfile to combine window appears.

Step 2   Highlight the file you want to process and click Open.

Step 3   AIR2GIS processes the file and creates a single file of all air parameter values for each source in the correct format for input into Risk-MAP.

Step 4   The AIR2GIS main window updates with the name of the file it processed.

References   3

U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Emissions, Monitoring, and Analysis Division, *Meteorological Processor for Regulatory Models User's Guide (MPRM) User's Guide.* Research Triangle Park, NC, August 1996.

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