

### **Note for users of AERSCREEN model**

USA EPA's AERSCREEN model consists of two main components - the MAKEMET program; and the AERSCREEN command-prompt interface program. The MAKEMET program generates application specific worst-case meteorology using representative ambient air temperatures, minimum wind speed, and site specific surface characteristics such as albedo, Bowen ratio, and surface roughness. The AERSCREEN model interfaces with AERMAP (terrain processor in AERMOD) and BPIPFRM (building downwash tool in AERMOD) to process terrain and building information respectively, and interfaces with the AERMOD model utilizing the SCREEN option to perform the modeling runs. The AERSCREEN program generates estimates of worst-case 1-hour concentrations for a single source, and also automatically provides impacts for other averaging period such as 3-hr, 8-hr, 24-hr and annual ratios currently implemented in AERSCREEN. The screening analysis with AERSCREEN should be consistent with the guidance contained in EPA's Guideline on Air Quality Models and appropriate screening modeling documents such as the Screening Procedures for Estimating the Air Quality Impact of Stationary Sources (EPA, 1992a)

In order to assist users, air-basin wide temperature tables have been generated. These tables include maximum and minimum temperatures by seasons - winter, spring, summer and fall for each meteorological monitoring site within an air-basin. The temperature datasets were prepared from ARB's meteorological data warehouse for the years 2004-2013. It included all valid sites, except CIMIS operated monitoring stations that report measurements taken at 2-meter height whereas other stations report measurements typically at 10-meter height level. In general, the temperature data were grouped by season in order to be consistent with seasonally varying surface characteristics such as albedo, Bowen ratio and surface roughness for each land cover type. It was found that 10-year dataset was long enough to capture ENSO (El Nino Southern Oscillation) effects on temperature, and generally be able to represent areas surrounding a specific meteorological monitoring station.