

## *Missouri Risk Assessment Levels*

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### **Hazardous Air Pollutants**

Hazardous air pollutants (HAPs) also known as air toxics, are air pollutants associated with elevated cancer levels and other adverse health effects. The type of modeling conducted for HAPs depends on the amount of HAPs being emitted from the proposed new source or modification of an existing source. If the potential to emit is above major source levels than the project may be subject to either a Section 6 or Section 9 permit review depending on if a Maximum Achievable Control Technology (MACT) applies to the project. Please refer to those sections for more guidance on the modeling requirements. The second type of HAP modeling is based upon requirements outlined in Appendix J of 10 CSR 10-6.060 which indicates that any project subject to permit review must include an air quality analysis if the project's potential HAP emissions exceed the Screening Model Action Level.

### **Screening Model Action Levels**

Screening Model Action Levels (SMALs) are emission threshold levels, established by the Missouri Air Pollution Control Program. The primary purpose of the SMALs is to determine if a site-specific ambient impact analysis should be performed. If the potential emissions of a project exceed these levels, then a site-specific ambient impact analysis is required.

### **Risk Assessment Levels**

Risk Assessment Levels (RALs) are ambient concentrations of air toxics that are not expected to produce adverse cancer and non-cancer health effects during a defined period of exposure. RALs are based on animal toxicity studies, human clinical studies, and human epidemiology studies that account for exposure to sensitive populations such as the elderly, pregnant women, children, and those having respiratory illnesses like asthma. The RALs are health-based levels developed, maintained, and reviewed by the Missouri Air Pollution Control Program and approved by the Department of Health and Senior Services. Similar to the National Ambient Air Quality Standards, if the maximum modeled concentration exceeds the RAL, the source must further reduce the ambient impact, through permit restrictions or the installation of controls, until the potential air toxic concentrations are below the RALs. For a list of all Hazardous Air Pollutants along with their related SMALs and RALs, please refer to the following table: [Table of Hazardous Air Pollutants, Screening Model Action Levels, and Risk Assessment Levels](#). For further guidance on the modeling for HAPs, please refer to the following document: [Hazardous Air Pollutant Analysis](#).