



Sulfur Dioxide Fact Sheet

for field use with mobile monitoring instruments

Special Note: People with asthma are particularly sensitive to sulfur dioxide and should be especially vigilant when higher concentrations are measured. The sulfur dioxide MMCVs are set to prevent health effects in people with asthma.

This Field Guide provides a summary of the different mobile monitoring comparison values developed by the Toxicology, Risk Assessment, and Research Division for use in evaluating real-time mobile monitoring data in the field.

All derived mobile monitoring comparison values are intended to be used as guidance. Field investigators and mobile monitoring staff should use their own discretion when deciding to mitigate exposure, such as when experiencing health effects or intense odors, regardless of measured concentrations.

What is Sulfur Dioxide?

- Sulfur dioxide is a colorless gas with a characteristic, irritating, pungent odor
- Sulfur dioxide is emitted from various industrial activities, including combustion of fossil fuels and smelting of sulfide ores, and released naturally from volcanic eruptions
- Once in the air, sulfur dioxide can be converted to sulfuric acid, sulfur trioxide, and sulfates

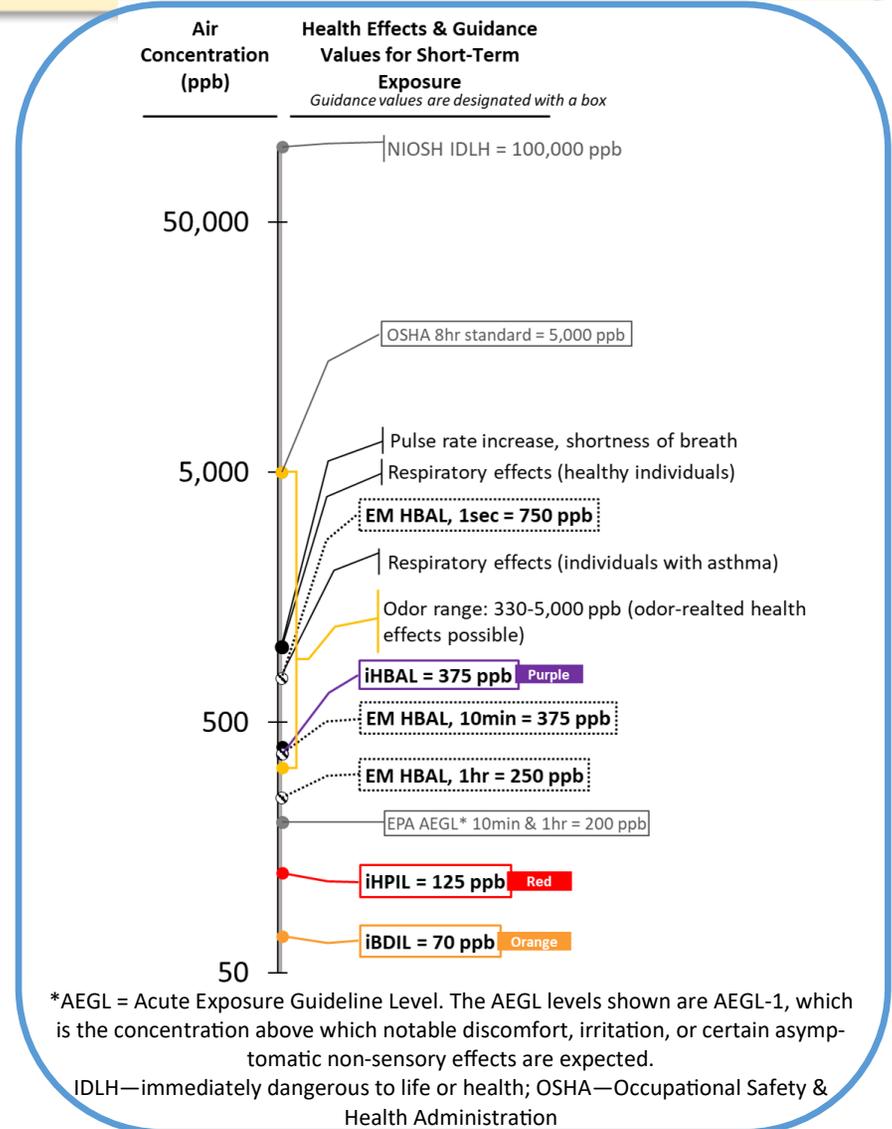
At What Levels Can Sulfur Dioxide Cause Harm?

Breathing high levels of sulfur dioxide for a short period of time can affect the respiratory system, causing irritation and make breathing difficult. Exposure to persistent levels can result in lung function changes. Individuals with asthma, children, and older adults are more sensitive to these effects.

Mobile Monitoring Comparison Values

	Sulfur Dioxide	
iBDIL (ppb)	Orange	70
iHPIL (ppb)	Red	125
iHBAL (ppb)	Purple	375
^{EM} HBAL _{10min} (ppb)		375
^{EM} HBAL _{1hr} (ppb)		250
^{EM} HBAL _{1sec} (ppb)		750

iBDIL - instantaneous baseline-derived investigation level
iHPIL - instantaneous health-protective investigation level
iHBAL - instantaneous health-based action level
^{EM}**HBAL**_{10min} - 10-minute health-based action level for exposure mitigation
^{EM}**HBAL**_{1hr} - 1-hour health-based action level for exposure mitigation
^{EM}**HBAL**_{1sec} - 1-second health-based action level for exposure mitigation



*AEGL = Acute Exposure Guideline Level. The AEGL levels shown are AEGL-1, which is the concentration above which notable discomfort, irritation, or certain asymptomatic non-sensory effects are expected.
 IDLH—immediately dangerous to life or health; OSHA—Occupational Safety & Health Administration

For more information on EPA's AEGL values, please see EPA's website.
 Texas SO₂ 30-minute state standard: 280 ppb for Galveston/Harris counties, 320 ppb for Jefferson/Orange counties, & 400 ppb for all other counties