

Missouri Ambient Air Quality Standards

Three standards, in addition to the National Ambient Air Quality Standards (NAAQS) have been defined in 10 CSR 10-6010 for the following pollutants within the State of Missouri: hydrogen sulfide, sulfuric acid and fluorides. The standards are pollutant ceilings and represent the maximum concentration of pollution that can be allowed within the atmosphere before adverse impacts become evident. Concentrations are measured as the total amount of a pollutant that is present within a particular region whose compliance is based upon all emission sources at the facility. If the permit granting authority determines that a modeling study is necessary prior to the issuance of a construction permit, the applicant will be required to submit a compliance demonstration for each applicable pollutant and averaging time for which a significant ambient impact will take place.

The modeled emission rates must reflect the maximum allowable operating conditions based upon federally enforceable emission limits and operating levels, for each pollutant, and averaging time. A separate demonstration must be conducted for each pollutant. A pollutant is in violation of the standard if the predicted concentration exceeds the thresholds contained within Table 1.

Table 1			
Missouri Air Quality Standards, MoAQS			
Pollutant	Averaging Time	MoAQS	Comment
		<i>($\mu\text{g}/\text{m}^3$)</i>	
Total Fluoride	Annual	13.0	Not to be exceeded.
Hydrogen Sulfide	30-Minute*	70.0	Not to be exceeded more than two times per year.
Hydrogen Sulfide	30-Minute*	42.0	Not to be exceeded more than two times in any consecutive five day period.
Sulfuric Acid	24-Hour	10.0	Not to be exceeded more than once in any consecutive 90-day period.
Sulfuric Acid	1-Hour	30.0	Not to be exceeded more than once in any consecutive two-day period.

**AERMOD cannot calculate pollutant concentrations for averaging periods less than one hour. As such, the model analysis for hydrogen sulfide should be based upon a one hour averaging period.*

If the predicted impact due to the facility-wide emissions is below the standard for each applicable averaging period, compliance has been demonstrated and no further analysis for that pollutant will be necessary.

Unlike the NAAQS, the Missouri Ambient Air Quality Standards do not have a significant impact threshold. As such, if a violation of the standard is predicted to occur at one or more receptors, the applicant will not be able to demonstrate compliance and permit issuance can't move forward until the violations are resolved through the establishment of emission limits, the installation of controls or other measures that reduce the ambient impact at the violating receptors.