

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. Sources include motor vehicle exhaust, industrial processes such as metals processing and chemical manufacturing, residential wood burning, and natural sources such as forest fires.

Nitrogen oxides (NOx) is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. However, one common pollutant, nitrogen dioxide (NO₂) along with particles in the air can often be seen as a reddish-brown layer over many urban areas.

Ozone (O₃) is a gas created by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents as well as natural sources emit NO_x and VOCs that help form ozone. Ground-level ozone is the primary constituent of smog.

Sulfur dioxide (SO₂) belongs to the family of sulfur oxide gases (SO_x). SO_x gases are formed when fuel containing sulfur, such as coal and oil, is burned, and when gasoline is extracted from oil, or metals are extracted from ore. SO₂ dissolves in water vapor to form acid, and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and their environment.

Particulate Matter 10 (PM₁₀) or "inhalable coarse particles," or "particle pollution" are smaller than 10 micrometers in diameter. Typically found near roadways and dusty industries. PM₁₀ is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Once inhaled, these particles can affect the heart and lungs and cause serious health effects.

Particulate Matter 2.5 (PM_{2.5}) or "fine particles," are 2.5 micrometers in diameter and smaller. Often found in smoke and haze, these particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.