

Clean and Healthy Air

FOR GLADSTONE

FACT SHEET

sulfur dioxide

What is sulfur dioxide?

A colourless gas with a sharp irritating odour, SO₂ is formed when burning fuel and smelting mineral ores that contain sulfur. When SO₂ combines with water, it forms sulfuric acid – the main component of acid rain.

What are the sources of sulfur dioxide?

SO₂ is generated from the burning of fossil fuels such as coal and fuel oil. In Gladstone, most SO₂ emissions are from industrial facilities, particularly the power station.

Motor vehicle fuels have a low sulfur content compared to fuels used in industry and shipping, and therefore emit less SO₂. The low sulfur content of Australian fuels reduces the potential for the formation of acid rain.

How can sulfur dioxide affect our health?

At high concentrations, sulfur dioxide can affect the respiratory system, irritate our eyes and can cause muscular constriction of the large airways.

People most sensitive to SO₂ include asthmatics and individuals with chronic lung disease such as bronchitis and emphysema or cardio vascular disease, as well as children and the elderly.

Non-asthmatics are usually not sensitive to concentrations of 1ppm or below. However at concentrations of 0.2 ppm or less asthmatics may be affected when they exercise.

Measuring sulfur dioxide in Gladstone

Sulfur dioxide has been monitored in Gladstone since 1979, and concentrations in the ambient (outdoor) air are well below 0.2ppm (the national standard is 0.2ppm over a one hour period).

Levels in Gladstone have been consistently low due to the small number of sulphur dioxide emission sources in the region. The extended air monitoring program will see sulfur dioxide measured at all six fixed stations as well as the mobile station, and live data will be available on the EPA website.

For more information

Visit www.epa.qld.gov.au/gladstone for more information on the Clean and Healthy Air for Gladstone project and for links to live air data and other air quality information.

Notes: ppm is a measure of concentration expressed as “parts per million”

Sources of sulfur dioxide

- Industry
- Transport

