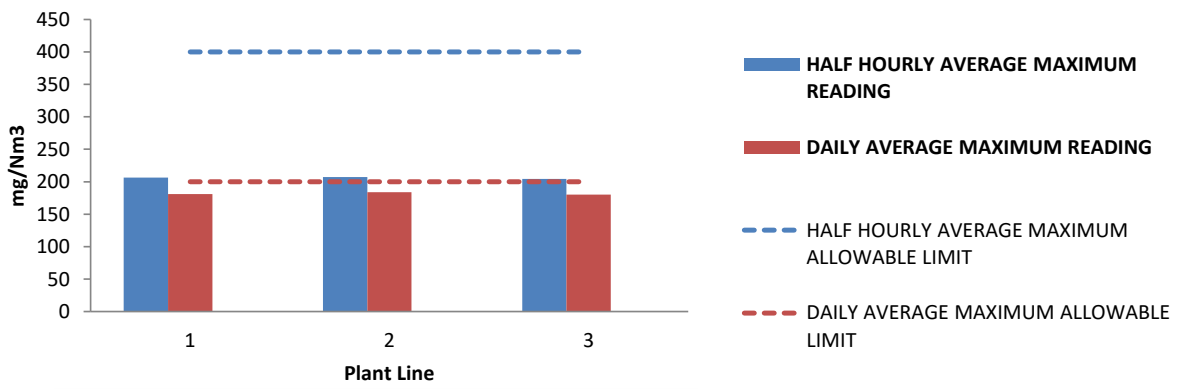
Riverside Resource Recovery emission report – January 2020

The following charts summarise the emission data for the Riverside Resource Recovery facility. The charts show the **MAXIMUM** readings taken during the month.

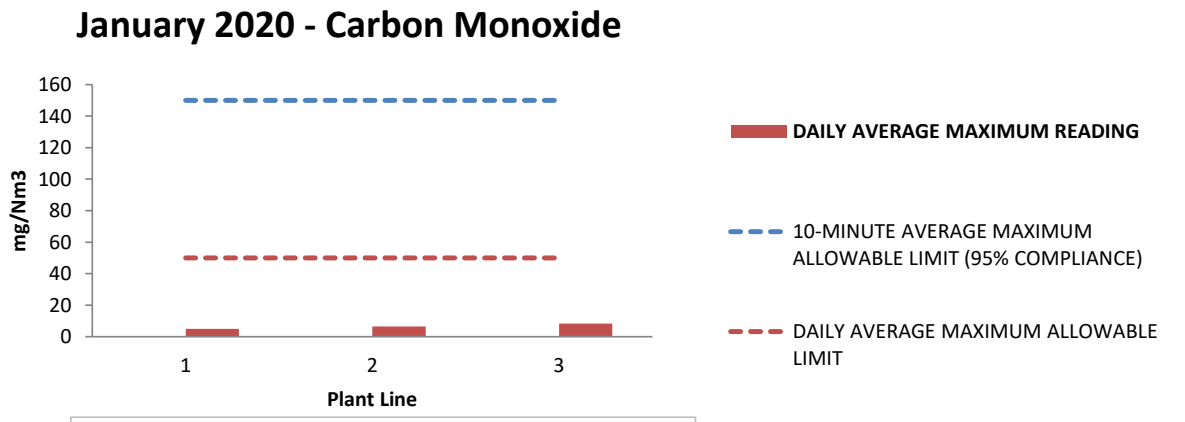


MONTHLY MEAN OF THE HALF HOURLY AVERAGE

Line 1 = 172.1 mg/Nm3
Line 2 = 173.8 mg/Nm3
Line 3 = 171.7 mg/Nm3

Why do we control and monitor Oxides of Nitrogen (NOx)?

NOx includes various compounds, but is usually used to group two gases; nitrogen dioxide (NO_2) and nitric oxide (NO). These can be formed naturally, but are also formed from man-made processes like fuel combustion or biomass burning. There are a number of health and environmental issues attributed to NOx, including smog, acid rain, and possibly global warming.



MONTHLY MEAN OF THE 10-MINUTE AVERAGE

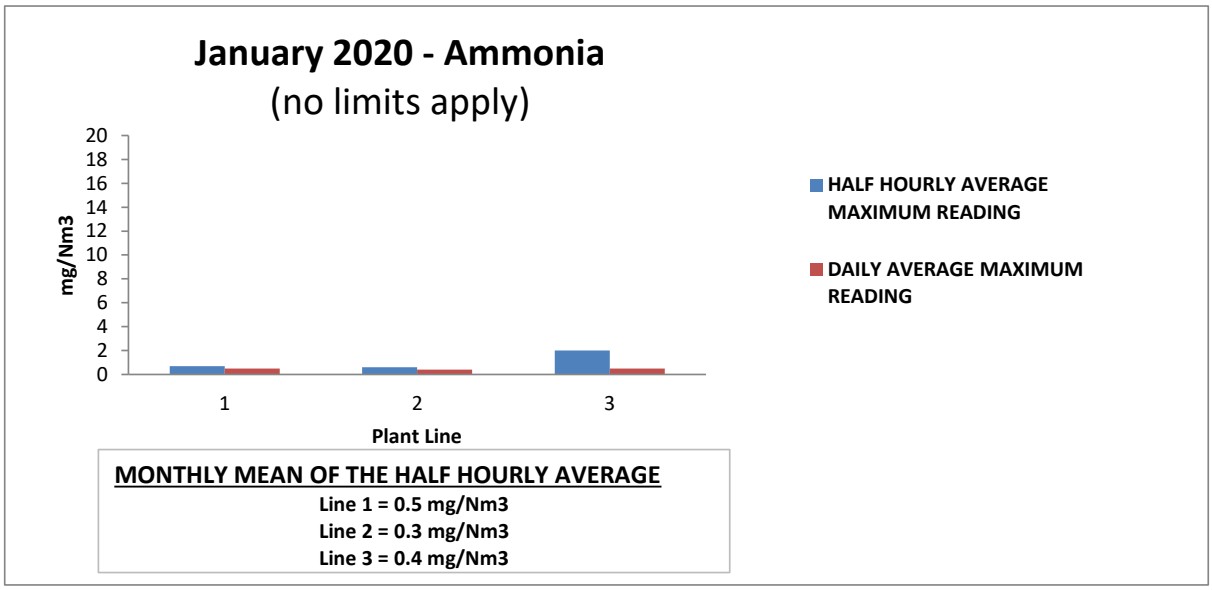
Line 1 = 2.5 mg/Nm3
Line 2 = 2.8 mg/Nm3
Line 3 = 3.5 mg/Nm3

* seven, or more, 10-minute period exceedances, within a 24 hour day. constitute an exceedance of the EA permit conditions.

Following EA guidance and approval in May 2019, RRRL no longer report carbon monoxide against a half-hourly emissions limit value. Carbon monoxide is now monitored against the requirement to be 95% compliant against a 10-minute average value, of 150mg/Nm3, over a 24-hour period. Any 24-hour period where the 95% compliance level is breached will be highlighted in the chart above. The daily average emissions limit value of 50mg/Nm3 remains unchanged.

Why do we control and monitor Carbon Monoxide?

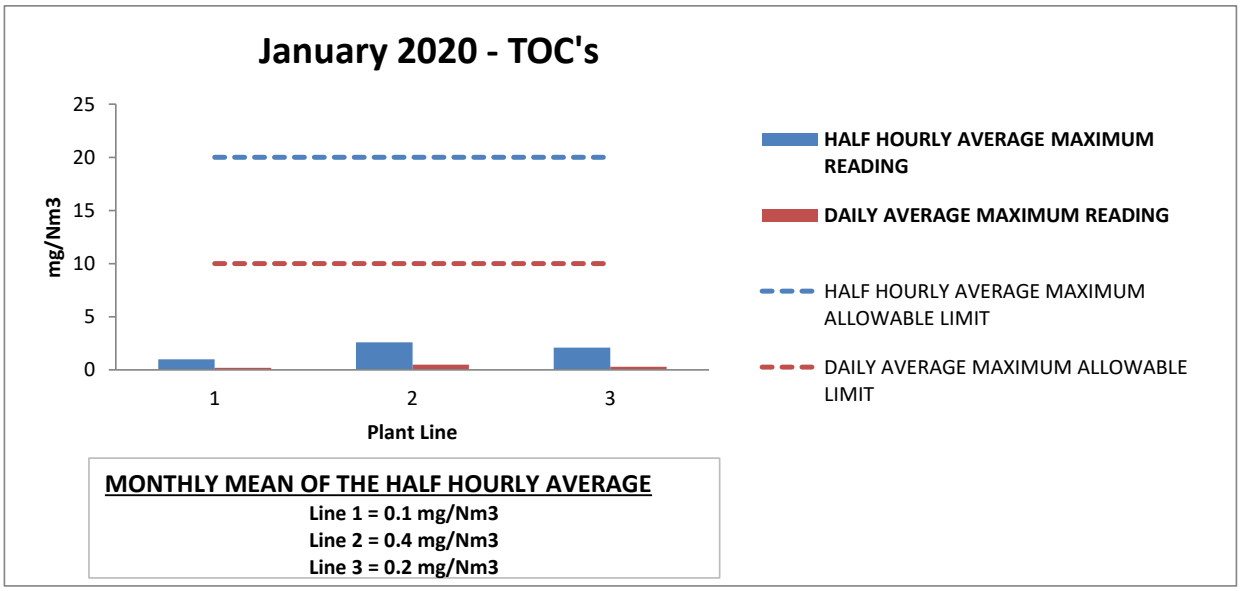
Carbon monoxide is both a common naturally occurring chemical and is manufactured by man. It is a colourless, odourless poisonous gas. Carbon monoxide is one of the eight substances for which the government has established an air quality standard as part of its national Air Quality Strategy.
Carbon monoxide can cause harmful health effects by reducing oxygen delivery to the body's organs and tissues.



Why do we control and monitor Ammonia?

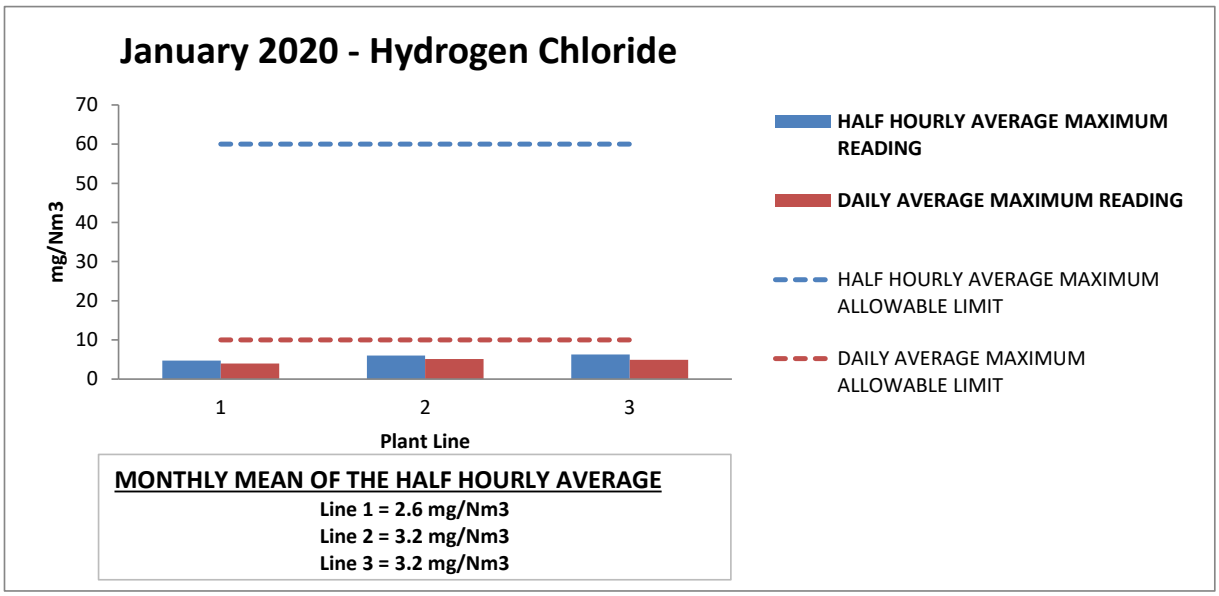
Although in wide-use in several industries, ammonia is both caustic and hazardous. It is a colourless gas with a characteristic pungent odour.

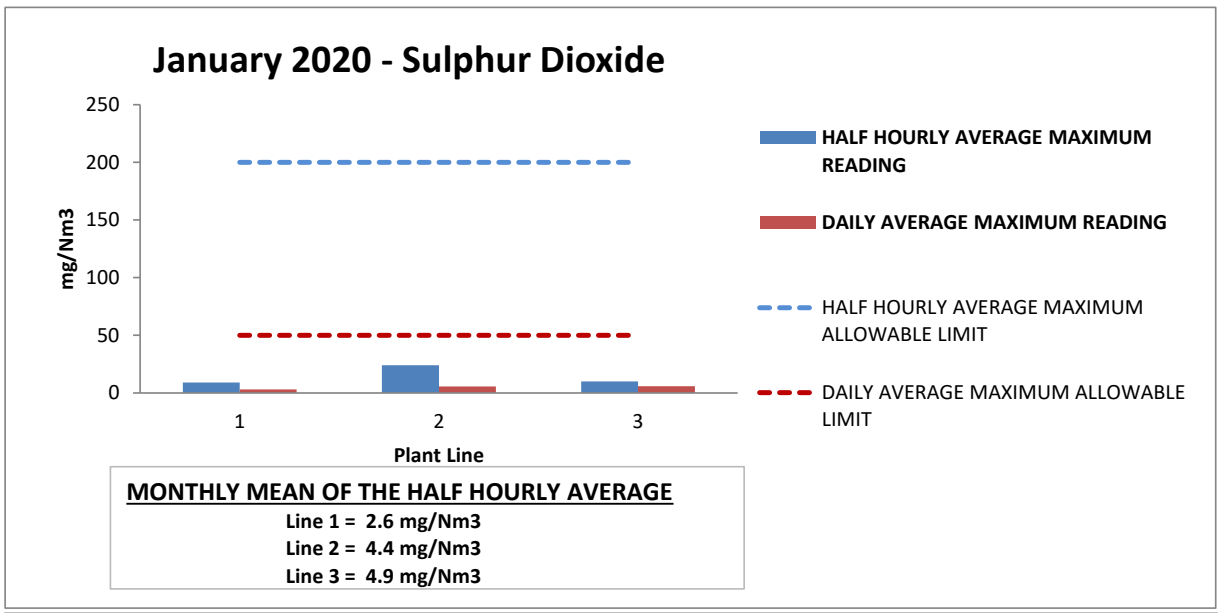
Ammonia, unlike the other species monitored, is not a product from the incineration of waste but is actually introduced into the furnace. Under the right conditions, ammonia is able to reduce oxides of nitrogen found in the flue gas by the chemical process Selective Non-Catalytic Reduction (SNCR) to nitrogen and water vapour which are both non-hazardous.



Why do we control and monitor Total Organic Carbon (TOC)?

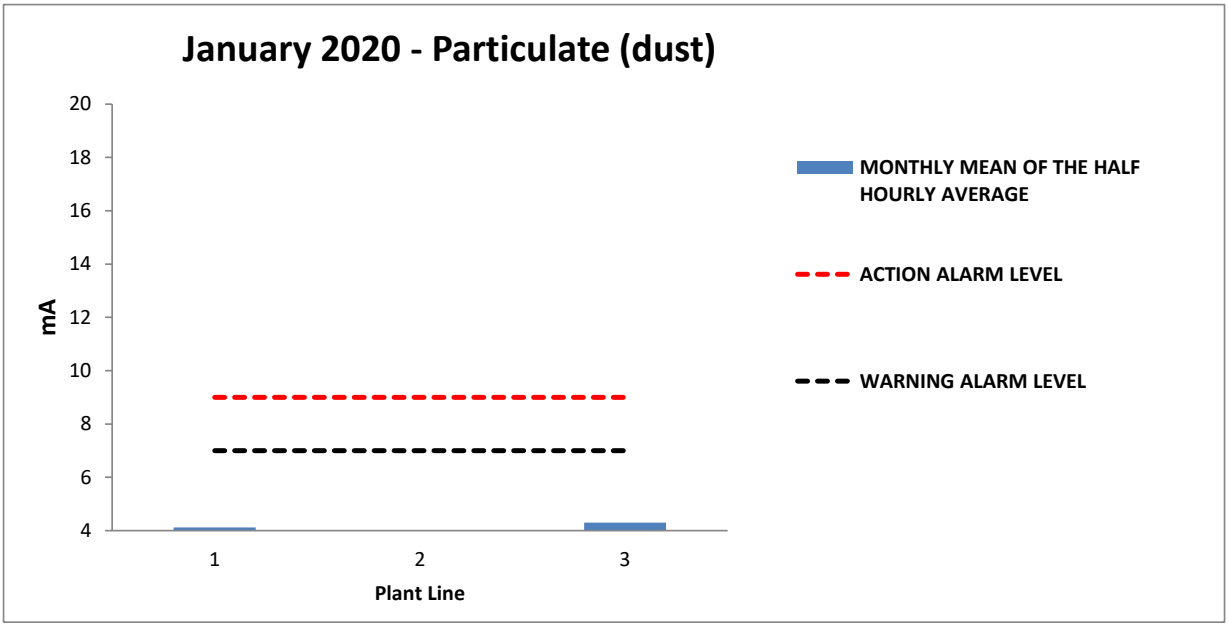
Total Organic Carbon (TOC) consists of a wide range of organic compounds including Volatile Organic Compounds (VOCs). VOCs are numerous, varied and found everywhere. VOCs are of general concern because of their ability to react with other pollutants (such as nitrogen oxides) in the lower atmosphere to form ozone. High concentrations of ozone at ground level can harm human health, damage crops and affect materials such as rubber. Some VOCs may be directly harmful to human health, contribute to global warming or destroy stratospheric ozone needed to shield the earth's surface from harmful ultra violet radiation.





Why do we control and monitor Sulphur Dioxide and Hydrogen Chloride?

Both gases dissolve in water to form strong acids and thus can contribute to the formation of acid rain. Acid rain is environmentally damaging to crops, soils and waters.



Following EA guidance and approval in July 2015, RRRL now monitor particulate emissions qualitatively as opposed to quantitatively. The particulate data is now reported in mA (milliamps) and the reporting range of the instrument is 4mA to 20mA where 4mA = 0 particles. The Half Hourly and Daily ELVs no longer apply, the ELVs have been replaced by two alarm levels that prompt the operator to start an investigation or take further action these are set at: 7mA – Warning Alarm and 9mA – Action Alarm.

Why do we control and monitor Particulates (dust)?

Particulates is the term used to describe tiny particles in the air, made up of a complex mixture of soot, organic and inorganic materials having a particle size less than or equal to 10 microns diameter (10 microns is equal to one hundredth part of a millimetre). Particulates is one of the eight substances for which the Government has established an air quality standard as part of its national Air Quality Strategy.

As part of our desire to build public trust we want to hear from you - please email **info@coryenergy.com** if you have questions regarding our emissions to air.