RioTinto Information sheet

Carbon monoxide (CO) gas recovery system

2022

The carbon monoxide (CO) gas recovery system carries the recovered gas through a network of pipes to the plants, where it is used in operations at the Sorel-Tracy Metallurgical Complex.

View from the roof of the RTFT reduction plant

Interesting facts

- The north side of the CO gas recovery system was built and commissioned in the early 1950s. The south side was added a few years later, in 1966.
- The pipes that carry CO gas to the RTFT metallurgical complex are orange, making them easy to spot.

What are the benefits of CO gas recovery?

CO gas recovery significantly reduces the amount of natural gas needed to power certain equipment, thereby reducing the production of greenhouse gases.

What is the purpose of the CO gas recovery system?

The system is used to recover and clean the CO produced in the furnaces when ilmenite ore is smelted at the reduction plant. The recovered gas is used as fuel to power equipment at the Sorel-Tracy site (about twenty internal users including the enrichment plant, the UGS plant, and the product processing area).

Maintenance of the CO gas recovery system

The CO gas recovery system is serviced every two years, area by area. A team of environmental and industrial hygiene staff monitors emission levels closely throughout the maintenance shutdowns in the targeted areas.

During maintenance or when specific work is required, the CO gas, which is normally recovered, is burnt off on exit through the flares (chimneys which can be seen above the reduction plant). This is known as “venting.”

Why is maintenance of the CO gas recovery system so important?

Maintenance is key to keeping the equipment safe and in good condition, resulting in:

- Less smoke and dust in the atmosphere
- Fewer equipment breakdowns
- Fewer CO gas leaks
- Less venting (flaring)
- A safer and healthier environment for RTFT staff and local residents

Part of the CO gas distribution network (orange pipes)

Examples of environmental improvement projects that are ongoing and developing in response to citizens’ concerns

- Construction of the new SO2 recovery plant and installation of a dust collection system at the coal dryers
- Use of three domes to store products (reducing dust emissions) and the warehouses at 1640 Marie-Victorin Road, which cuts down on transportation in the community
- Installation of a new loading turn at the wharf, which is better adapted to our products, thereby reducing dust emissions
- In progress: construction of the BlueSMelting™ demonstration plant, which will reduce GHG emissions into the atmosphere