Healthy environment continued

Managing air quality

Predictive environmental monitoring

One of the challenges associated with air quality monitoring is that, once the increase in emissions or impact is detected, events leading up to this have already occurred. These may relate to specific operational conditions and circumstances that can be exacerbated by atmospheric conditions, for example wind speed, direction and atmospheric pressure.

A pilot study on implementing predictive environmental monitoring to enable smarter air quality emissions control was completed at Waterval smelter complex during the year, with full implementation planned by the end of 2023. Critical pollutants monitored are aligned with our AELs, namely particulate matter, SO_2 and NO_X.

Predictive environmental monitoring is an Anglo American group environmental digital initiative that ensures environmental compliance at receptors through enhanced and integrated control performance and real-time monitoring. Through this process, we will be able to ensure and optimise air quality control management while meeting production guidance targets. Where necessary, we would be able to amend production schedules.

An important element of the project is to ensure communities and other stakeholders are pro-actively informed about any potential air quality issues . Information collected will also support the development of a dashboard that can be used to predict emissions and potential impacts on sensitive receptors, allowing process conditions to be adapted to eliminate or minimise the predicted impact.