McPhillamys Gold Project

#11 Air quality

Understanding air quality

When we talk about air quality, we generally think about it in relation to how clean (or not) the air is.

An important part of the investigations for the McPhillamys Gold Project was assessing how the project might affect local air quality. In particular, if the project would create unsafe levels of pollutants in the air, such as dust and other fine particles.

No unsafe levels of dust predicted

The mine has been designed to minimise and manage air emissions in line with industry best practice.

The independent project studies have predicted that there will be no unsafe levels of dust or other pollutants as a result of the mine.

Studying the existing air quality

In order to understand what impact the project might have we first have to look at the existing or current quality of local air.

Studies have been conducted since 2013 to provide an understanding of the existing air quality.

This was done through a network of air quality and meteorology (weather) monitoring equipment which was installed at and around the mine site.

The monitoring equipment records:

1. the weather;
2. levels of airborne dust and pollutants; and
3. levels of deposited dust.

Predicting impacts on air quality

Once there was an understanding of the existing air quality, we modelled different scenarios to build a picture of how the air quality might change as a result of the project.

These looked at the impact of construction activities and mining operations including things such as dust created by vehicles; emissions from plant and machinery; and dust from the open pit and tailings storage facility.

Based on modelling predictions, emissions of dust, fine particles and other pollutants from the mine will be well within safe levels set down by the NSW Environment Protection Authority (EPA).

That means our neighbours and the surrounding community should not experience any health impacts as a result of air quality impacts from the project.

Below:
Dust is monitored by devices such as this dust-gauge on the McPhillamys site.

Monitoring air quality

During construction and mining operations air quality will be continuously monitored on and around the mine site.

Equipment such as dust gauges and air samplers will be placed at various locations on the boundaries of the mine site, in consultation with regulators such as the Environment Protection Authority (EPA).

Air monitoring stations will be able to pick up and record if the local air quality is changing as a result of the mine. And if that happened we could take early action to avoid and manage the impacts.

Dealing with any air quality impacts

The project will manage air quality in the following ways:

Minimising clearing—so that there is grass and vegetation wherever possible, to minimise the amount of uncovered dirt that could get blown around.

Dust suppression—the tailings storage facility and other open surfaces will be kept damp with recycled water, to reduce dust. Dust will also be limited by covers on the crushed ore stockpile and conveyors.

Revegetating exposed areas—as soon as possible, the amenity bunds, rock emplacements and other exposed areas will be planted with grass, shrubs and trees to reduce dust.

Use of low fines construction materials—wherever possible, we will avoid using fine construction materials which are lighter and more vulnerable to air movement.

Use of formed roads—vehicles will be directed to use formed site roads wherever possible.

Clean air regulation

Construction and mining operations will be required to operate under an environment protection licence (EPL) issued by the NSW EPA.

The environment protection licence sets out the requirements the project needs to comply with in order to maintain safe and healthy air quality. It includes things like emission limits; air monitoring and pollution-reduction programs.

Above: A high volume air sampler at McPhillamys.

Below: The McPhillamys automatic weather station.

For more information about the McPhillamys Gold Project you can view the Development Application documents at:
https://www.planningportal.nsw.gov.au/major-projects/project/9821