

Analysis of Disruption

The output excavation per labourer was noted by witnesses to be substantially reduced as a result of increased humidity and temperature in the mine that occurred through a failure of the mine owner to properly ventilate the works.

This necessitated a review of the loss in productivity of labour through changes in environmental conditions and its impact in terms of delay to be assessed.

PRODUCTIVITY LOSS REVIEW

1 Establish As Built Periods for Work

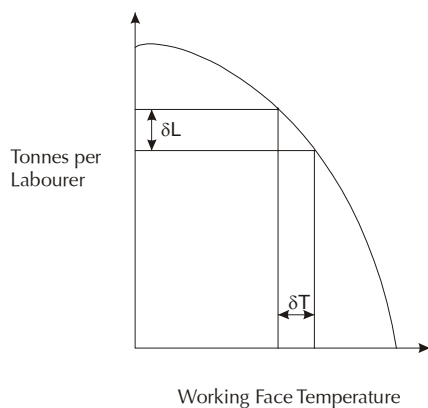
Determination of discrete pieces of work, for which the elapsed time, resource input and output could be determined from contemporary records.

2 Analysis of Productivity in Activities

From resource and output data, and existing temperature and humidity records, calculate and correlate productivity with environmental factors.

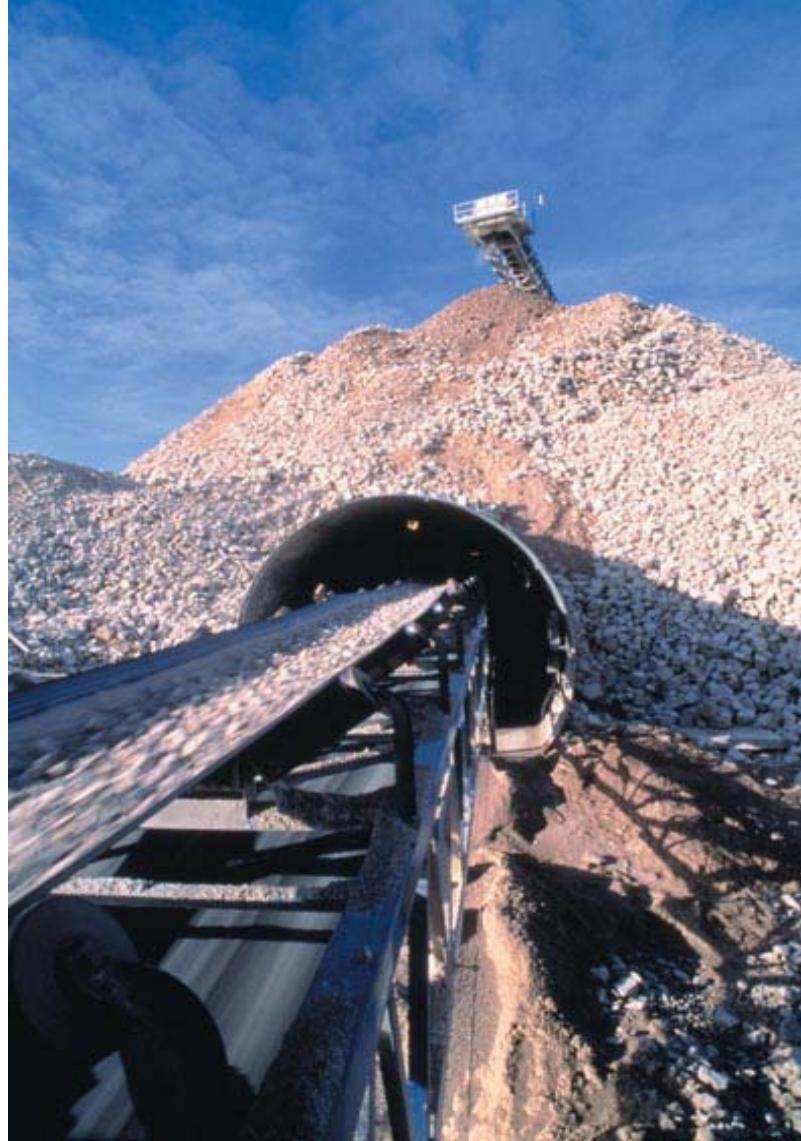
3 Review Published Research

Review published research for relevant mining conditions in South Africa to determine impact of environmental factors.



4 Determine Lost Productivity & Delay

From published research and the output data determined for each activity, compute the productivity lost as a result of increased humidity and thus the delay resulting using the actual level of resources employed.



A DISRUPTION EXAMPLE

African Nickel Mine Delay Arbitration

For a specialist contractor, we were appointed to give expert advice in an Arbitration regarding delays to the construction of an inclined shaft in Africa.

The materials shaft was 880 metres underground and involved drilling and blasting two main tunnels each at 26° to the horizontal.

Productivity was affected by increased levels of heat and humidity, and revised evacuation procedures for the mine to allow daily blasting to proceed.

An expert report was submitted to the Arbitration.