## METROPOLITAN COAL - ENVIRONMENTAL MONITORING SUMMARY

### Land

#### Cliffs and Overhangs

Five cliffs and overhangs have been identified within 600 m of Longwalls 20-22 secondary extraction and are shown on Figure 1, namely, sites COH1, COH2, COH3, COH4 and COH14.

Visual inspections are conducted monthly for the period of time that longwall extraction is within 400 m of the cliffs and overhangs.

Inspections of sites COH1 and COH2 were conducted in July 2010.

Specific details that are noted and/or photographed during the inspections include:

- the date of the inspection;
- the location of longwall extraction (i.e. the longwall chainage);
- the location of the cliff instability (i.e. freshly exposed rock face and debris scattered around the base of the cliff or overhang) relative to the cliff face or overhang;
- the nature and extent of the cliff instability (including an estimate of volume);
- the length of the cliff instability;
- other relevant aspects such as water seepage (which can indicate weaknesses in the rock);
- whether any actions are required (e.g. implementation of management measures, initiation of the Contingency Plan, incident notification, implementation of appropriate safety controls, review of public safety, etc.); and
- any other relevant information.

No cliff instabilities (i.e. freshly exposed rock face and debris scattered around the base of the cliff or overhang) or areas of water seepage were evident.

The monitoring results are used to assess the Project against the land subsidence impact performance measure:

Less than 3% of the total length of cliffs (and associated overhangs) within the mining area experience mining-induced rock fall.

The land subsidence impact performance measure was not exceeded during the reporting period.

#### Steep Slopes and Land in General

Opportunistic visual inspections for subsidence impacts on steep slopes and land in general within 600 m of Longwalls 20-22 secondary extraction are conducted by Metropolitan Coal and its contractors as part of routine works conducted in the catchment.

Specific details that are noted and/or photographed during the inspections include:

- the location, approximate dimensions (length, width and depth), and orientation of surface tension cracks:
- the location of the surface tension crack in relation to fire trails;
- the location and approximate dimensions of rock falls (e.g. rock ledges that occur along the Waratah Rivulet);
- whether any actions are required (for example implementation of management measures, initiation of the Contingency Plan, incident notification, implementation of appropriate safety controls, review of public safety, etc.); and
- any other relevant information.

The date of the observation, details of the observer and the location of longwall extraction are also documented.

No subsidence impacts (e.g. surface tension cracks or rock falls) have been observed within the Longwalls 20-22 area.

A surface tension crack has however recently been recorded above Longwall 18. The tension crack extends semi-continuously over a length of approximately 200 m. The width of the tension crack is typically less than 10 mm, with a maximum width of 40 mm.





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