



# **SUNNYSIDE COAL MINE**

**COMMUNITY CONSULTATIVE COMMITTEE**

**MEETING #6**

**ENVIRONMENTAL MONITORING REPORT**

**March 2010 – May 2010**

## Noise Monitoring

The noise limits applicable to operations on the Sunnyside Coal Mine, as prescribed in the Project Approval and Environment Protection Licence, are as follows:-

<b>Day/Evening LAeq(15 minute)</b>	<b>Land</b>
35	Any residence on, or more than 25% of, any privately owned land, except "Lilydale".

Impact Assessment Criteria dB(A).

Noise measurements taken since the last meeting are as tabulated below.

### **Attended Noise Levels – 23<sup>rd</sup> February 2010 (morning)**

<b>Location</b>	<b>Time</b>	<b>dB(A),Leq (15 min)</b>	<b>Wind speed/ direction</b>	<b>Identified Noise Sources as dB(A) Leq (15 min)</b>
Illili	7:24am	37	2m/s NE	Insects (35), Traffic (30), <b>SCM (30)</b>
Ferndale	7:07am	49	2m/s NE	Insects (49), <b>SCM inaudible</b>
Plain View	8:05am	45	2m/s NE	Insects (44), <b>SCM (35)</b>
Lilydale				<b>No Access, Gate Locked</b>
Glendower	7:43am	51	2m/s NE	Birds/Insects (51), <b>SCM inaudible</b>

### **Attended Noise Levels – 23<sup>rd</sup> February 2010 (afternoon)**

<b>Location</b>	<b>Time</b>	<b>dB(A),Leq</b>	<b>Wind speed/ direction</b>	<b>Identified Noise Sources</b>
Illili	3:30pm	36	3m/s NW	Birds & insects (33), Wind (33), <b>SCM inaudible</b>
Ferndale	3:59pm	44	2.5m/s NW	Birds (43), <b>SCM (37)</b>
Plain View	3:10pm	41	3.5m/s NW	Birds (40), <b>SCM (31)</b>
Lilydale	4:45pm	40	2.5m/s NW	Birds & insects (48), Wind (33), <b>SCM inaudible</b>
Glendower	4:29pm	40	2.5m/s NW	Birds & insects (38), Wind (33), <b>SCM (31)</b>

The results indicate that, under the operational and atmospheric conditions at the time, noise emissions from the mine exceeded the noise criterion of 35 dB(A) at the monitoring location of "Ferndale" during the afternoon of 23<sup>rd</sup> February 2010 with a result of 37 dB(A). This represents a 2 dB exceedance in criteria and was identified as predominantly haul truck and dozer noise. As a minor exceedance, ongoing monitoring will be used to determine if this trend in elevated noise level continues at this monitoring location.

A sound level meter was also set up in the paddock adjacent to the "Roslyn" property to determine the noise levels associated with coal haulage. The noise levels from 11 trucks (6 full 4 empty and a water cart) passing the site were measured between 7.45 am and 8.45 am on Friday 12<sup>th</sup> March 2010.

Over the approximate 1 hour monitoring the measured Leq noise level from mine vehicles was 49.7 dB(A) which is well below the local road noise criterion of 55 dB(A).

### Attended Noise Levels – 14<sup>th</sup> May 2010 (morning)

Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	8:37am	40	Calm	Birds and Insects (40), <b>SCM (28)</b>
Ferndale	7:35am	53	Calm	Traffic (53), Birds & Insects (41), <b>SCM (38)</b>
Plain View	8:17am	41	Calm	Birds & Insects (39), Traffic (34), <b>SCM (32)</b>
Lilydale	8:00am	46	Calm	Traffic (45), Birds & Insects (33), <b>SCM (34)</b>
Glendower	7:15am	41	Calm	Domestic Noise (39), Birds/Insects (37), <b>SCM (30)</b>

### Attended Noise Levels – 14<sup>th</sup> May 2010 (afternoon)

Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	3:20pm	36	<0.5m/s SSW	Birds and Insects (36), <b>SCM (&lt;25)</b>
Ferndale	4:40pm	37	<0.5m/s SSW	Birds & Insects (34), Traffic (32), <b>SCM (32)</b>
Plain View	3:40pm	43	<0.5m/s SSW	Birds (43), Traffic (30), <b>SCM (&lt;20)</b>
Lilydale	4:20pm	53	<0.5m/s SSW	Birds & Insects (53), Traffic (38), <b>SCM inaudible</b>
Glendower	4:20pm	36	<0.5m/s SSW	Birds/Insects (35), <b>SCM (30)</b>

### Attended Noise Levels – 14<sup>th</sup> May 2010 (evening)

Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	7:28pm	36	<0.2m/s W	Insects (30), <b>SCM (35)</b>
Ferndale	7:49pm	36	<0.2m/s W	Insects (28), <b>SCM (35)</b>
Plain View	6:50pm	40	<0.2m/s W	Insects (31), <b>SCM (40)</b>
Lilydale	6:30pm	40	<0.2m/s W	Birds & Insects (36), Traffic (31), <b>SCM (37)</b>
Glendower	7:10pm	33	<0.2m/s W	Insects (26), <b>SCM (32)</b>

The May results indicate exceedance of noise criteria at “Ferndale” during the morning measurement (3dB) and “Plain View” during the evening measurement (5dB). The “Lilydale” residence is classified Project Related and not assessed against the noise criteria. The exceedances were noted at being predominantly from haul trucks, dozers and engine revs. Namoi Mining is currently awaiting the provision of the May weather report from the Sunnyside Weather Station to identify if any temperature inversion was present during the morning and evening exceedances. Namoi Mining will also consult with the affected residences to determine extent of noise impact and measures that may be able to be taken to minimise impact from future operations.

A sound level meter was also set up in the paddock adjacent to the “Roslyn” property to determine the noise levels associated with coal haulage. The noise levels from 8 light vehicles and 2 heavy vehicles passing the site were measured between 1:30 pm and 3:00 pm on Friday 14<sup>th</sup> May 2010.

Over the monitoring period the measured Leq noise level from mine vehicles was 44.0 dB(A) which is well below the local road noise criterion of 55 dB(A).

### Air Quality Monitoring

#### Deposited Dust

Deposited dust levels for the site for the last 12 months are shown in the following table.

**Sunnyside Mine – Deposited Dust**

Month	SD1 Ferndale	SD3 Plainview	SD4 Lilydale	SD5 Ivanhoe	SD6 Illili	SD7 Innisvale
May 2009	1.4	1.4	1.0	1.0	0.8	1.1
June 2009	0.3	0.5	0.1	0.4	0.2	1.0
July 2009	0.4	0.5	0.5	2.1	0.6	0.7
August 2009	1.8	1.3	1.2	32.6	4.0	0.8
September 2009	9.7	39.9	6.8	12.2	15.0	6.9
October 2009	3.7	12.2	1.9	3.2	10.0	2.3
November 2009	0.6	25.7	1.5	3.0	0.9	1.5
December 2009	1.2	1.4	1.6	1.9	1.1	1.0
January 2010	1.8	7.9	3.0	1.9	1.7	1.6
February 2010	2.5	1.3	0.6	1.2	0.6	0.7
March 2010	11.9	3.0	1.9	1.8	1.8	2.5
April 2010	0.9	1.2	0.9	1.8	0.6	0.6
<b>Annual Average</b>	<b>3.0</b>	<b>8.0</b>	<b>1.7</b>	<b>5.3</b>	<b>3.1</b>	<b>1.7</b>

Deposited dust levels have generally remained at consistently low levels over the last 3 months with the exception of SD1 – “Ferndale” with its March result above expectations. The laboratory analysis for this result confirmed contamination of the sample with insects, bird droppings and leaf matter. It is clearly an outlier result when compared with the deposited dust result from September 2009 which coincided with regional dust storm events.

The annual average for all sites remains below 4g/m<sup>2</sup>/month for all sites except “Plainview” and “Ivanhoe”. The annual averages for both sites is trending downwards with the results over the last 5 months consistently at low levels which again indicates the significance of the outlier results (contamination) on the running annual average.

#### **PM<sub>10</sub> Data**

Compliance with the 24hr criterion of 50µg/m<sup>3</sup> has been maintained at both PM<sub>10</sub> monitor locations during the period since January 2010.

PM<sub>10</sub> measurements taken to date for the “Illili” High Volume Air Sampler are returning a running annual average of 18.73µg/m<sup>3</sup>, which is well below the annual average limit of 30µg/m<sup>3</sup>. The highest reading from this sampler remains 109µg/m<sup>3</sup> measured on the 8<sup>th</sup> December 2009.

PM<sub>10</sub> measurements taken to date for the “Lilydale” High Volume Air Sampler are returning a running annual average of 13.98µg/m<sup>3</sup>, which is well below the annual average limit of 30µg/m<sup>3</sup>. The highest reading from this sampler was 70µg/m<sup>3</sup>, also measured on 8<sup>th</sup> December 2009.

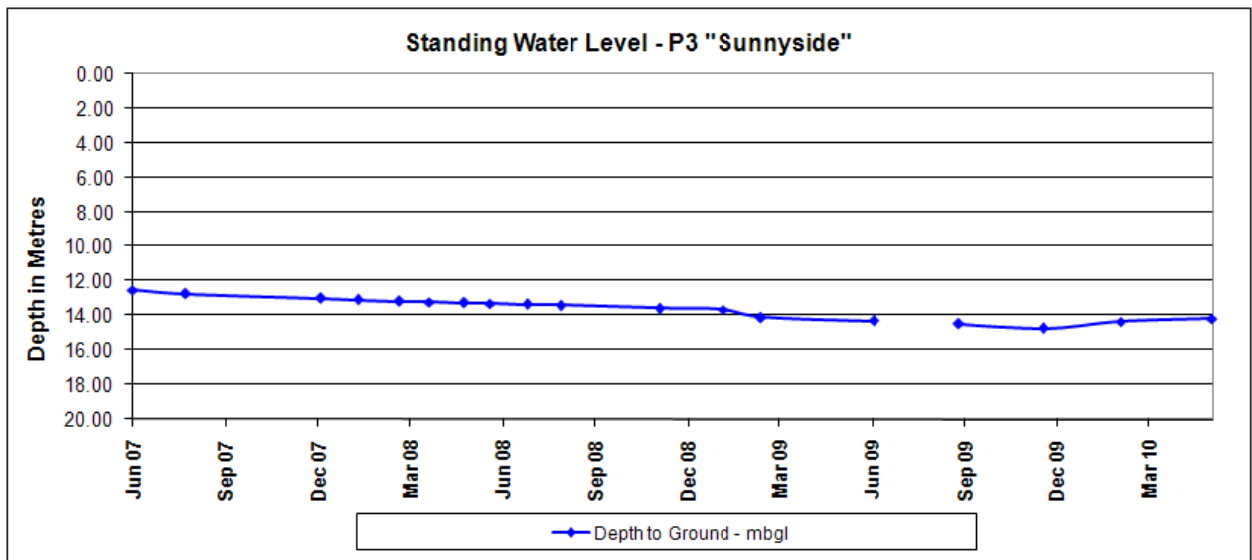
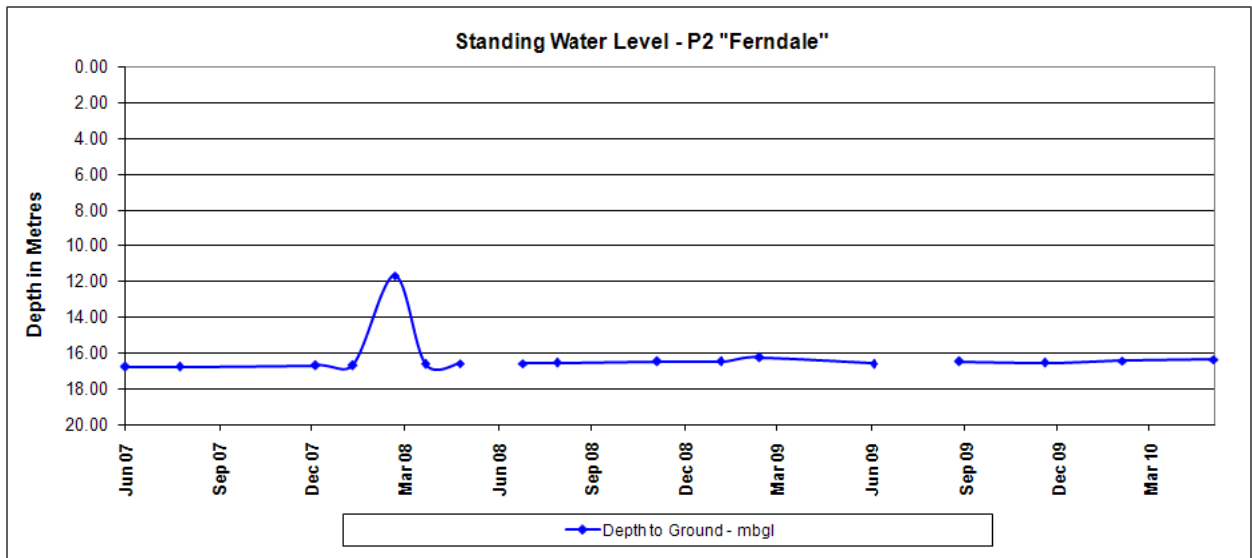
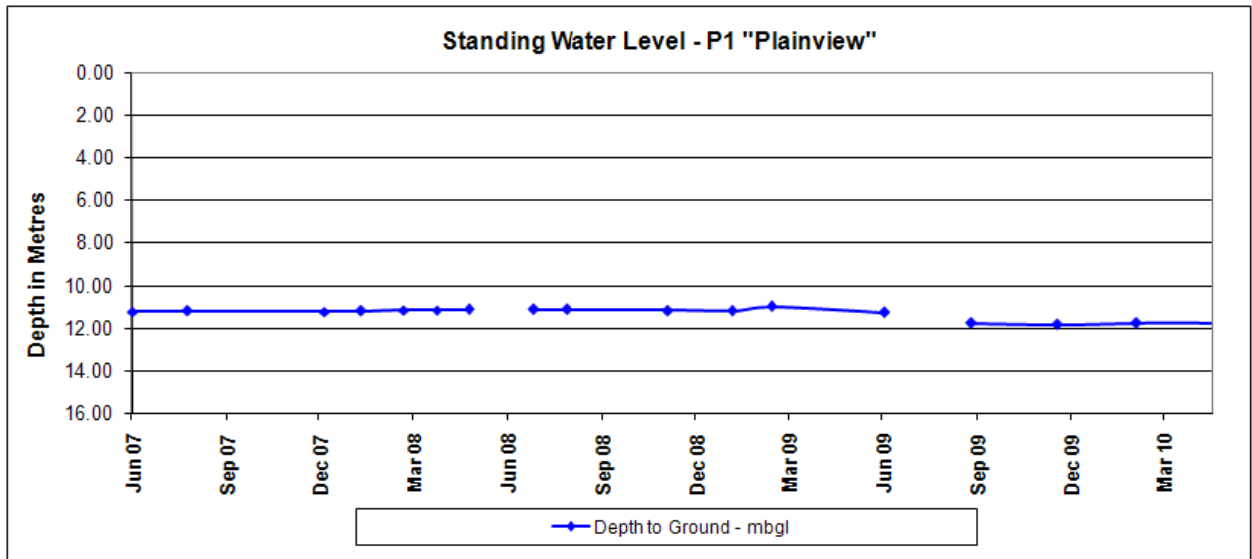
### **Blast Monitoring**

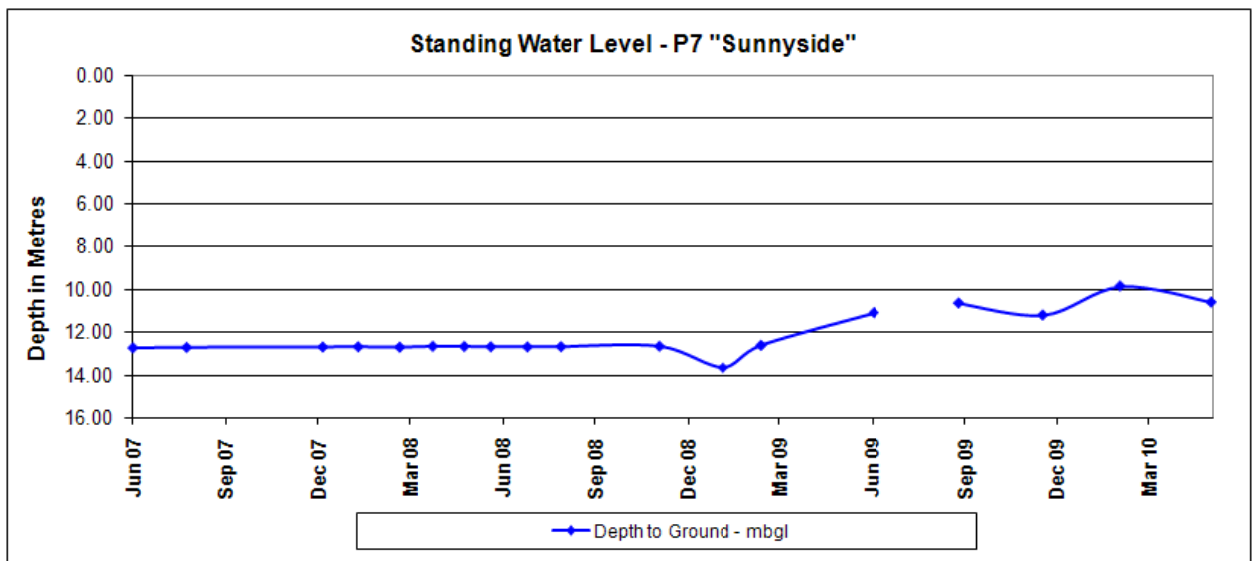
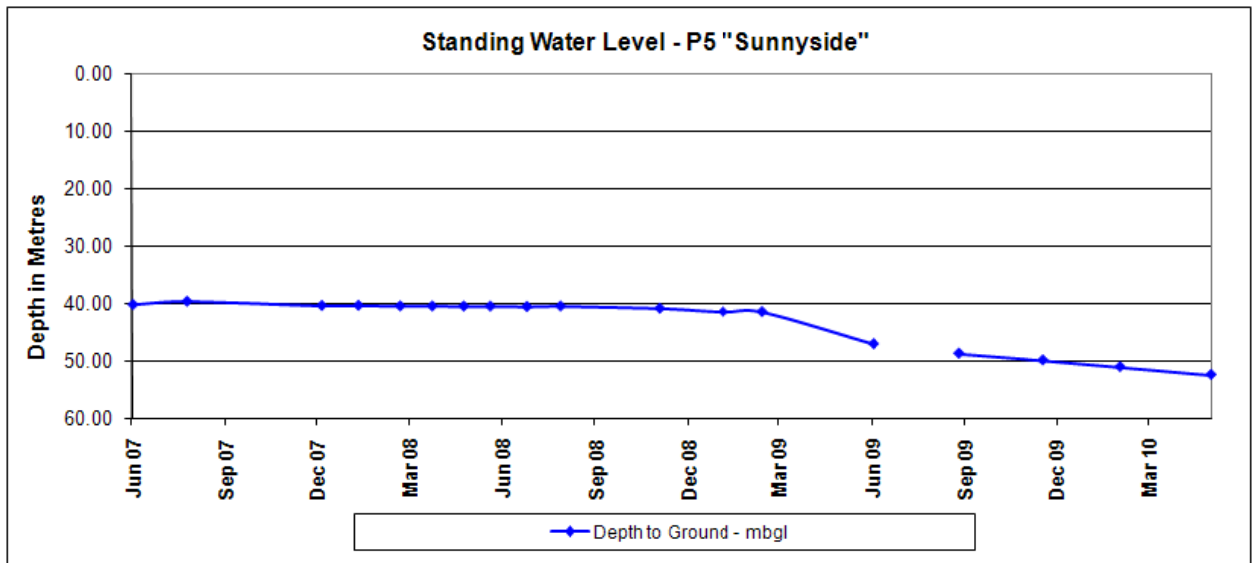
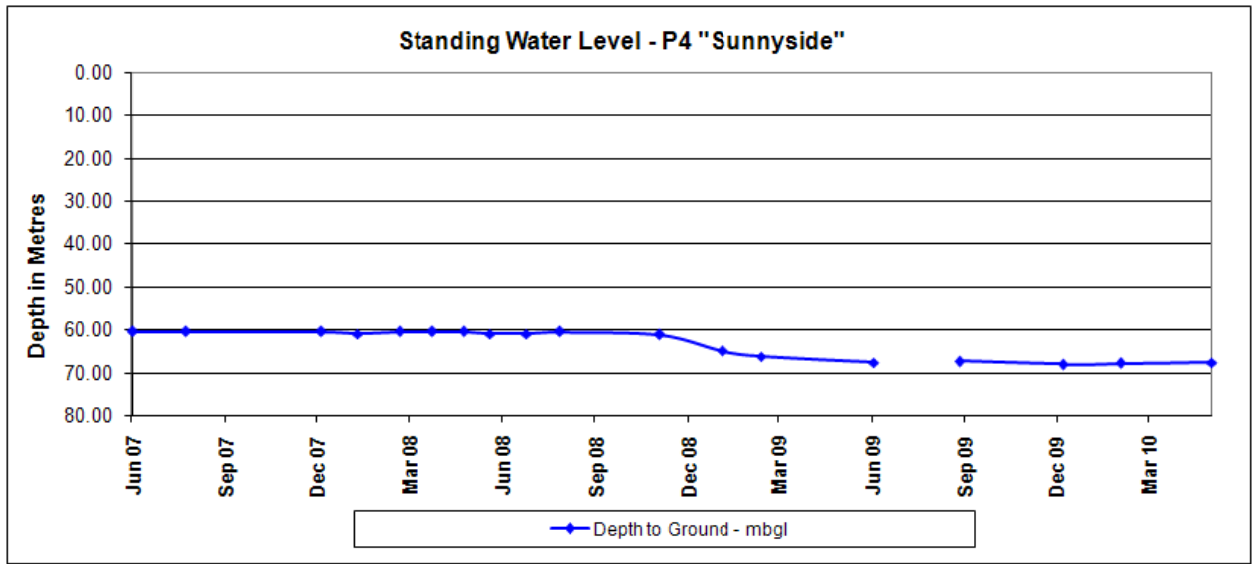
Since the first shot there have been 14 blasts. All blasts during this report period have been compliant within the limits of 115dBL and 5mm/s.

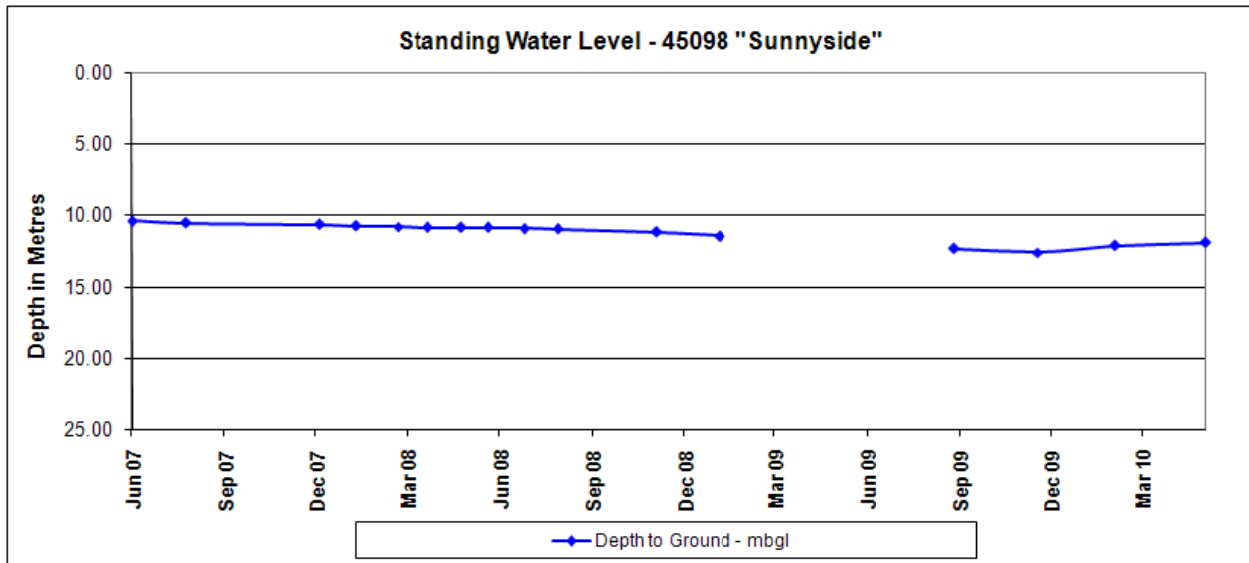
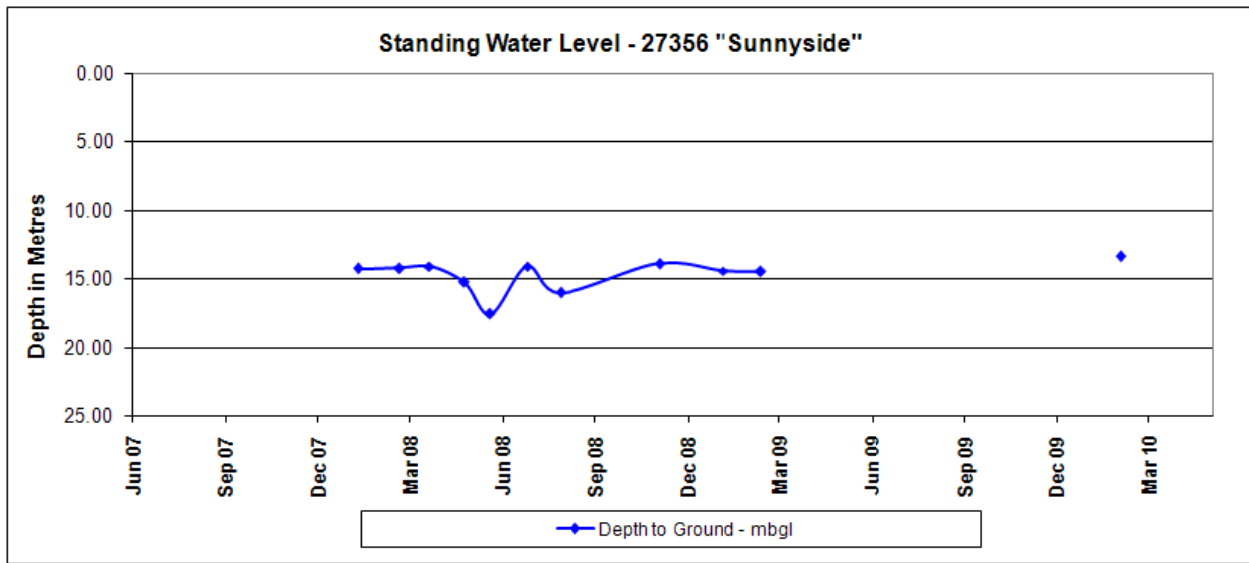
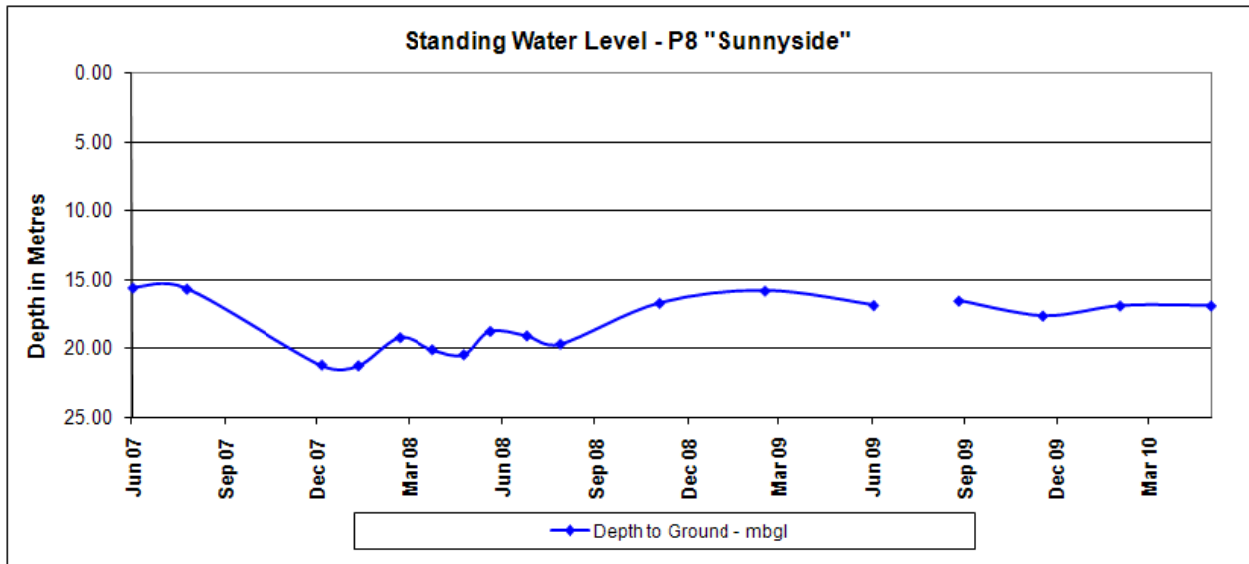
To date, the highest overpressure recorded is 114.8 dBL recorded at “Illili” on the 17<sup>th</sup> April 2010. The highest ground vibration recorded is 2.39mm/s recorded at “Plain View” on the 17<sup>th</sup> April 2009.

### **Groundwater Monitoring**

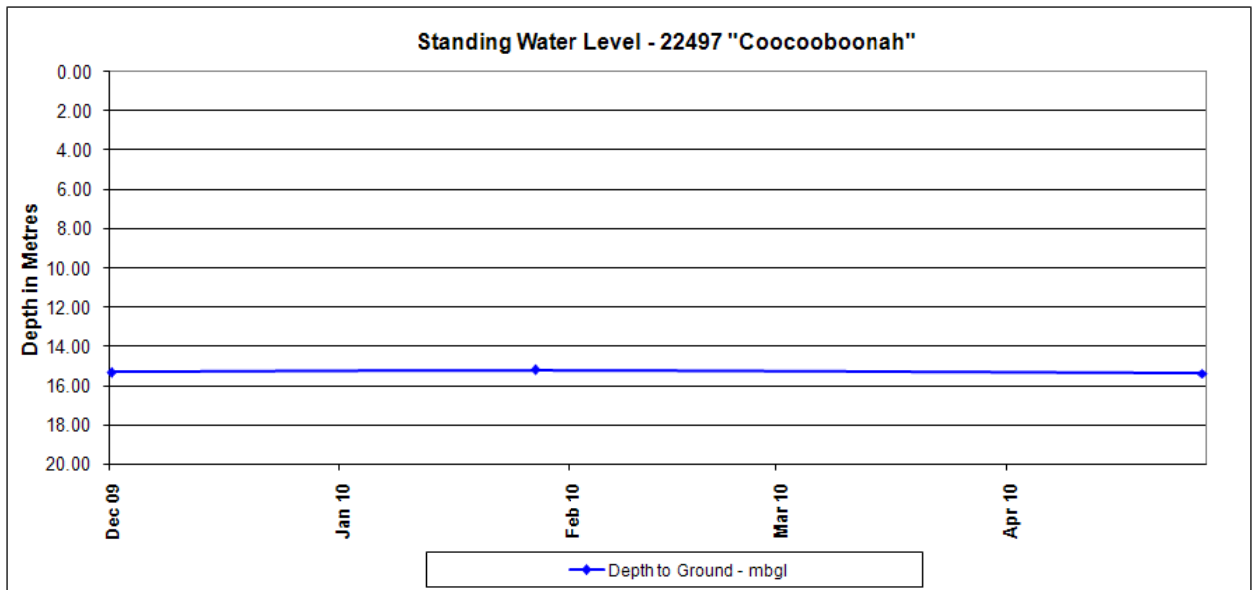
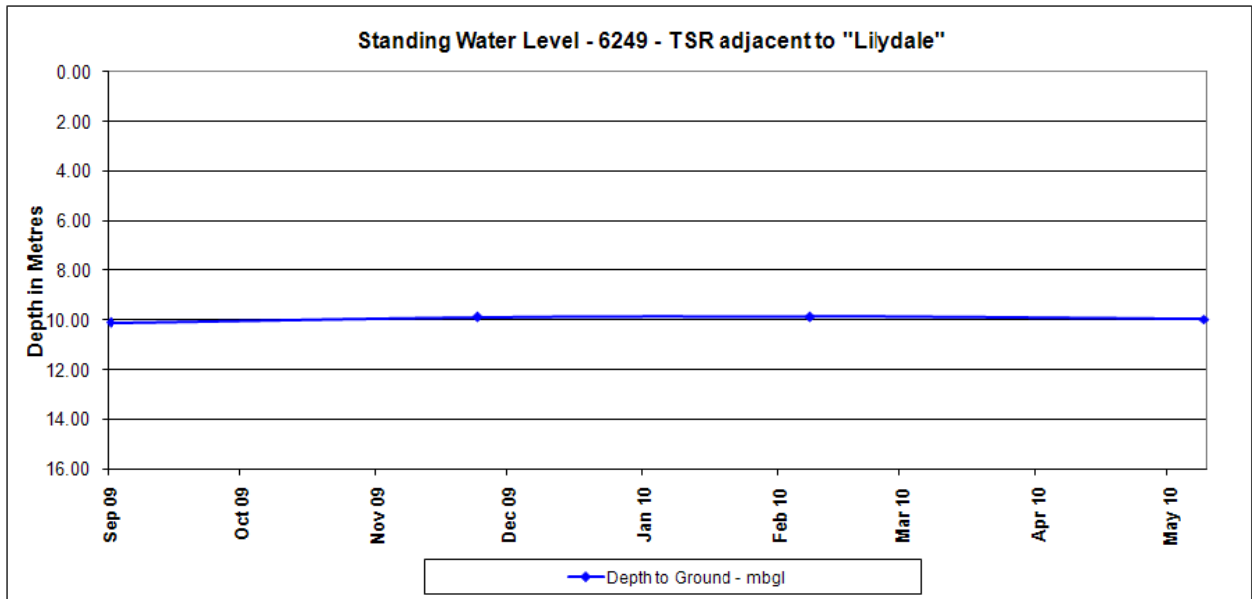
Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level checks are undertaken on a quarterly basis, with full water quality sampling to be undertaken on a 6 monthly basis. Monitoring results to date for Standing Water Level are shown below with no significant impact/trend indicated from mining operations. The next round of monitoring is expected to be conducted during September 2010. Results from this monitoring will be provided at the next CCC meeting.











As discussed in the previous CCC report, results to date indicate minor variability in groundwater levels with no significant trend applicable. There is evidence of some minor recharge in some of the bores over the Dec 09 – Feb 10 period, but no identifiable recharge in others. P5 remains the only monitoring location that has continued a downward trend in SWL since February 2009. P5 is the closest monitoring point to the active pit and the most likely monitor to be affected from depressurisation as a result of the open cut. Groundwater seepage into the pit is still minimal. Ongoing data collection will provide for longer term analysis of groundwater impact.

### **Surface Water**

No wet weather discharge events have occurred since the last CCC meeting. Surface water sampling over March and May from storages on site have indicated that water quality parameters would be within concentration criteria if a discharge event was to occur.

### **Complaints**

No complaints have been received since the last CCC meeting.

The complaints line number is: **0427 106 384**.

### **Rehabilitation**

Minor shaping works of the northern dump occurred during the reporting period. A Landscape Management Plan, incorporating a Rehabilitation Management Plan is currently being developed by external consultants as required under the site's development consent. It is expected the plan will be finalised during June 2010 and will guide future rehabilitation actions across the site.