

**Minutes of the 13<sup>th</sup> Meeting of the  
Sunnyside Coal Mine Community Consultative Committee**

**Meeting Held:** 14<sup>th</sup> March 2012, 3:30pm

**Venue:** The meeting was held in the Board Room at Namoi Valley Brickworks.

**1. Present and Apologies**

**Present:** Mr Michael Broekman (MB) (Chairman)  
Mr Bruce Reid (BR) (Community Representative)  
Mrs Jill Johnson (JJ) (Environmental Officer - Whitehaven)  
Mr Craig Woodhead (CW) (Action Project Manager - Whitehaven)  
Mr Tim Muldoon (TM) (Community Liaison Officer - Whitehaven)  
Mr Andrew Kennedy (AK) (Community Representative)

The Committee was advised that Michael Clark had resigned and Craig Woodhead has taken up the position of Acting Project Manager.

**Apologies:** Mr Danny Young (DY) (Environmental Manager - Whitehaven)

Moved: AK and CW

**2. Previous Minutes**

Minutes of the previous meeting were adopted as a true record on the motion of BR and TM.

**3. Business Arising**

- 3.1. Letter received from Vivienne Rooke (BR's daughter) advising of her resignation as BR's representative on the Committee. No alternative representative provided. Letter of thanks to be issued to Vivienne – moved BR, TM.

**4. Mine Progress Report**

CW provided an update on the mine's progress as follows:

- Operators - 13 full time, 9 permanent casual and 4 part time casual.
- Fitters - 1 permanent.
- Site management – 2 permanent.
- 616 LTI free days as at 29<sup>th</sup> February 2012.
- Some repair works to be conducted in the coming months (weather permitting) for erosion on rehabilitated areas following heavy rain.
- Overpressure exceedance recorded during shot 43 (18<sup>th</sup> Jan 2012).
- Noise exceedance recorded at Plainview on 7<sup>th</sup> February 2012.
- Total blasted volume for the three months was 729,550 bcm.
- Nil topsoil has been removed and stockpiled in the last three months.
- In the last three months 946,632 bcm of overburden has been removed and 115,639 tonnes of coal mined.
- 94,720 tonnes of ROM coal has been transported offsite.

AK asked if there had been any issues with pit water during the wet weather events. CW advised that all pit water had been retained onsite.

BR commented that the mine seems to be working in one area and it must be getting deep. CW said there will be another 3 months of working towards the east and then the pit will move west. The highwall will be approximately 80m on the highest corner.

## **5. Environmental Monitoring Report**

JJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

TM asked if the pit water was actually groundwater intercepted in the pit or rainfall runoff collected in the pit. CW advised that the majority of the water is rainfall runoff.

BR asked if there will be a final void. CW said that there would be.

BR asked about trucks turning right from the highway to Blackjack Road. AK said he thought they were Tunbridge's trucks. Whitehaven said they would investigate and provide an update at the next meeting.

MB asked if the Committee was happy with the Company's response to the complaint regarding blasting. AK asked if the Company had responded. JJ advised that the complainant indicated that he didn't need a response to the complaint but requested it be recorded. A follow up phone call had since been received from the complainant requesting a meeting with Whitehaven. Whitehaven will arrange the meeting with the complainant.

## **6. Complaints**

Complaints were discussed in the Environmental Monitoring Report.

## **7. General Business**

AK tendered his resignation from the Committee. TM thanked AK for his contribution to the Committee. Letter of thanks to be issued to AK.


MB tabled a letter from Liz Ferguson expressing interest in being a member on the CCC. JJ to check CCC application requirements and respond to Liz's letter. Whitehaven to advertise for expressions of interest for new members.

TM provided a brief update on the proposed Whitehaven/Aston merger. Due diligence works are still being undertaken with further outcomes expected in April.

## **8. Next Meeting**

Wednesday 13<sup>th</sup> June 2012

Meeting closed at 4:00pm

  
Michael Broekman - Chairman

# Sunnyside Coal Mine Community Consultative Committee Meeting #13

## Environmental Monitoring Report December 2011 – February 2011

### 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:-

Day/Evening LAeq(15 minute)	Land
35	Any residence on, or more than 25% of, any privately owned land, except "Lilydale". Impact Assessment Criteria dB(A).

Monitoring was undertaken on the 7<sup>th</sup> February 2012 with results outlined below:

Noise Monitoring Results – 7 <sup>th</sup> February 2012 (Day)				
Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	4:19 pm	47	2m/s SW	Traffic (45), Birds (38), wind (38), <b>SCM inaudible</b>
Ferndale	5:05 pm	46	1-2m/s SW	Birds (45), domestic noise (35), <b>SCM inaudible</b>
Plain View	4:21 pm	42	1-2m/s SW	<b>SCM (38)</b> , wind (38), Birds & insects (33)
Lilydale	3:55 pm	44	2m/s SW	Birds & insects (40), Traffic (38), <b>SCM (31)</b>

Noise Monitoring Results – 7 <sup>th</sup> February 2012 (Evening)				
Location	Time	dB(A),Leq	Wind speed/ direction	Identified Noise Sources
Illili	8:19 pm	44	2-3m/s SW	Birds & insects (42), wind (36), <b>SCM (30)</b>
Ferndale	8:44 pm	50	2-3m/s SW	Birds & insects (50), <b>SCM (28)</b>
Plain View	8:31 pm	54	2-3m/s SW	Birds & insects (53), traffic (42), <b>SCM inaudible</b>
Lilydale	8:09 pm	45	1-2m/s SW	Traffic (43), Birds & insects (36), <b>SCM (&lt;30)</b>

The results indicate compliance at all non-project related receivers, except "Plain View" where a 3 dB exceedance occurred during the daytime monitoring. The primary cause of this exceedance was truck noise from the mine. As a previous exceedance occurred in August 2011, a private agreement may be sought with the residents of "Plain View" to address any potential noise exceedances in future. The landholders, Department of Planning and Infrastructure and the Office of Environment and Heritage were all notified of the exceedance.

Monitoring was also conducted at the "Glendower" residence on the 7<sup>th</sup> February 2012 to confirm if mine noise remained within compliance limits at that residence, with results confirming compliance as per the following table.

Noise Monitoring Results – 7 February 2012 - Glendower				
Date	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
7 February	4:39 pm	47	2m/s SW	Birds (44), traffic (41), wind (41), <b>SCM inaudible</b>
7 February	7:58 pm	49	1-2m/s SW	Insects (48), wind (40), <b>SCM (32)</b>

Road noise monitoring was undertaken on the 7<sup>th</sup> February 2012 for a one hour period from 5:00pm. A total of 6 heavy vehicles travelled along Torrens Lane during the monitoring period, consisting of 3 full and 2 empty coal haulage trucks entering and leaving the CHPP and one fuel truck leaving site. The measured Leq noise level from all vehicles on Torrens Lane was of 49.8 dB(A) Leq (1 hour). This is in compliance with the noise criterion for a local road of 55 dB(A) Leq (1 hour).

### 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	SD8 Woodlawn
March 2011	2.7	0.8	1.1	0.6	0.8	0.7	0.5
April 2011	0.7	0.8	0.8	1.0	0.6	2.1	0.7
May 2011	0.5	0.7	1.1	5.5	0.6	0.7	1.5
June 2011	0.5	1.6	0.7	0.3	0.4	1.6	0.5
July 2011	0.5	1.0	0.2	0.5	0.5	0.7	0.3
August 2011	0.4	0.9	0.4	2.7	0.5	0.8	0.5
September 2011	0.9	0.6	0.3	0.7	0.3	0.6	0.3
October 2011	0.6	0.7	0.4	1.7	0.8	0.5	0.7
November 2011	3.7	0.7	1.9	2.6	1.4	1.2	0.9
December 2011	0.7	1.4	1.0	1.5	1.2	3.3	1.3
January 2012	1.6	3.8	6.8	6.0	1.8	4.3	1.9
February 2012	0.8	1.6	10.2	13.6	2.8	1.2	3.7
<b>Annual Average</b>	<b>1.1</b>	<b>1.2</b>	<b>2.1</b>	<b>3.1</b>	<b>1.0</b>	<b>1.5</b>	<b>1.1</b>

Deposited dust rates over the last three months have generally been at low levels, with the exception of the “Lilydale”, “Ivanhoe” and “Innisvale” monitors.

“Lilydale”, which is project related, recorded results of 6.8 and 10.24g/m<sup>2</sup>/month during January and February 2012. Upon review of the chain of custody documentation, plant and insect matter was present in both samples and may have contributed to the results.

The “Ivanhoe” monitor recorded results of 6.0 and 13.6g/m<sup>2</sup>/month during January and February 2012, again with chain of custody documentation revealing that insect and plant material was present in the samples.

The “Innisvale” monitor recorded 4.3g/m<sup>2</sup>/month during January 2012. This minor exceedance is considered an anomaly, as “Innisvale” rarely records any elevated results. The chain of custody also revealed that plant and insect material was present.

These three monitors have not exceeded the 4g/m<sup>2</sup>/month annual average limit, although they will be closely monitored in the coming months to ensure compliance is met. The annual average dust levels at all other monitors have continued to remain very low.

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

Compliance with the 24hr criterion of 50µg/m<sup>3</sup> has been maintained during the reporting period.

PM<sub>10</sub> measurements taken for the “Illili” High Volume Air Sampler (HVAS) are returning a running annual average of 9.62µg/m<sup>3</sup>, which is well below the annual average limit of 30µg/m<sup>3</sup>.

PM<sub>10</sub> measurements taken for the “Lilydale” HVAS are returning an annual average of 8.48µg/m<sup>3</sup>, which is also well below the annual average limit of 30µg/m<sup>3</sup>.

### **Blast Monitoring**

Since the first blast there have been 47 blasts. On the 18<sup>th</sup> January 2012, during blast 43, an exceedance of the overpressure criteria (120.0dBL) was recorded at monitoring point “Plain View” (122.2dBL). An investigation into the cause of the overpressure exceedance was carried out by the blasting contractor Orica.

After a review of blast design, loading data, video and photographic evidence as well as environmental monitors, the root cause of the overpressure exceedance was the reinforcement of blast hole signals arriving at the monitor at the same time. Upon reviewing the initiation sequences, up to 19 holes would have arrived at the “Plain View” monitor within an 8ms window. This was caused by a deficiency in the blast timing design. Other factors including vertical movement, due to inadequate stemming and survey may have contributed to the exceedance.

### **The following recommendations were made by Orica:**

1. Use hole arrival predictive tool for all Sunnyside blasts, with all blast and initiation designs to be sent off site for review until consistent results can be generated.
2. Wherever possible all blasts should be marked out using survey to ensure that adequate and appropriate face burdens are achieved, with no pattern drilled without clear drill patterns being issued.
3. Increase the stemming length in holes to 4m when heavier burdens are present.

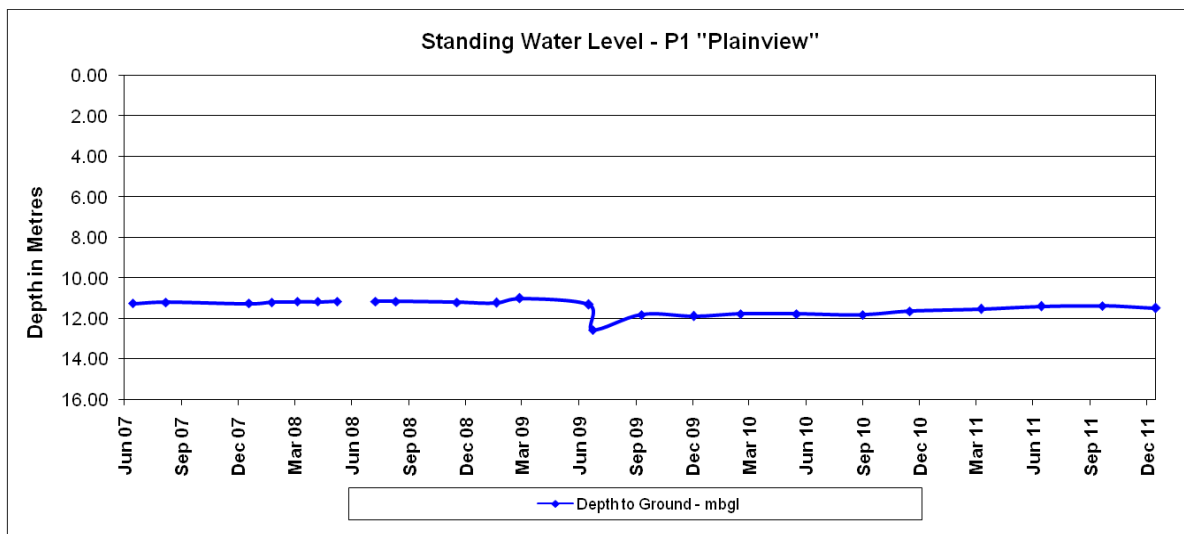
Whitehaven are closely working with Orica with the intention of achieving compliance of all future Sunnyside blasts.

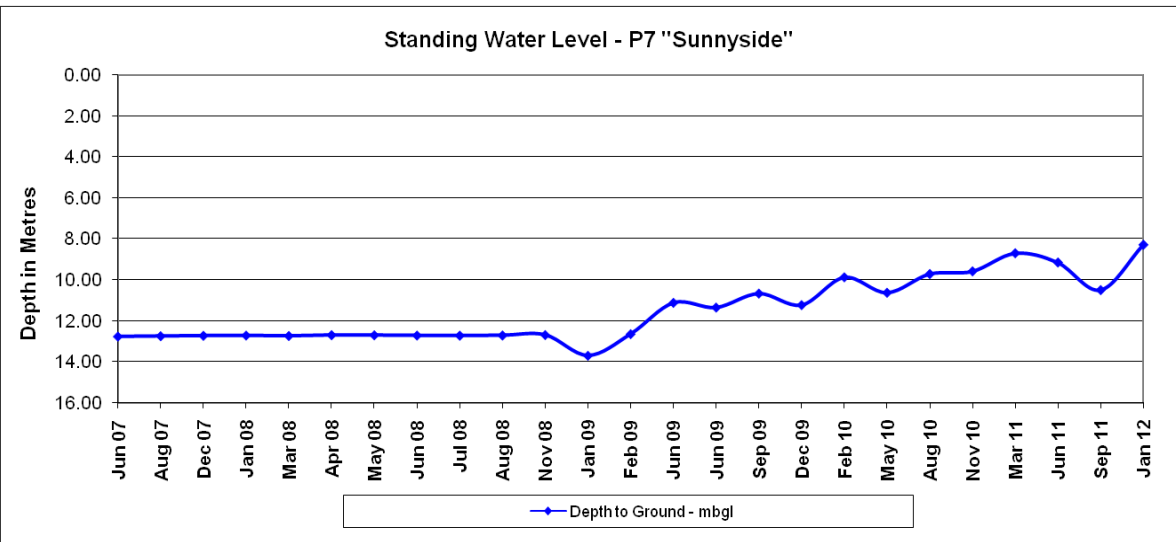
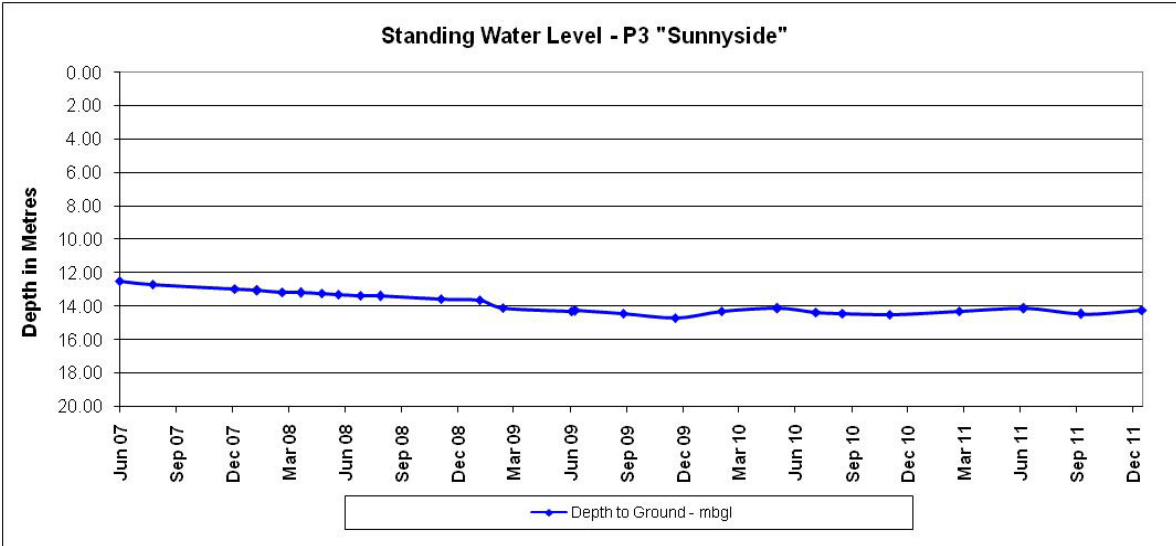
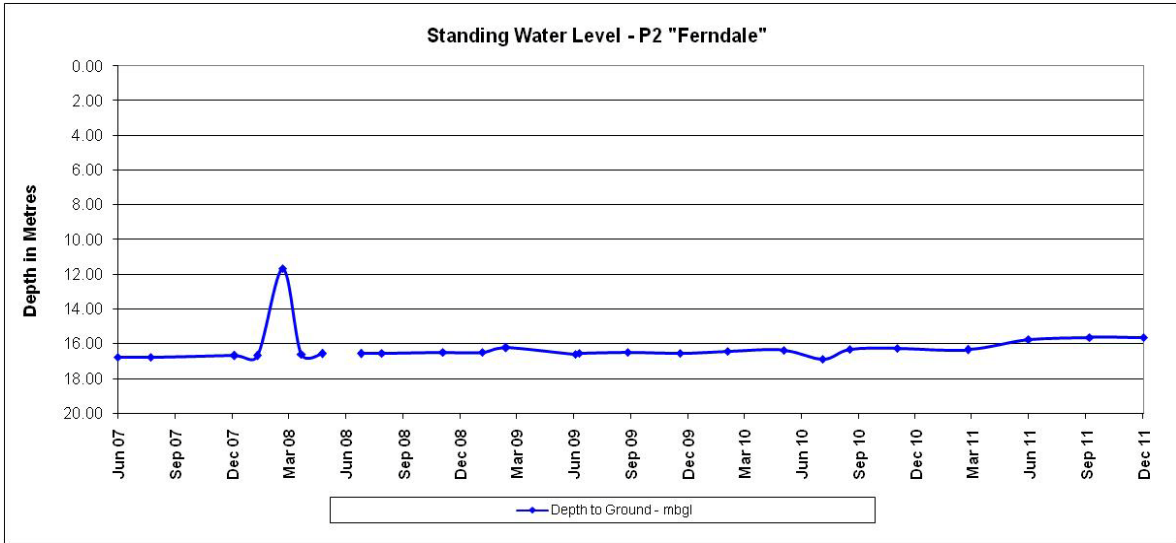
Since blasting commenced, the highest recorded overpressure was 128.8 dBL recorded at "Innisvale" on the 3<sup>rd</sup> May 2011. The highest ground vibration recorded is 2.39mm/s recorded at "Plain View" on the 17<sup>th</sup> April 2009.

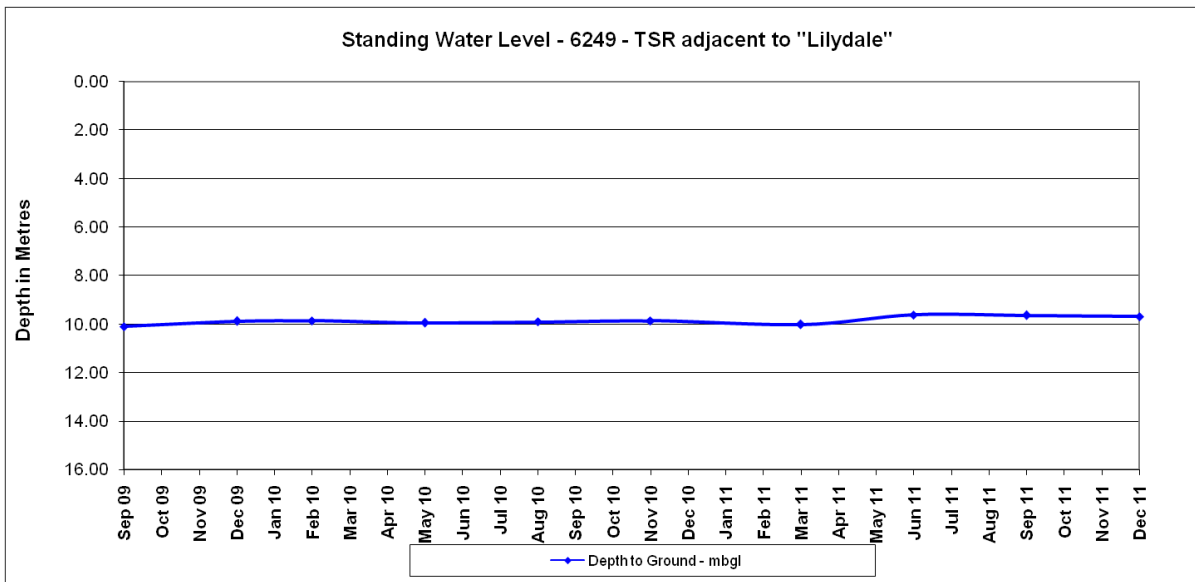
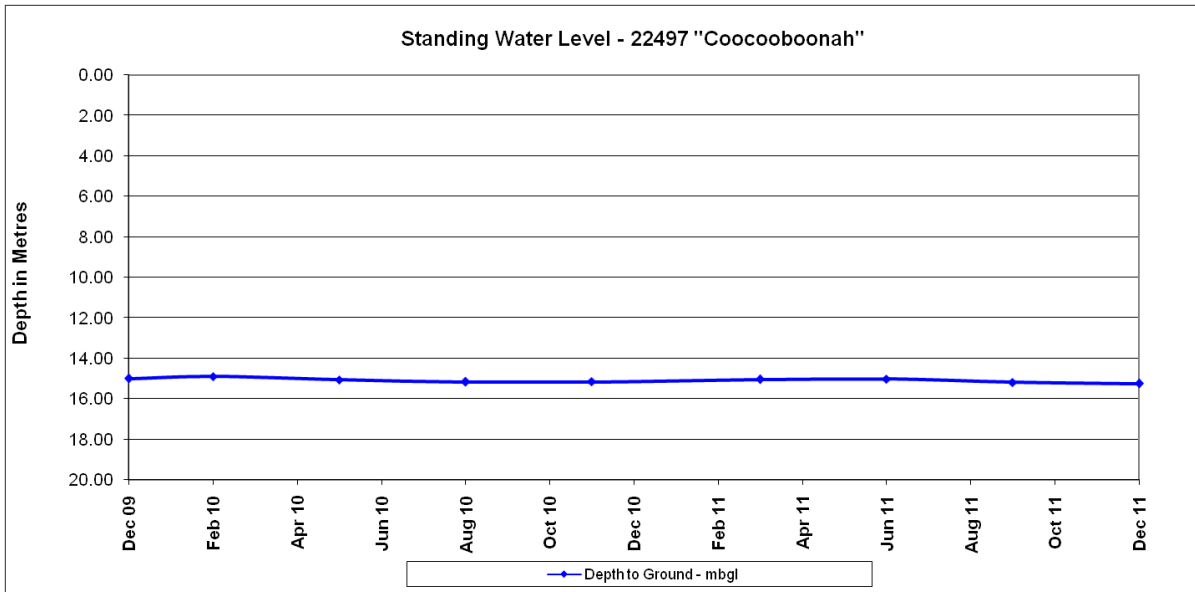
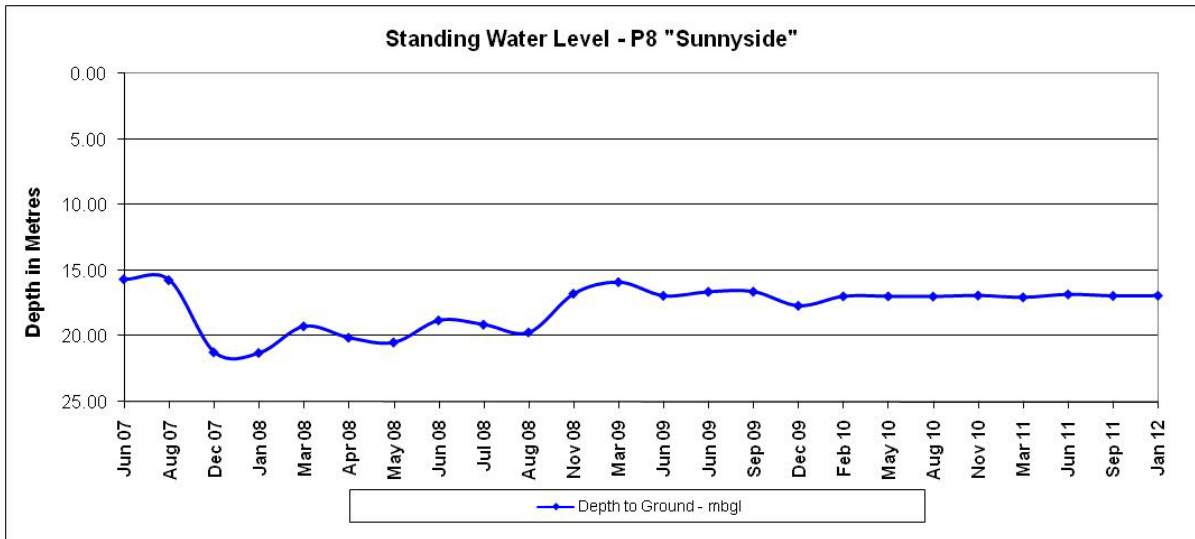
### **Groundwater Monitoring**

Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level (SWL) checks are undertaken on a quarterly basis, with full water quality sampling undertaken on a 6 monthly basis.

Monitoring was undertaken on the 15<sup>th</sup> December 2011 and 6<sup>th</sup> January 2012. Results for SWL are shown below with no significant impact/trend indicated from mining operations, other than at monitoring point P7, where recharge is occurring. This recharge is due to the bore's stand pipe being broken at ground level, accepting inflow from rainfall and as a result recharging. This stand pipe is expected to be repaired in the coming month. These graphs represent water bores and piezometers which are currently accessible for monitoring. Monitoring Piezometer 4 (P4) is now in the production area and will no longer be monitored. The next round of monitoring is expected to be conducted during March 2012.









## **Surface Water**

Surface water sampling was carried out in February 2012. Results from the sampling were generally good with some elevated Total Suspended Solids (TSS) detected in some of the site's sediment basins. These sediment basins will continue to be utilised over the coming weeks for site dust suppression to ensure they have sufficient capacity for further inflow, thereby reducing potential overflow into the final discharge dam. The final discharge dam, Storage Dam 4 (SD4), returned good results with low sediment levels.

Two wet weather discharge events have occurred since the last CCC meeting. The first discharge occurred from SD4 after 65mm of rain on the 11<sup>th</sup> December 2011. All parameters were compliant with EPL thresholds, including a TSS level of 48mg/L (compliance threshold – 50mg/L). Coocooboonah Creek upstream (CCUS) and downstream (CCDS) samples were also taken at the time of discharge. Low TSS was recorded at both locations, being 46mg/L at CCUS and 34mg/L at CCDS.

The second discharge, also from SD4, occurred on the 6<sup>th</sup> February 2012 after 111.6mm of rain during the five days leading up to the event. SD4 recorded results which were compliant with EPL thresholds, including a TSS level of 16mg/L. A sample from CCDS was also taken at the time of discharge, with a low TSS of 36mg/L recorded. No upstream sample was taken due to inaccessibility due to regional flood waters.

## **Complaints**

One complaint has been received since the last CCC meeting. The complaint was made on the 25<sup>th</sup> January at 11:48am, via text message to the Sunnyside Complaints Line. The complaint was in relation to the blast conducted on that day and impacts on the complainant's residence. The complainant described the blast as a significant explosion, which shook the complainant's house.

The complaint was raised with the Sunnyside Project Manager. Review of blast monitoring results at monitors in closer proximity to the blast site indicated compliance with both overpressure and ground vibration at all points. Cloud conditions may have exacerbated overpressure impacts however at the time it was deemed appropriate to proceed with the blast. Delaying the blast may have resulted in worse conditions due to predicted rain and the potential for post blast fume that this would create. The complainant advised no requirement to respond to the complaint but requested that the complaint be placed on the public record.

## **Rehabilitation**

No rehabilitation has occurred since the last CCC meeting. Previous rehabilitation outlined in the last CCC meeting has produced good results.



**Developed pasture on newly rehabilitated waste emplacement area**

**Minutes of the 14<sup>th</sup> Meeting of the  
Sunnyside Coal Mine Community Consultative Committee**

**Meeting Held:** 13 June 2012, 3:35pm

**Venue:** The meeting was held in the Board Room at Namoi Valley Brickworks.

**1. Present and Apologies**

**Present:** Mr Michael Broekman (MB) (Chairman)  
Mr Bruce Reid (BR) (Community Representative)  
Mrs Jill Johnson (JJ) (Environmental Officer - Whitehaven)  
Mr Craig Woodhead (CW) (Action Project Manager - Whitehaven)  
Mr Tim Muldoon (TM) (Community Liaison Officer - Whitehaven)  
Mrs Liz Ferguson (LF) (Community Representative)  
Miss Brittany Riley (BRi) (Alternate Community Representative), 3:40pm  
Mr Hans Allgayer (HA) (Gunnedah Shire Council Representative)

**Apologies:** Mr Danny Young (DY) (Environmental Manager - Whitehaven)  
Glenn Bailey (GB) (Community Representative)

Moved: CW and HA

**2. Previous Minutes**

Minutes of the previous meeting were adopted as a true record on the motion of BR and CW.

**3. Business Arising**

- 3.1. Liz Ferguson and Brittany Riley were introduced to the Committee and provided with an outline of how the meetings are conducted. The Department guideline for CCCs was posted to Liz and Brittany prior to the meeting.
- 3.2. JJ advised that a thankyou letter had been issued to Vivienne Rooke for her assistance to BR during meetings.
- 3.3. JJ advised that Toll trucks are not turning right from the Oxley Highway onto Blackjack Road. The trucks are private contractors (Tunbridge's) who used to sub-contract to Toll. They no longer work for Toll but have not taken the numbers off their trucks.
- 3.4. JJ advised that a thankyou letter had been issued to Andrew Kennedy for his contribution to the Committee.
- 3.5. JJ said that Whitehaven had advertised for expressions of interest for new members and received two applications. The Department of Planning and Infrastructure reviewed the applications and appointed LF as a full time member and BRi as an alternate member. Alternate members are invited to meetings when full time members have advised that they are not able to attend. JJ reiterated the importance of members advising Whitehaven as soon as possible if they are not able to attend meetings so there is enough time to notify Brittany.

#### **4. Mine Progress Report**

CW provided an update on the mine's progress as follows:

- Operators - 13 full time, 24 permanent casual and 5 part time casual.
- Fitters - 1 permanent.
- Site management – 2.
- 708 LTI free days as at 31<sup>st</sup> May 2012. New site record (599 previously).
- Reshaping of the northern waste emplacement almost ready for topsoiling. Erosion repair works will occur at the same time.
- 8 blasts between 1<sup>st</sup> March and 31<sup>st</sup> May 2012.
- Nil topsoil has been removed and stockpiled in the last three months.
- In the last three months 1,140,804 bcm of overburden has been removed and 173,217 tonnes of coal mined.
- 151,616 tonnes of ROM coal has been transported offsite.

#### **5. Environmental Monitoring Report**

JJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

#### **6. Complaints**

Complaints were discussed in the Environmental Monitoring Report.

#### **7. General Business**

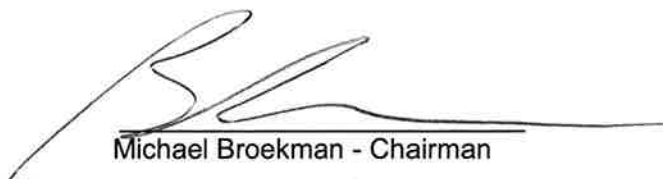
LF raised concern about the Mining Purposes Lease applications for Brickworks implying Bushes Lane was a public road. The committee discussed the situation and MB advised that the road is actually private road deemed for public access. Whitehaven will deal with this issue separately as it is not related to Sunnyside.

LF asked about groundwater testing in bores around Brickworks. This will be addressed separately by Whitehaven as it is not related to Sunnyside.

#### **8. Next Meeting**

Wednesday 12<sup>th</sup> September 2012, 3:30pm.

Meeting closed at 4:25pm



Michael Broekman - Chairman

# Sunnyside Coal Mine Community Consultative Committee Meeting #14

## Environmental Monitoring Report March – May 2011

### **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:-

Day/Evening LAeq(15 minute)	Land
35	Any residence on, or more than 25% of, any privately owned land, except "Lilydale". Impact Assessment Criteria dB(A).

Monitoring was undertaken on the 29<sup>th</sup> May 2012 with results outlined below:

Noise Monitoring Results – 29 May 2012 (Day)				
Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	4:23 pm	41	1m/s S	Birds (41), SCM (35), traffic (32)
Ferndale	5:12 pm	46	1.5m/s S	Traffic (45), SCM (35), birds (33)
Plain View	3:58 pm	48	2-3m/s S	Birds (47), wind in trees (40), traffic (32), SCM inaudible
Lilydale	3:35 pm	44	1.5m/s S	Traffic (42), birds & insects (41), SCM inaudible

Noise Monitoring Results – 29 May 2012 (Evening)				
Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	8:08 pm	39	2m/s S	Birds & insects (36), SCM (33), traffic (30), wind in trees (30)
Ferndale	9:01 pm	41	1.5m/s S	Birds (38), SCM (37), traffic (30)
Plain View	7:36 pm	51	2-3m/s S	Insects (51), wind in trees (44), traffic (35), SCM inaudible
Lilydale	7:10 pm	41	1.5m/s S	Traffic (39), birds & insects (33), SCM inaudible

The results indicate that, under the operational and atmospheric conditions at the time, noise emissions from mine operations exceeded the noise criterion of 35 dB(A)  $L_{eq}$  (15 min) at the "Ferndale" property during the evening survey. Mine hum, truck revs and dozer tracks were the dominant audible mine noise sources at this receiver.

Monitoring was also conducted at the "Glendower" residence on the 29<sup>th</sup> May 2012 to confirm if mine noise remained within compliance limits at that residence, with results confirming a 1dB exceedance during the day survey as per the following table.

Noise Monitoring Results – 29 May 2012 - Glendower				
Date	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
29 May	4:50 pm	44	1.5m/s S	Birds (43), SCM (36), traffic (35)
29 May	7:58 pm	36	1m/s S	SCM (35), insects (28)

An investigation is currently underway to determine the cause of the elevated results. The investigation will include determination of any temperature inversion that may have been present at the time of monitoring that may have influenced noise levels. Agencies and the landholders will be informed of the elevated noise results and the outcomes from the investigation. Discussions will be held with the affected landholders to verify if noise from the mine has been causing consistent impacts or if the elevated result was an isolated occurrence. These discussions will inform the most appropriate steps to minimise the risk of further noise exceedances.

Road noise monitoring was conducted on the 30<sup>th</sup> May 2012 for a one hour period from 8:00am. The sound level meter was set up in the yard at “Roslyn” on Torrens Lane, at the same distance from the road as the façade of the residence.

A total of 18 heavy vehicles travelled along Torrens Lane during the monitoring period. These consisted of 9 full and 8 empty coal haulage trucks entering and leaving the CHPP site and 1 water cart leaving the site. The measured Leq noise level from all vehicles on Torrens Lane was of 57 dB(A)  $L_{eq(1\text{ hour})}$  which is in exceedance of the noise criterion for a local road of 55 dB(A)  $L_{eq(1\text{ hour})}$ . As “Roslyn” is a project related property, the elevated noise result does not constitute a non-compliance.

## **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	SD8 Woodlawn
June 2011	0.5	1.6	0.7	0.3	0.4	1.6	0.5
July 2011	0.5	1.0	0.2	0.5	0.5	0.7	0.3
August 2011	0.4	0.9	0.4	2.7	0.5	0.8	0.5
September 2011	0.9	0.6	0.3	0.7	0.3	0.6	0.3
October 2011	0.6	0.7	0.4	1.7	0.8	0.5	0.7
November 2011	3.7	0.7	1.9	2.6	1.4	1.2	0.9
December 2011	0.7	1.4	1.0	1.5	1.2	3.3	1.3
January 2012	1.6	3.8	6.8	6.0	1.8	4.3	1.9
February 2012	0.8	1.6	10.2	13.6	2.8	1.2	3.7
March 2012	0.8	1.5	4.6	4.6	1.3	1.1	10.8
April 2012	0.8	3.3	0.4	1.7	1.1	1.1	0.8
May 2012	1.6	0.5	0.5	1.2	0.7	1.2	0.6
<b>Annual Average</b>	<b>1.1</b>	<b>1.5</b>	<b>2.3</b>	<b>3.1</b>	<b>1.1</b>	<b>1.5</b>	<b>1.9</b>

Deposited dust rates over the last three months have been at low levels, with the exception of a result of 10.8g/m<sup>2</sup>/month at “Woodlawn” in March 2012. Deposited dust gauges collect dust from all sources which can result in elevated dust levels that aren't necessarily related to mining operations. The “Plainview” and “Lilydale” properties are in between the mine and “Woodlawn” and both only recorded a result of 4.6g/m<sup>2</sup>/month. The “Woodlawn” result also comprised 7.6g of combustible matter as per the laboratory advice thereby indicating that the bulk of the sample was not dust related. Despite this higher than normal result at “Woodlawn”, the annual average remains well within the compliance limit of 4g/m<sup>2</sup>/month. All other monitors also remain compliant.

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

Compliance with the 24hr criterion of 50µg/m<sup>3</sup> has been maintained during the reporting period.

PM<sub>10</sub> measurements taken for the “Illili” High Volume Air Sampler (HVAS) are returning a running annual average of 9.83µg/m<sup>3</sup>, which is well below the annual average limit of 30µg/m<sup>3</sup>.

PM<sub>10</sub> measurements taken for the “Lilydale” HVAS are returning an annual average of 8.09µg/m<sup>3</sup>, which is also well below the annual average limit of 30µg/m<sup>3</sup>.

### **Blast Monitoring**

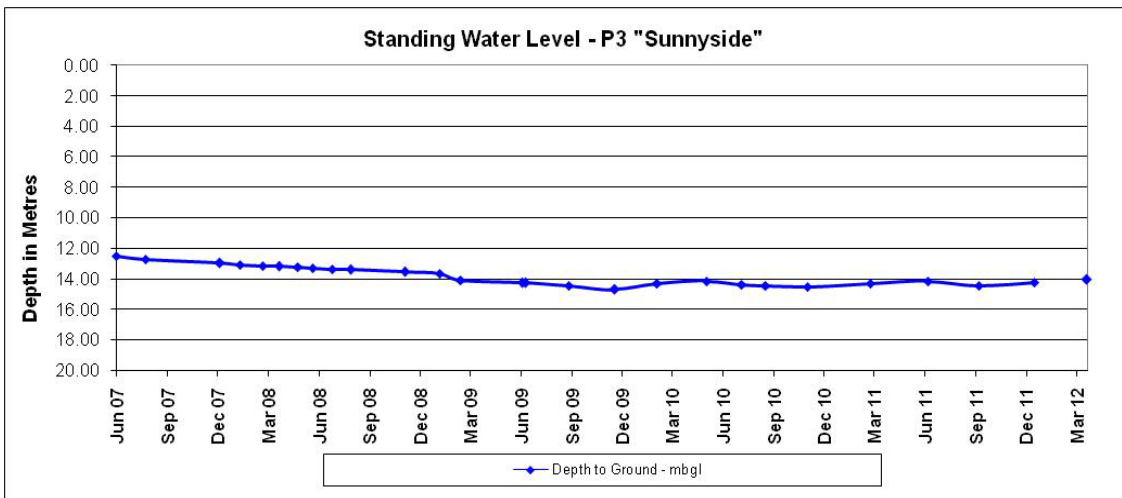
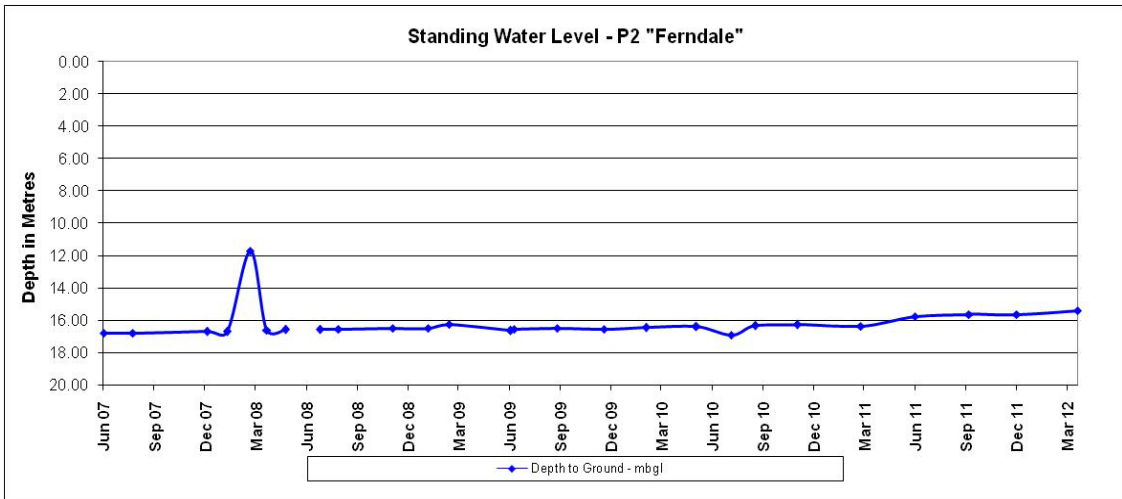
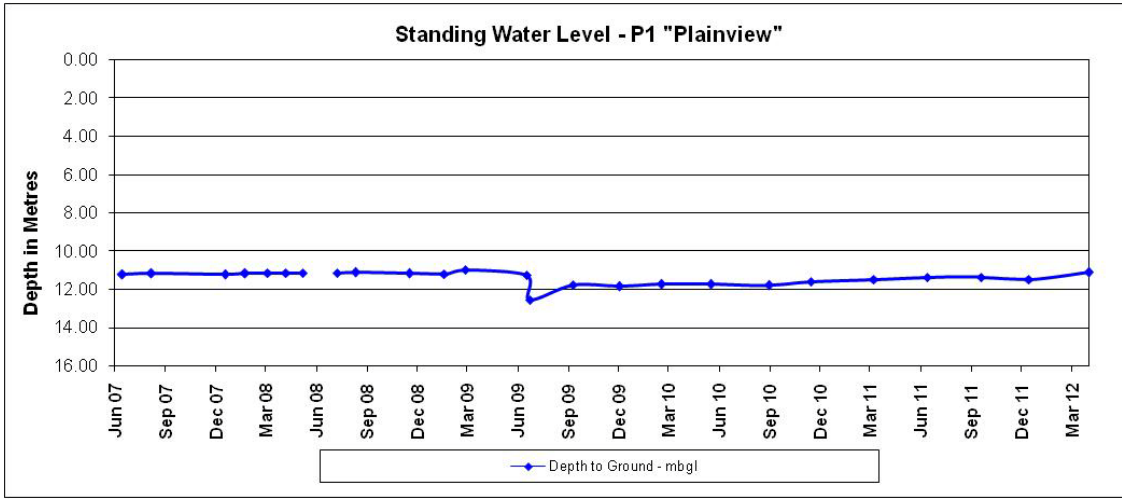
Since the first blast there have been 53 blasts. All blasts have been compliant with ground vibration and airblast overpressure criteria since the last CCC meeting.

A complaint was received following the blast on the 22<sup>nd</sup> May 2012, which is discussed further in the complaints section of this report.

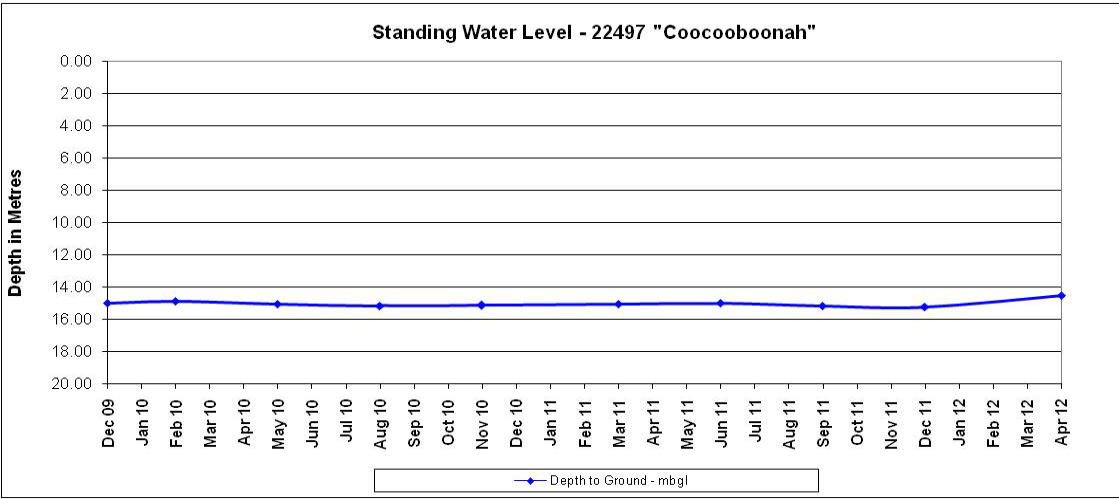
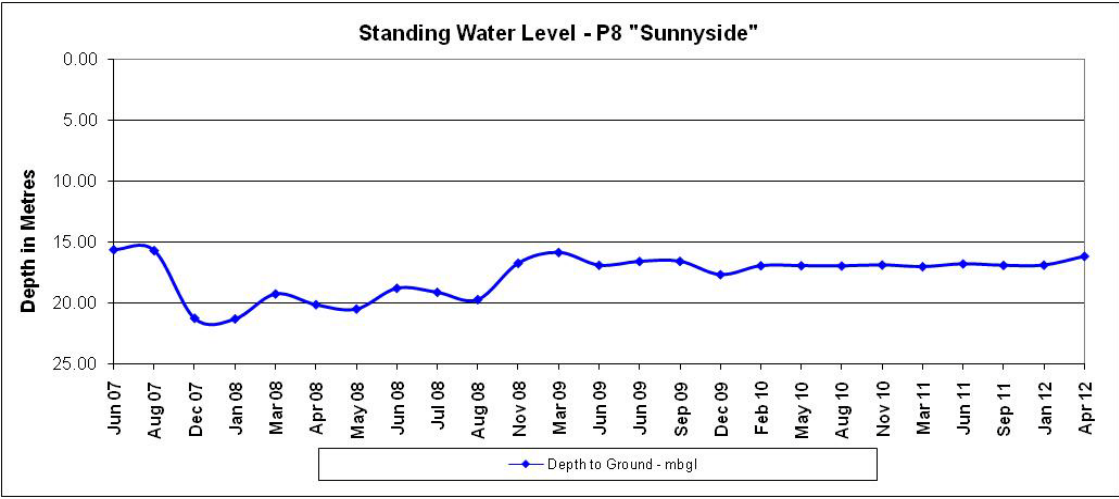
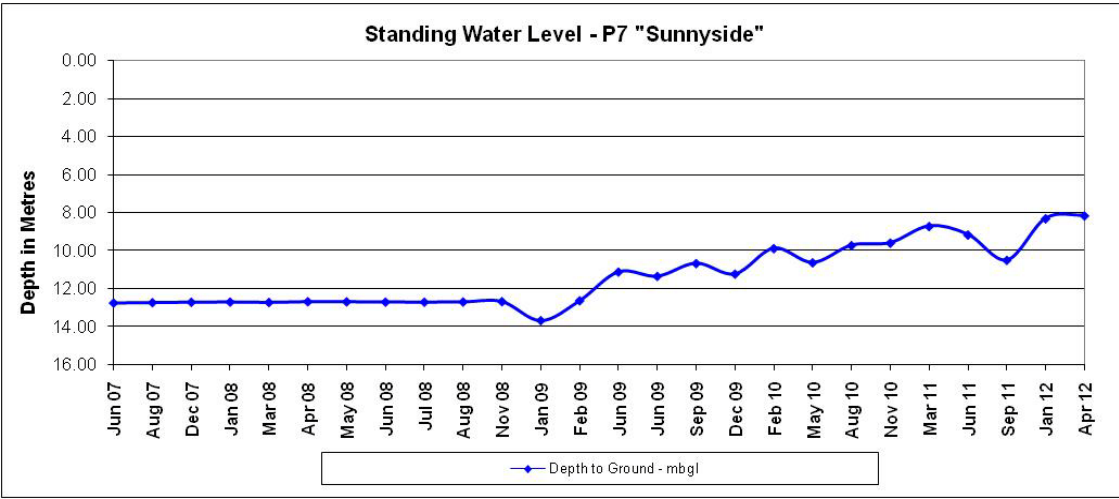
### **Groundwater Monitoring**

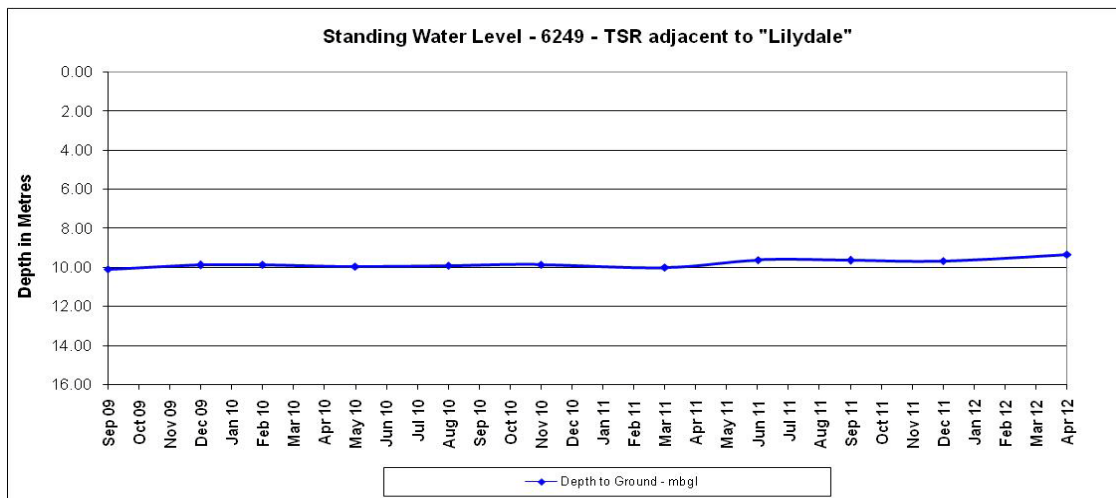
Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level (SWL) checks are undertaken on a quarterly basis, with full water quality sampling undertaken on a 6 monthly basis.

Monitoring was undertaken in early April 2012. Results for SWL are shown below with no significant impact/trend indicated from mining operations, other than at monitoring point P7, where recharge has been occurring due to the bore's standpipe being broken at ground level and allowing inflow from rainfall. The standpipe was repaired in late April so it is expected that the next round of monitoring in July 2012 will highlight some change to the SWL in this piezometer.









## **Surface Water**

Surface water sampling was carried out in May 2012. Results from the sampling were generally good with some elevated Total Suspended Solids (TSS) detected in some of the site's sediment basins. These sediment basins will continue to be utilised for site dust suppression to ensure they have sufficient capacity for further inflow, thereby reducing potential overflow into the final discharge dam. The final discharge dam, Storage Dam 4 (SD4), returned good results with low sediment levels (26mg/L).

No wet weather discharges have occurred since the last meeting.

## **Complaints**

One complaint has been received since the last meeting. The complaint was made on the 22nd May 2012 in relation to what appeared to be two blasts on that day. The complainant said his house shook but people working outdoors on his property did not notice the blast.

The blast monitor results at the property between the mine and the complainant's property confirmed compliance. The Environmental Officer spoke with the Project Manager who confirmed the blast appeared to be slightly louder than normal. There was definitely only one blast however it was low down in the pit so the noise/vibration may have been received at the complainant's property as what appeared to be two blasts in quick succession.

The Environmental Officer contacted the complainant to advise that the blast monitor confirmed compliance, despite the blast being slightly larger and louder than normal. A structural assessment was recently conducted at the complainant's property and the report will be issued to the complainant upon receipt.

## **Rehabilitation**

Rehabilitation works have continued to progress at the Sunnyside site with Ward's Earthmoving continuing to shape the emplacement area and undertaking works on the top of the emplacement to improve drainage and reduce potential for surface erosion. It is intended to undertake additional seeding and fertilizing in the next month (using Natramin and chicken manure to improve soil fertility, based on recommendations provided by Ag Solutions). Tubestock are also being sourced for an additional tree planting campaign for later this month.

**Minutes of the 15<sup>th</sup> Meeting of the  
Sunnyside Coal Mine Community Consultative Committee**

**Meeting Held:** 12<sup>th</sup> September 2012, 3:30pm

**Venue:** The meeting was held in the Board Room at Namoi Valley Brickworks.

**1. Present and Apologies**

**Present:** Mr Michael Broekman (MB) (Chairman)  
Mr Bruce Reid (BR) (Community Representative)  
Mrs Jill Johnson (JJ) (Environmental Officer - Whitehaven)  
Mr Craig Woodhead (CW) (Acting Project Manager - Whitehaven)  
Mr Tim Muldoon (TM) (Community Liaison Officer - Whitehaven)  
Mrs Liz Ferguson (LF) (Community Representative)  
Miss Brittany Riley (BRi) (Alternate Community Representative)  
Mr Hans Allgayer (HA) (Gunnedah Shire Council Representative)  
Glenn Bailey (GB) (Community Representative)

**Apologies:** Mr Danny Young (DY) (Environmental Manager - Whitehaven)

Moved: BR and GB

**2. Previous Minutes**

Minutes of the previous meeting were adopted as a true record on the motion of BR and HA.

**3. Business Arising**

**3.1.** No business arising from the last meeting.

**4. Mine Progress Report**

CW provided an update on the mine's progress as follows:

- Operators - 13 full time, 30 contractors.
- Fitters - 1 permanent.
- Site management – 2 full time, 2 casual.
- 779 LTI free days as at end of August.
- 28.45ha seeded to crop and remaining 5000 trees planted. Rehabilitation complete as far as possible.
- 6 blasts between 1<sup>st</sup> June and 31<sup>st</sup> August with no issues. Total blast volume for the three months was 828,150bcm.
- Nil topsoil has been removed and stockpiled in the last three months.
- In the last three months 940,120 bcm of overburden has been removed and 261,339 tonnes of coal mined.
- 145,367 tonnes of ROM coal has been transported offsite.

HA asked whether the washout caused by heavy rain had been repaired and CW said it had.

LF asked if Sunnyside coal trucks are required to be covered with a tarp. JJ said they are required to be and they all are. LF said she followed a truck on the way to the meeting that wasn't covered and had material spilling from the back of it. JJ asked where it was and LF said it was on Blackjack Road. JJ advised that it would have been carting fine reject rather than coal and asked whether the material was spilling from the tailgate or over the top. LF said it was spilling over the top in clumps. MB and GB both concurred that reject is being spilt along Blackjack Road and MB asked if Whitehaven was looking into engineering a solution to prevent it happening. JJ said if the material is spilling out the top like LF said then the easiest solution is to not fill them up so much. LF suggested tarps like the coal trucks. JJ committed to discussing the issue with Toll.

HA asked whether Whitehaven knows the carbon content of the tailings and suggested it could be applied to poor soils if the carbon content was greater than 60%. JJ said ash analysis of the tailings had been undertaken in the past but there would need to be rigorous investigation and approvals before it would be permitted.

## **5. Environmental Monitoring Report**

JJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

LF questioned elevated deposited dust levels in January and February at some monitors. JJ said she couldn't remember the reason provided for the elevated results and also explained that deposited dust monitoring is a very basic means of monitoring dust from a mine as it can be influenced by all dust sources, not just mining. JJ will provide an explanation for the January and February results at the next meeting.

## **6. Complaints**

Complaints were discussed in the Environmental Monitoring Report.

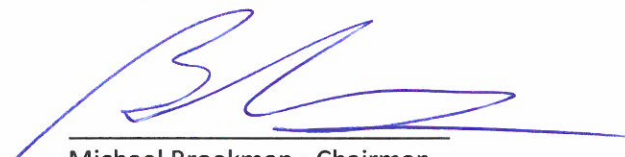
## **7. General Business**

TM provided an update on Whitehaven mergers and acquisitions. Whitehaven now owns the Maules Creek project following a merger with Aston Resources. Whitehaven has also acquired 100% of Coalworks. The Coalworks Vickery South project has been put on hold at this stage and may be included in the future as a modification to the Vickery Project. A Community Information Day will be held on the 13<sup>th</sup> September 2012. Whitehaven is progressing the application for the Project but the actual Project will be delayed for some time, firstly pending the Tarrawonga venture with Boggabri Coal (which will remove Tarrawonga road haulage) and secondly because of economic reasons. The Maules Creek Project is further advanced and more economical and will be progressed first.

## **8. Next Meeting**

Wednesday 12<sup>th</sup> December 2012, 3:00pm (with mine tour after).

Meeting closed at 4:15pm



Michael Broekman - Chairman

# Sunnyside Coal Mine Community Consultative Committee Meeting #15

## Environmental Monitoring Report June – August 2012

### 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:

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

Impact Assessment Criteria dB(A).

Quarterly noise monitoring was not conducted during the period of this report however is scheduled to be undertaken in the coming weeks. This next round of monitoring will be based on revised EPA requirements comprising monitoring over 3 consecutive days for longer periods of time to provide for more representative noise conditions during monitoring events. Results from monitoring will be provided at the next meeting.

The "Glendower" and "Ferndale" residents, as well as EPA and Department of Planning and Infrastructure, were notified of the exceedances reported at the last CCC meeting. The option of a private agreement at "Glendower" was raised again with the landholders invited to contact Whitehaven if they wished to discuss it further. The exceedance at "Ferndale" was the first in some time and an inversion was present at the time of monitoring. On this basis, Whitehaven has committed to continue monitoring with further investigation to be initiated if noise exceedances continue to occur.

### Air Quality Monitoring

#### **Deposited Dust**

Deposited dust levels for the site for the last 12 months are provided on the following page. Dust levels at all monitoring locations have been low since the last meeting. The annual averages for each monitor remain well below the annual average limit of 4g/m<sup>2</sup>/month.

### Sunnyside Mine – Deposited Dust

Month	SD1 Ferndale	SD3 Plainview	SD4 Lilydale	SD5 Ivanhoe	SD6 Illili	SD7 Innisvale	SD8 Woodlawn
September 2011	0.9	0.6	0.3	0.7	0.3	0.6	0.3
October 2011	0.6	0.7	0.4	1.7	0.8	0.5	0.7
November 2011	3.7	0.7	1.9	2.6	1.4	1.2	0.9
December 2011	0.7	1.4	1.0	1.5	1.2	3.3	1.3
January 2012	1.6	3.8	6.8	6.0	1.8	4.3	1.9
February 2012	0.8	1.6	10.2	13.6	2.8	1.2	3.7
March 2012	0.8	1.5	4.6	4.6	1.3	1.1	10.8
April 2012	0.8	3.3	0.4	1.7	1.1	1.1	0.8
May 2012	1.6	0.5	0.5	1.2	0.7	1.2	0.6
June 2012	2.2	1.0	0.2	0.8	0.8	0.7	0.4
July 2012	1.1	0.7	0.8	2.3	1.7	0.7	0.5
August 2012	0.3	1.5	0.2	0.4	0.3	0.2	0.2
<b>Annual Average</b>	<b>1.3</b>	<b>1.4</b>	<b>2.3</b>	<b>3.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.8</b>

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

Compliance with the 24hr criterion of 50µg/m<sup>3</sup> has been maintained during the reporting period.

PM<sub>10</sub> measurements taken for the “Illili” High Volume Air Sampler (HVAS) are returning a running annual average of 10.24µg/m<sup>3</sup>, which is well below the annual average limit of 30µg/m<sup>3</sup>.

PM<sub>10</sub> measurements taken for the “Lilydale” HVAS are returning an annual average of 8.02µg/m<sup>3</sup>, which is also well below the annual average limit of 30µg/m<sup>3</sup>.

#### **Blast Monitoring**

Since the first blast there have been 59 blasts (until the end of August). All blasts have been compliant with ground vibration and airblast overpressure criteria since the last CCC meeting.

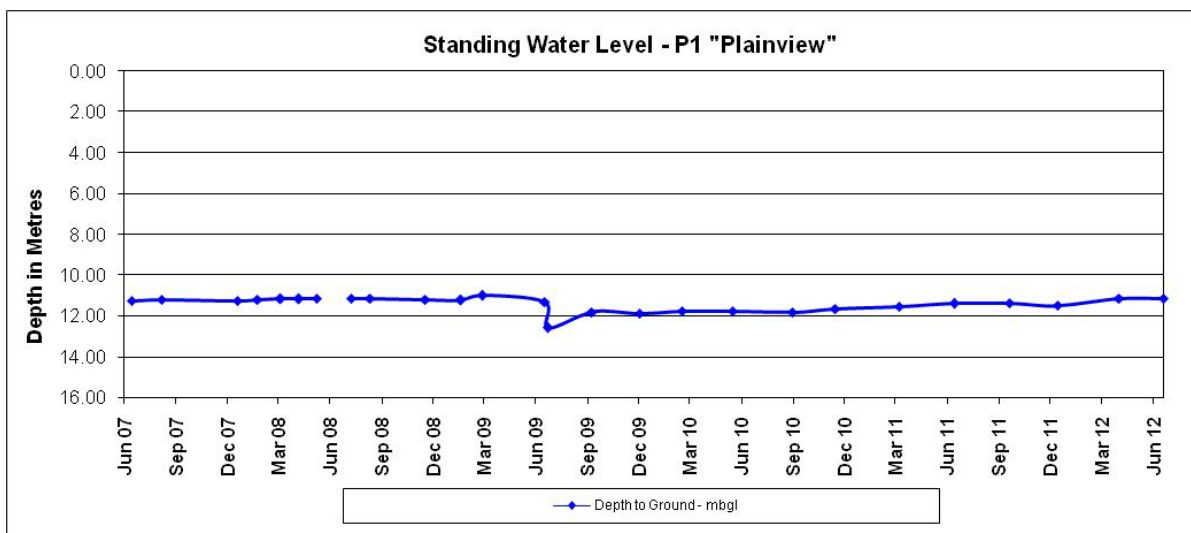
#### **Groundwater Monitoring**

Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level (SWL) checks are undertaken on a quarterly basis, with full water quality sampling undertaken on a 6 monthly basis.

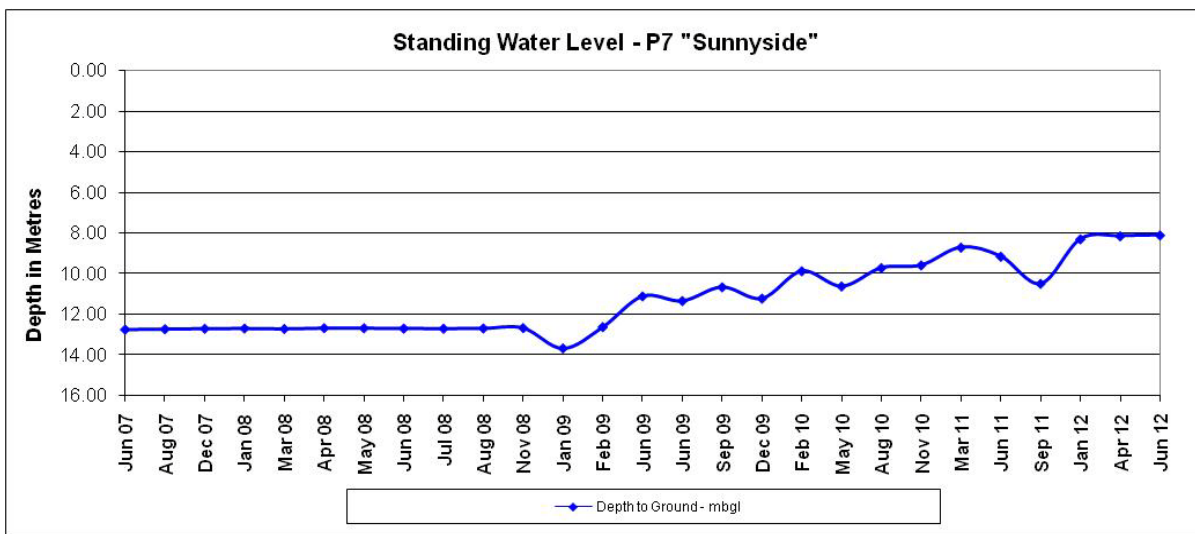
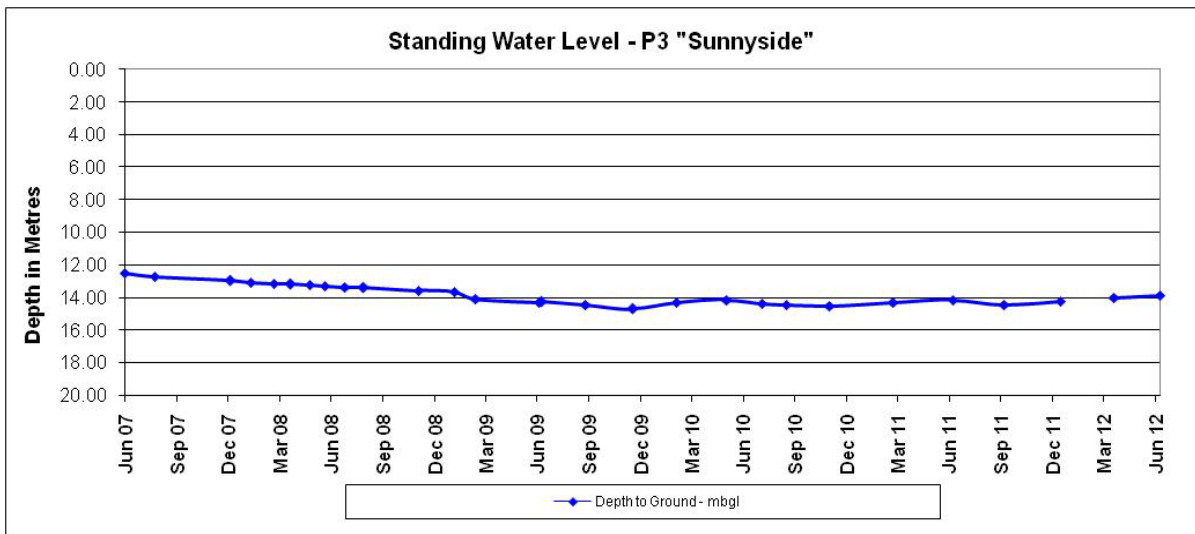
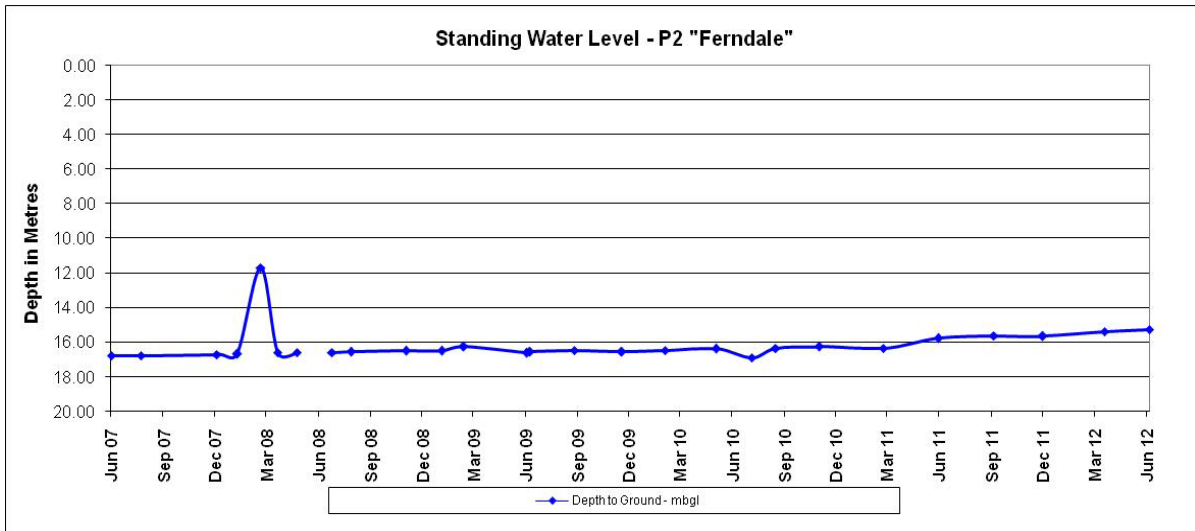
Monitoring was undertaken in June 2012. Results for SWL are shown below with no significant impact/trend indicated from mining operations, with the exception of P7 and P8.

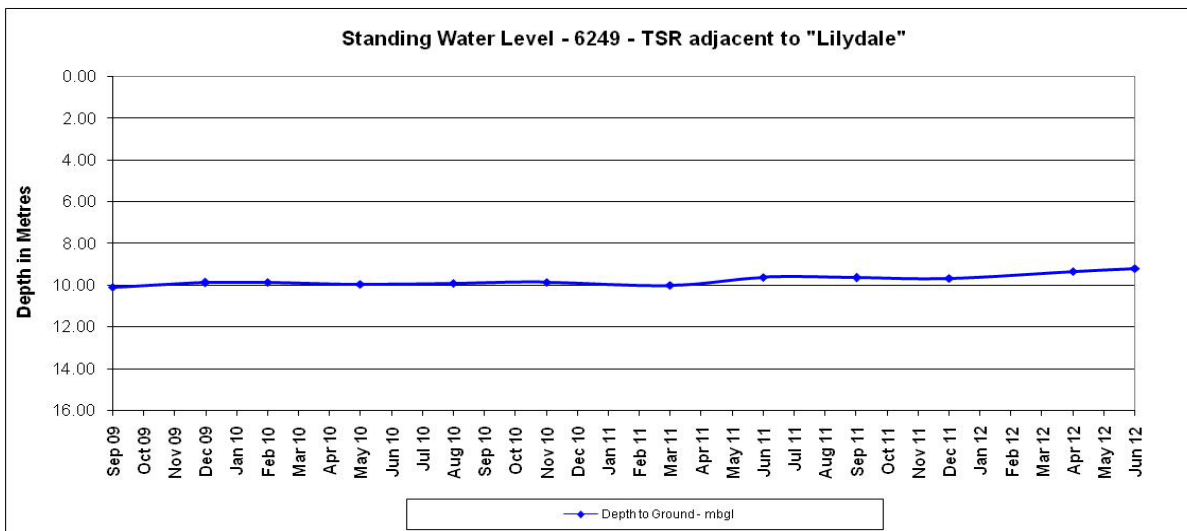
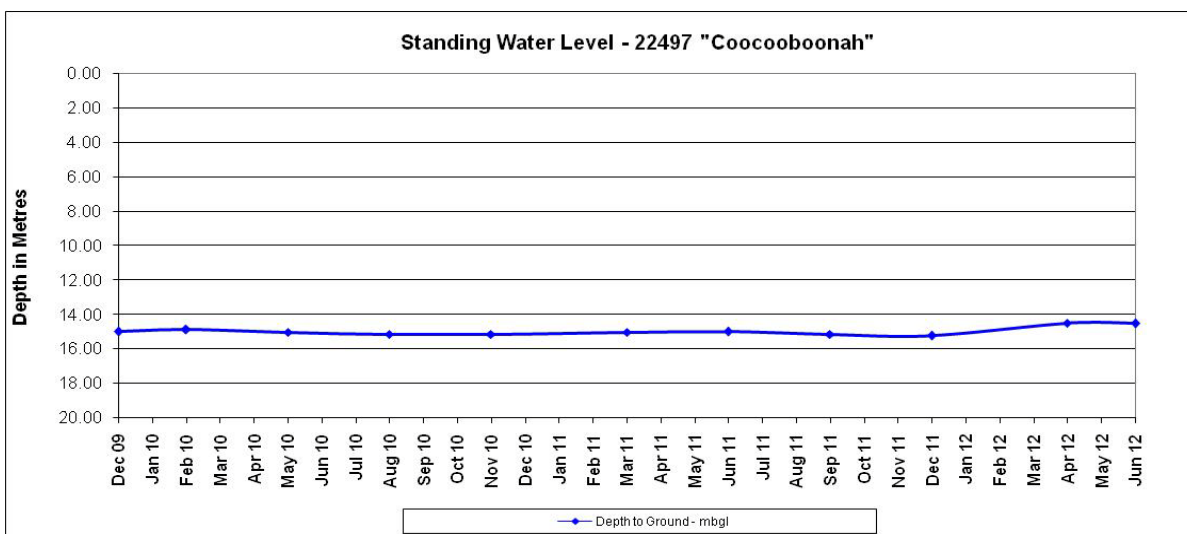
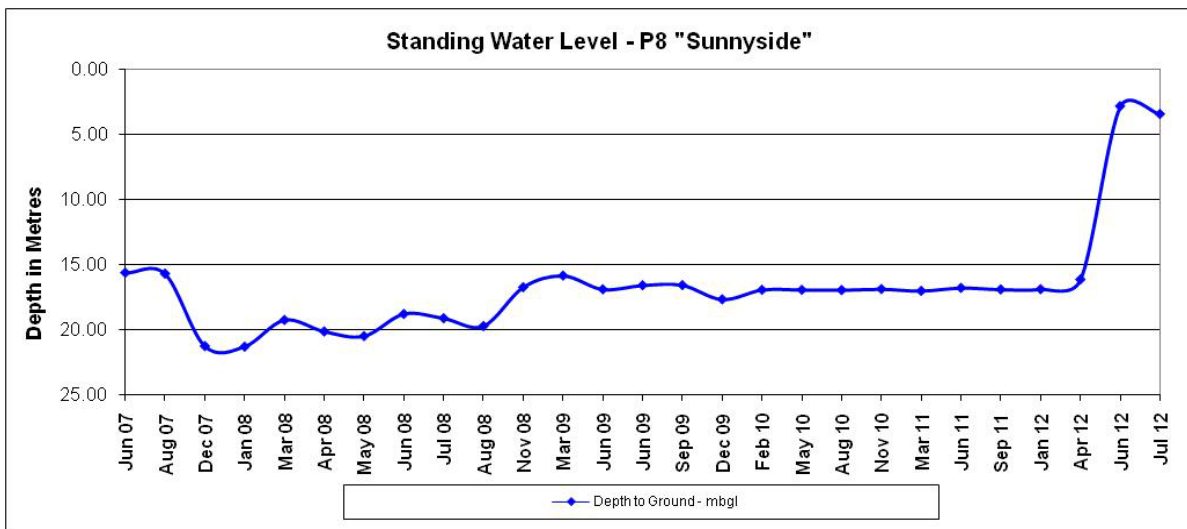
As discussed at the last meeting, P7 has been affected by inflow of surface water resulting from a broken standpipe. The standpipe was repaired in late April 2012 and the piezometer should therefore return more consistent SWL readings over time.

The SWL in P8 has consistently been between 15m and 20m for the last four years however the June 2012 SWL was recorded as less than 3m below ground level. The piezometer was re-dipped in mid July 2012, to confirm the first reading was not an error, with a SWL of 3.5m recorded. An investigation was then initiated which determined that P8 may have been influenced by water seepage from the Void Water Dam located on the southern side of the active pit. The Void Water Dam was constructed in early 2009 and was designed and constructed to achieve a low permeability to avoid such seepage. The Void Water Dam pit water dam has generally remained empty until recently (due to minimal pit water make) and this prolonged period of exposure may have compromised the permeability of the dam. As a means of addressing the issue, a polymer used for sealing leaky dams has recently been applied to the dam in an attempt to seal off the area of the leak. Other measures, such as ripping and re-compaction of the dam floor will be investigated and implemented if the polymer isn't successful. The standing water level in P8 will be monitored to confirm it trends back to usual levels.









### **Surface Water**

Surface water sampling was carried out in early August 2012. Results from the sampling were generally good with low Total Suspended Solids (TSS) and normal levels for all other parameters (pH, EC, oil and grease etc). The void water sample showed an elevated EC level which is consistent with previous sample results.

No wet weather discharges have occurred since the last meeting.

### **Complaints**

No complaints have been received during the last three months.

### **Rehabilitation**

During the reporting period, rehabilitation works have included:

- Shaping of the plateau area of the emplacement;
- Installation of water management structures;
- Topsoiling;
- Fertilising with a Natramin and chicken manure mix as developed by Ag-Solutions; and
- Planting of 7,000 trees through Fields Environmental.

This completes the rehabilitation of areas currently available (not required for mining or mining access) at the Sunnyside site.

**Minutes of the 16<sup>th</sup> Meeting of the  
Sunnyside Coal Mine Community Consultative Committee**

**Meeting Held:** 12<sup>th</sup> December 2012, 3:00pm

**Venue:** The meeting was held in the Board Room at Namoi Valley Brickworks.

**1. Present and Apologies**

**Present:** Mr Michael Broekman (MB) (Chairman)  
Mr Danny Young (DY) (Environmental Manager - Whitehaven)  
Mrs Jill Johnson (JJ) (Environmental Officer - Whitehaven)  
Mr Craig Woodhead (CW) (Acting Project Manager - Whitehaven) – site tour only  
Mr Tim Muldoon (TM) (Community Liaison Officer - Whitehaven)  
Mrs Liz Ferguson (LF) (Community Representative)

**Apologies:** Mr Bruce Reid (BR) (Community Representative)  
Mr Hans Allgayer (HA) (Gunnedah Shire Council Representative)  
Glenn Bailey (GB) (Community Representative)

Moved: LF and TM

**2. Previous Minutes**

Minutes of the previous meeting were adopted as a true record on the motion of LF and TM.

**3. Business Arising**

**3.1.** JJ advised that the Toll Manager had refuted that coal reject spills out of the top of the trucks. JJ noted that the approval for the new emplacement area at Brickworks requires reject trucks to be covered with tarps and to be washed down prior to entering the public road network.

DY said the procedures at the CHPP had been changed which resulted in the trucks carrying a drier product.

**3.2.** Following a request from LF at the previous meeting, JJ provided the January and February 2012 deposited dust results. DY and JJ provided a copy of a typical chain of custody form (which includes field notes about contamination) and results as provided by the laboratory. Total, combustible and ash components of deposited dust were explained.

**4. Mine Progress Report (provided during site tour)**

CW provided an update on the mine's progress (September – November) as follows:

- Operators - 13 full time, 14 contractors.
- Fitters - 1 permanent.
- Site management – 2 full time, 2 casual.
- 851 LTI free days as at end of November (a new record).
- Rehabilitation complete as far as possible.

- 1 blast between 1<sup>st</sup> September and 30<sup>th</sup> November with no issues. Total blast volume for the three months was 200,190bcm.
- Nil topsoil has been removed and stockpiled in the last three months.
- In the last three months 574,525bcm of overburden has been removed and 141,262 tonnes of coal mined.
- 145,297 tonnes of ROM coal has been transported offsite.
- Other matters:
  - Returned to only one excavator in November 2012
  - Started removing last block of coal on the 1<sup>st</sup> November 2012 and finished coaling on the 29<sup>th</sup> November 2012.
  - Sunnyside is currently under care and maintenance.
  - Still loading and transporting coal to the CHPP.

## 5. Environmental Monitoring Report

DY presented the environmental monitoring results which are attached in the Environmental Monitoring Report. He provided additional discussion on the new noise monitoring requirements specified in the Environment Protection Licence.

LF asked what strata P7 and P8 were located in (referring to seepage from the void water dam and subsequent change in SWL at these piezometers). Whitehaven to provide information at next meeting.

LF asked if there is a set time for care and maintenance and whether obligations change because the mine isn't producing. DY said it won't change the obligations under the current Mining Operations Plan and a rehabilitation security arrangement (with financial guarantee) is still held with the Department. Rehabilitation has progressed as far as it can (ie. on the outer batters of the waste emplacement areas) so Whitehaven is not proposing any rehabilitation of the pit area on the basis that mining will continue in the future. MB said the wider community doesn't want to sterilise the resource by rehabilitating it before it has been mined. JJ noted that the current consent expires in 2015.

TM asked if 2015 is when mining or rehabilitation must cease. DY said mining must cease by 2015 but rehabilitation activities will occur after this date. LF asked if there is a set time to achieve rehabilitation outcomes. DY said the Closure Plan defines when rehabilitation is expected to be finalised but this is dependent on a number of things including weather. As long as Whitehaven continues to provide updates to the Department and the rehabilitation is progressing in an acceptable manner, the Department will be satisfied. JJ said rehabilitation post mining nominally takes around 5 years. You need to ensure tubestock and groundcover has properly established before the Department will sign off.

LF asked if the rehabilitation security amount is high enough. DY said it is based on a government template which lists commercial rates. Whitehaven also has an ongoing internal rehabilitation provision which is reviewed every six months.

Environmental monitoring report moved by DY and LF.

## 6. Complaints

No complaints in the last three months.

## **7. General Business**

LF raised the issue of recently lit fires on the Oxley Highway and suggested that Whitehaven should provide the Rural Fire Service with contact details on the tenants in Whitehaven owned properties around Sunnyside. Given the mine is in care and maintenance, DY said the best contact for the mine is the complaints line (which is how Whitehaven was contacted for the latest fire).


## **8. Next Meeting**

Wednesday 13<sup>th</sup> March 2013, 3:30pm.

Meeting closed at 4:00pm

## **9. Site Tour**

A site tour was conducted following the meeting with CW, DY, JJ, MB and LF present.



Michael Broekman - Chairman

# Sunnyside Coal Mine Community Consultative Committee Meeting #16

## Environmental Monitoring Report September – November 2012

### 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:

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

Quarterly noise monitoring was carried out in mid September 2012 with results shown below. The monitoring was based on Sunnyside's Environmental Protection License requirements comprising monitoring over 3 consecutive days for longer periods of time than previously required to provide for more representative noise conditions during monitoring events.

Table 1 SCM Operational Noise Monitoring Results – 17 September 2012 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	3:55 pm	44	3 m/s NW	Birds & insects (44), traffic (35), <b>SCM (25)</b>
Ferndale	12:25 pm	42	2 m/s NW	Birds & insects (42), <b>SCM inaudible</b>
Plain View	2:02 pm	42	1.5 m/s NW	Birds & insects (42), <b>SCM (22)</b>
Lilydale	3:35 pm	46	3 m/s NW	Traffic (44), birds & insects (39), <b>SCM (32)</b>

Table 2 SCM Operational Noise Monitoring Results – 17 September 2012 (evening)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	7:30 pm	30	0.5 m/s SE	Insects (27), traffic (27), <b>SCM (&lt;20)</b>
Ferndale	8:10 pm	25	Calm	Insects (23), <b>SCM (21)</b>
Plain View	6:48 pm	42	0.5 m/s SE	Insects (41), traffic (35), <b>SCM (21)</b>
Lilydale	6:30 pm	43	0.5 m/s SE	Traffic (41), birds & insects (38), <b>SCM (&lt;20)</b>

Table 3 SCM Operational Noise Monitoring Results – 18 September 2012 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	12:49 pm	36	1.5 m/s NW	Birds & insects (36), <b>SCM (&lt;20)</b>
Ferndale	2:27 pm	47	1 m/s N	Traffic (45), birds & insects (42), <b>SCM inaudible</b>
Plain View	n/a	n/a	3 m/s NW	Rain - no mining from mid afternoon

Table 4 SCM Operational Noise Monitoring Results – 18 September 2012 (evening)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	8:40 pm	25	1 m/s N	Traffic (23), insects (20), <b>SCM inaudible</b>
Ferndale	8:03 pm	29	1 m/s N	Sheep (26), insects (25), traffic (20), <b>SCM inaudible</b>
Plain View	9:19 pm	33	0.5 m/s N	Traffic (31), insects (29), <b>SCM inaudible</b>

Table 5 SCM Operational Noise Monitoring Results – 19 September 2012 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	2:08 pm	45	1.5 m/s, NW	Birds & insects (45), traffic (30), <b>SCM inaudible</b>
Ferndale	12:34 pm	47	1.5 m/s NW	Traffic (46), birds & insects (43), <b>SCM barely audible</b>
Plain View	4:05 pm	41	0.5 m/s NW	Birds & insects (40), traffic (35), <b>SCM (25)</b>

Table 6 SCM Operational Noise Monitoring Results – 19 September 2012 (evening)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Illili	6:26 pm	35	Calm	Traffic (35), insects (25), <b>SCM inaudible</b>
Ferndale	6:59 pm	47	Calm	Traffic (47), insects (32), <b>SCM (&lt;20)</b>
Plain View	7:39 pm	41	Calm	<b>SCM (39)</b> , traffic (33), plane (32), insects (26)

The results in Tables 1 to 6 show that, the mine noise exceeded the operational noise criterion at the Plain View monitoring location during the evening of September 19. Noise from haul truck engines was the dominant audible mine noise source at this receiver. Whitehaven has entered into a private agreement with the owner of the “Plain View” property which specifies an alternate noise limit applicable at the property of 45dB(A). A copy of this agreement has been supplied to the Environment Protection Authority and the Department of Planning and Infrastructure. On this basis, the measured noise level of 39 dB(A) at “Plain View” is not considered an exceedance of the noise criteria. All other locations recorded results below the criteria.

Transport noise monitoring was carried out at “Roslyn” on Torrens Lane over a one hour period from 8.00 am on Wednesday 8<sup>th</sup> August. A total of 18 heavy vehicles travelled along Torrens Lane during the monitoring period. These consisted of 9 full and 9 empty coal haulage trucks entering and leaving the CHPP site. The measured Leq noise level from all vehicles on Torrens Lane was 56 dB(A) Leq (1 hour). This is in exceedance of the noise criterion for a local road of 55 dB(A) Leq (1 hour) however as the “Roslyn” property is project related the exceedance is not considered a non-compliance and no additional mitigation measures on road transport noise are considered warranted at this time.



## Air Quality Monitoring

### **Deposited Dust**

Deposited dust levels for the site for the last 12 months are provided below. Dust levels at all monitoring locations have been low since the last meeting. The annual averages for each monitor remain well below the annual average limit of  $4\text{g}/\text{m}^2/\text{month}$ .

#### **Sunnyside Mine – Deposited Dust**

<b>Month</b>	<b>SD1 Ferndale</b>	<b>SD3 Plainview</b>	<b>SD4 Lilydale</b>	<b>SD5 Ivanhoe</b>	<b>SD6 Illili</b>	<b>SD7 Innisvale</b>	<b>SD8 Woodlawn</b>
December 2011	0.7	1.4	1.0	1.5	1.2	3.3	1.3
January 2012	1.6	3.8	6.8	6.0	1.8	4.3	1.9
February 2012	0.8	1.6	10.2	13.6	2.8	1.2	3.7
March 2012	0.8	1.5	4.6	4.6	1.3	1.1	10.8
April 2012	0.8	3.3	0.4	1.7	1.1	1.1	0.8
May 2012	1.6	0.5	0.5	1.2	0.7	1.2	0.6
June 2012	2.2	1.0	0.2	0.8	0.8	0.7	0.4
July 2012	1.1	0.7	0.8	2.3	1.7	0.7	0.5
August 2012	0.3	1.5	0.2	0.4	0.3	0.2	0.2
September 2012	1.2	1.5	1.0	1.1	1.8	0.8	3.1
October 2012	1.0	1.2	0.5	1.7	0.7	1.4	0.7
November 2012	0.8	0.7	0.4	0.5	2.2	1.2	1.1
<b>Annual Average</b>	<b>1.3</b>	<b>1.4</b>	<b>2.3</b>	<b>3.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.8</b>

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

Compliance with the 24hr criterion of  $50\mu\text{g}/\text{m}^3$  has been maintained during the reporting period.

PM<sub>10</sub> measurements taken for the “Illili” High Volume Air Sampler (HVAS) are returning a running annual average of  $13.13\mu\text{g}/\text{m}^3$ , which is well below the annual average limit of  $30\mu\text{g}/\text{m}^3$ .

PM<sub>10</sub> measurements taken for the “Lilydale” HVAS are returning an annual average of  $8.56\mu\text{g}/\text{m}^3$ , which is also well below the annual average limit of  $30\mu\text{g}/\text{m}^3$ .

### **Blast Monitoring**

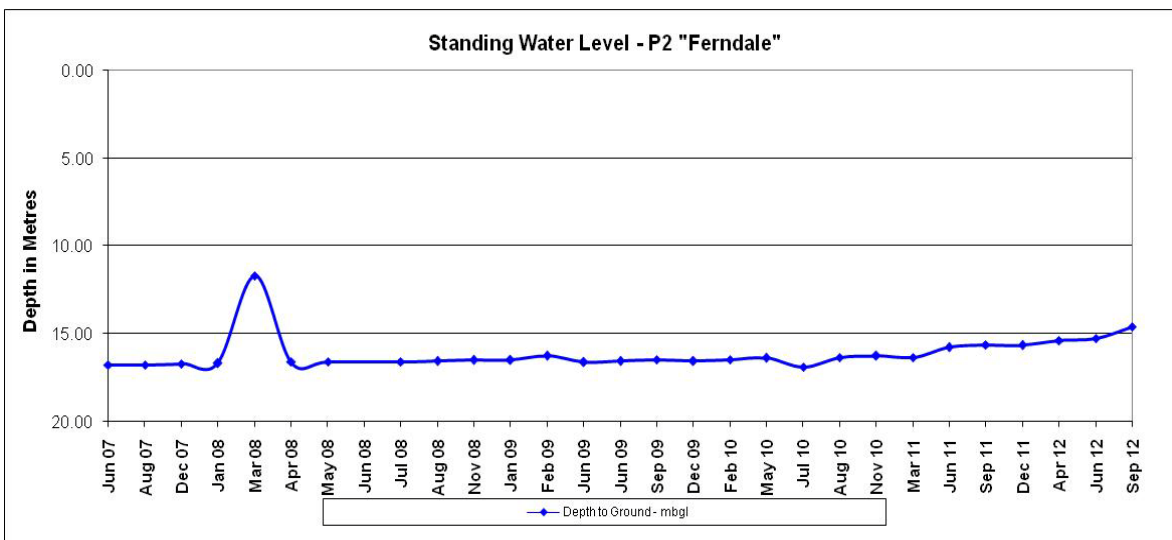
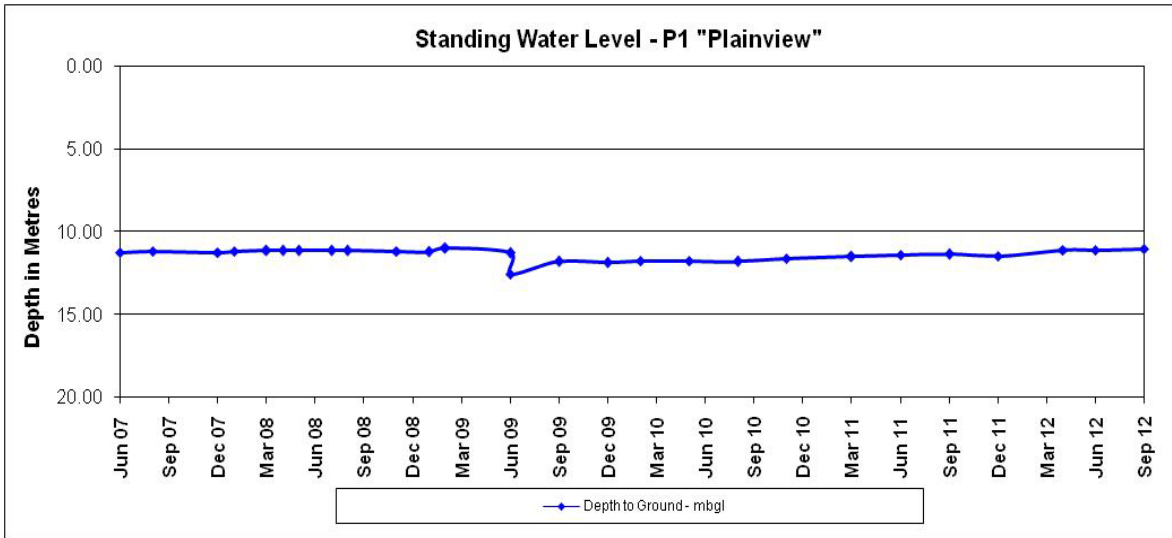
Since the first blast there have been 60 blasts (until the end of November). All blasts have been compliant with ground vibration and airblast overpressure criteria since the last CCC meeting.

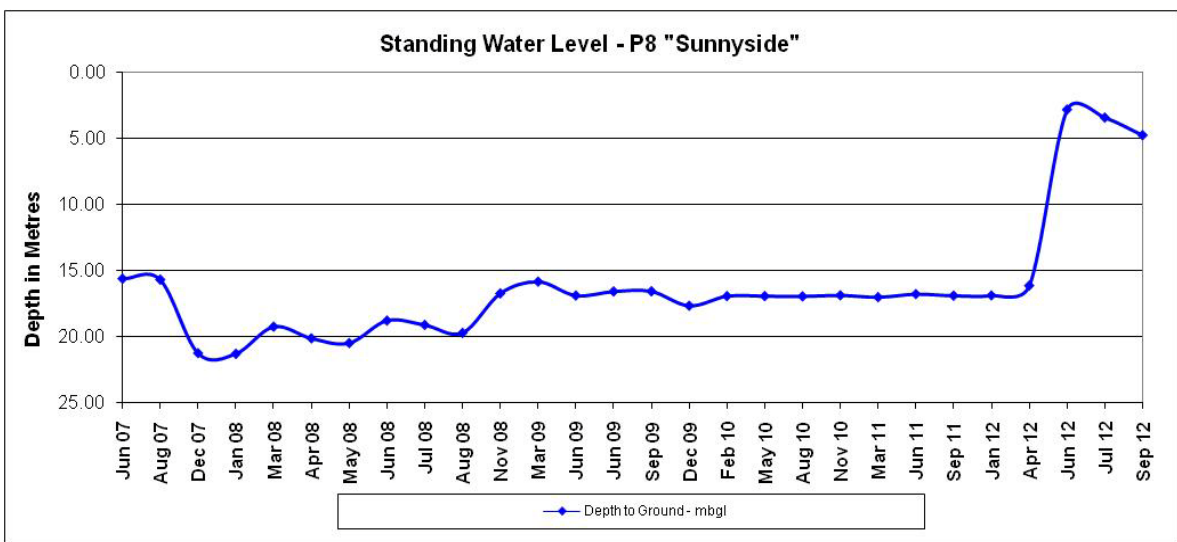
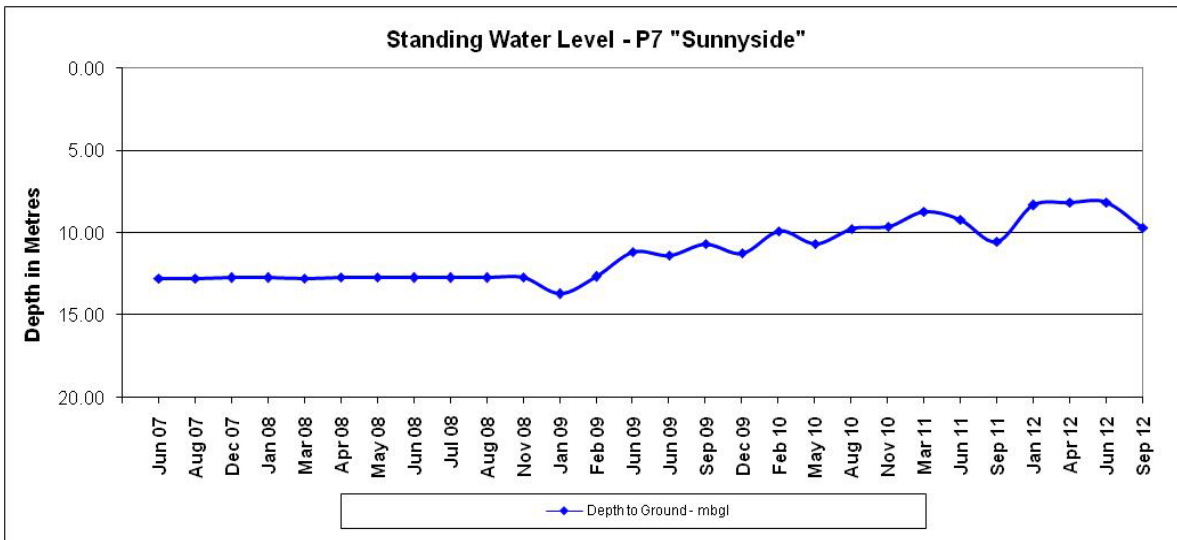
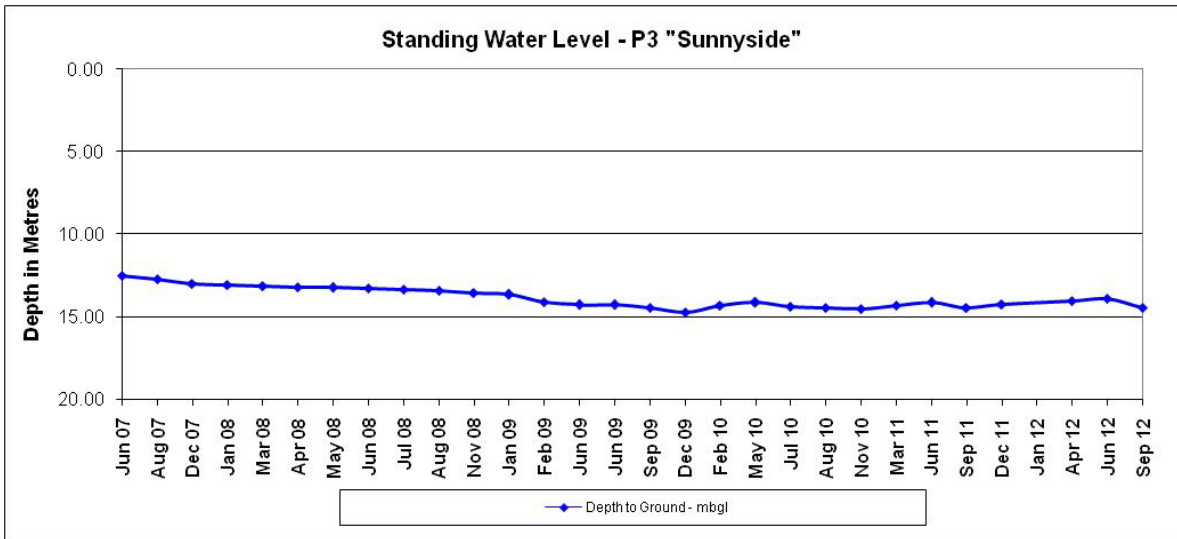
### **Groundwater Monitoring**

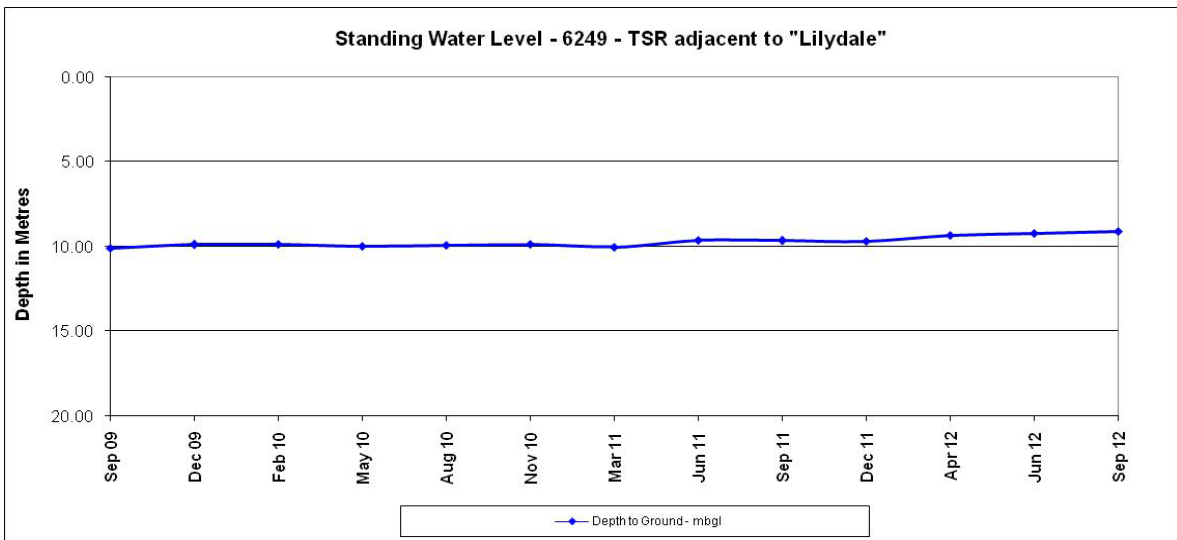
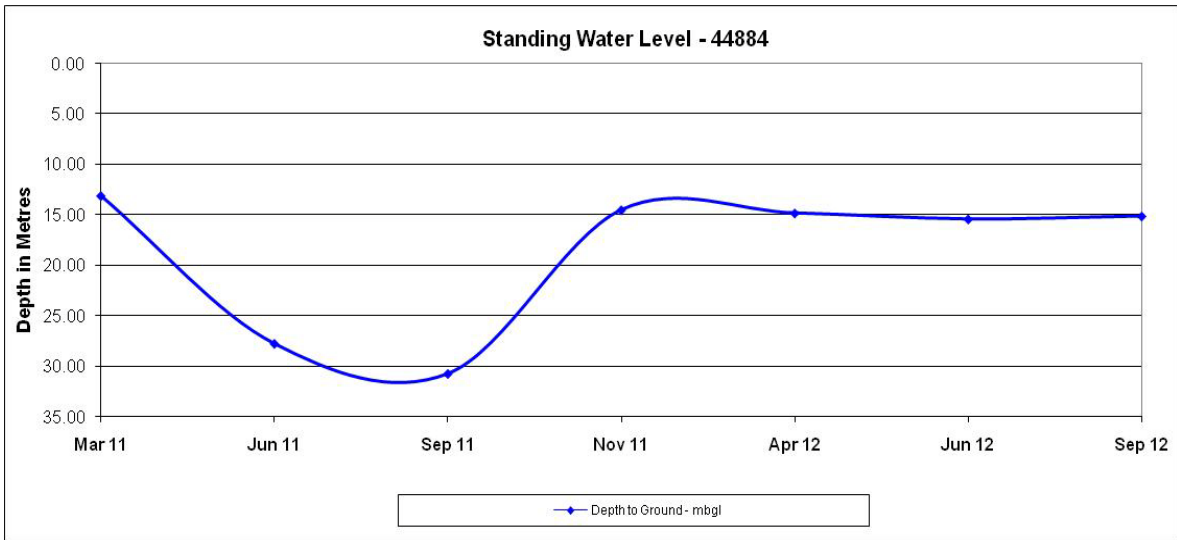
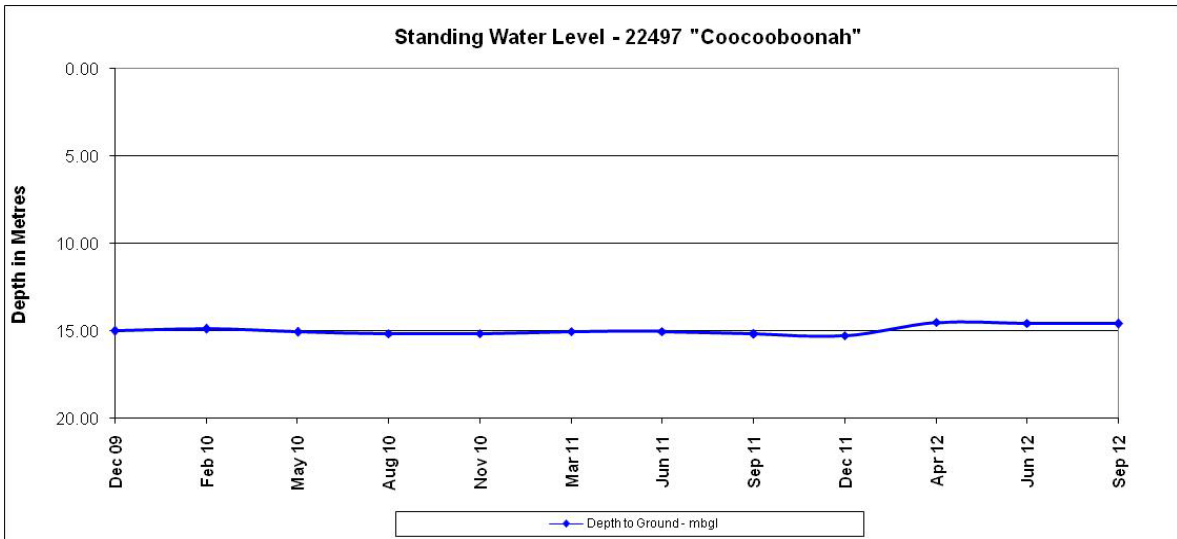
Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level (SWL) checks are undertaken on a quarterly basis, with full water quality sampling undertaken on a 6 monthly basis.

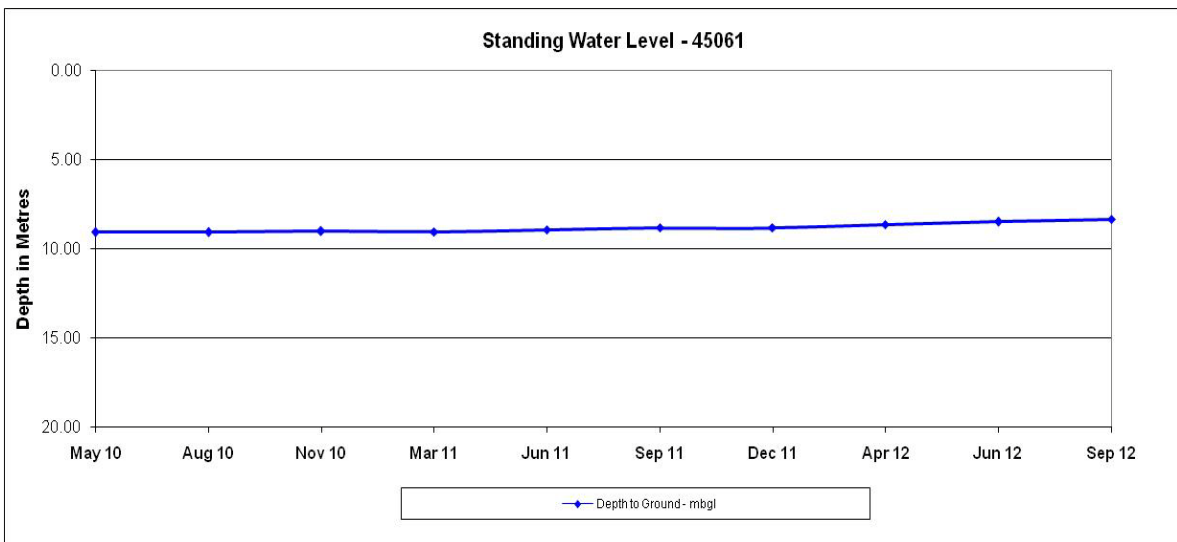
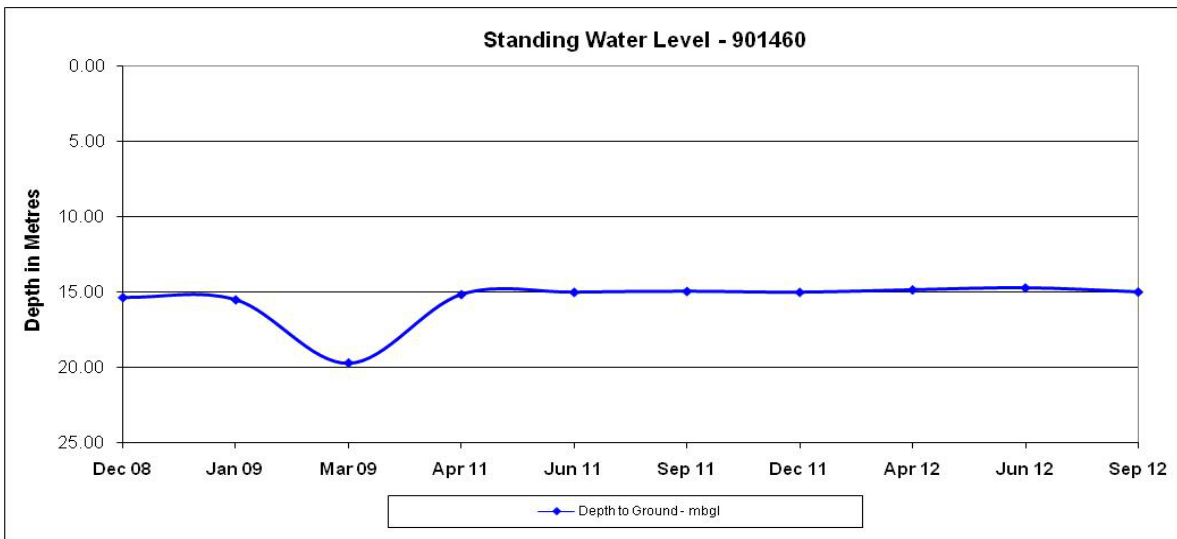
6 monthly quality sampling was undertaken in September 2012. Results for SWL are shown below with no significant impact/trend indicated from mining operations, with the exception of P7 and P8.

The SWL in both P7 and P8, as described in the last report is thought to be influenced by water seepage from the Void Water Dam located on the southern side of the active pit. The Void Water Dam was treated with a polymer sealing agent in early September, to prevent the seepage. The standing water levels in P7 and P8 have lowered recently (by 1.58m and 1.33m respectively). This indicates that seepage was reduced through the polymer treatment. Currently the Void Water Dam is holding negligible water, due to the limited water produced in pit. Both P7 and P8 are predicted to continue to drop in SWL.









### **Surface Water**

Surface water sampling of storages on site was carried out in November 2012. Results from the sampling found higher than normal Electrical Conductivity (EC) and Total Suspended Solids (TSS) levels in sediment basins. This is attributable to the storages being close to dry, with concentrated EC and TSS typical in dams which have very low water levels. The void water sample showed an elevated EC level which is consistent with previous sample results. No wet weather discharges have occurred since the last meeting.

### **Complaints**

No complaints have been received during the last three months.

### **Rehabilitation**

During the reporting period, no additional rehabilitation works have taken place. An assessment into available rehabilitation areas as required by care and maintenance protocol is to take place in the coming weeks, with any works to occur in the New Year. Low rainfall over the past 3 months has limited the performance of previously seeded areas.