

Narrabri Coal Mine Community Consultative Committee Meeting #16

Environmental Monitoring Report November 2011 – February 2012

Noise Monitoring

Attended noise monitoring was undertaken on 6th December 2011 to verify if noise levels were within compliance limits. The results from this monitoring are detailed in the tables below.

Table 1 NCM Noise Monitoring Results – 6 December 2011 (Day)					
Location	Time	dB(A), L _{eq} (15min)	Wind speed/ direction	Temp Grad (°C/100m)	Identified Noise Sources
Bow Hills	5:22 pm	41	Calm	-0.6	Traffic (38) train (37), birds & insects (34), NCM inaudible
Naroo	3:33 pm	42	0.5 m/s, NW	+1.2	Birds & insects (40), traffic (37), NCM (20)
Claremont*	4:07 pm	33	<0.5 m/s NW	-0.6	Birds & insects (31), NCM (<25)
Westhaven	4:33 pm	36	Calm	+1.2	Birds & insects (34), construction noise (33), NCM inaudible
Greylands	4:58 pm	46	Calm	-0.8	Birds & insects (45), traffic (37), sheep (34), NCM inaudible

* Correction of 4-8dB is to be subtracted from the *mine noise component only* to estimate levels at "Kurrajong".

Table 2 NCM Noise Monitoring Results – 6 December 2011 (Evening)					
Location	Time	dB(A), L _{eq} (15min)	Wind speed/ direction	Temp Grad (°C/100m)	Identified Noise Sources
Bow Hills	7:25 pm	41	3.5 m/s, NW	-1.8	Traffic (41), insects (30), NCM inaudible
Naroo	8:10 pm	42	3 m/s, NW	+0.6	Birds & insects (41), traffic (35), NCM (25)
Claremont	8:31 pm	35	3 m/s, NW	+0.6	Frogs & insects (35), traffic (25), NCM inaudible
Westhaven	8:54 pm	34	2 m/s, NW	-0.6	Insects (33), NCM (27)
Greylands	9:19 pm	39	2 m/s, NW	-1.2	Frogs & insects (38), traffic (32), NCM (28)

Location	Time	dB(A), L _{eq} (15min)	Wind speed/ direction	Temp Grad (°C/100m)	Identified Noise Sources
Bow Hills	10:00 pm	40	2 m/s, NE	-1.8	Traffic (37), insects (35), NCM (32)
Naroo	11:46 pm	39	<0.5 m/s, NE	0	Traffic (36), insects (36), NCM inaudible
Claremont	11:13 pm	35	<0.5 m/s, NE	+1.6	Birds & insects (32), NCM (31), plane (27)
Westhaven	10:50 pm	34	<0.5 m/s, NE	-0.6	Insects (32), NCM (30)
Greylands	10:25 pm	45	1 m/s, NE	-1.2	Frogs & insects (45), traffic (35), NCM (30)

The results indicate noise emissions from the mine did not exceed the criterion limit of 35 dB(A), L_{eq}(15min) at any monitoring location during the monitoring period.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L₁(1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. During the night time measurement circuit the L₁(1 min) noise from the mine did not exceed 45 dB(A) at any monitoring location during the monitoring events.

The December monitoring also assessed the incidence of temperature inversions by placing two temperature loggers, attached to stakes, at different elevations. At the time of measurement, some slight temperature inversions were present, but no impact on noise propagation was noted.

The real time noise monitor, located at the “Matilda” property, is reporting results to date indicating no noise exceedance events.

Deposited Dust Monitoring

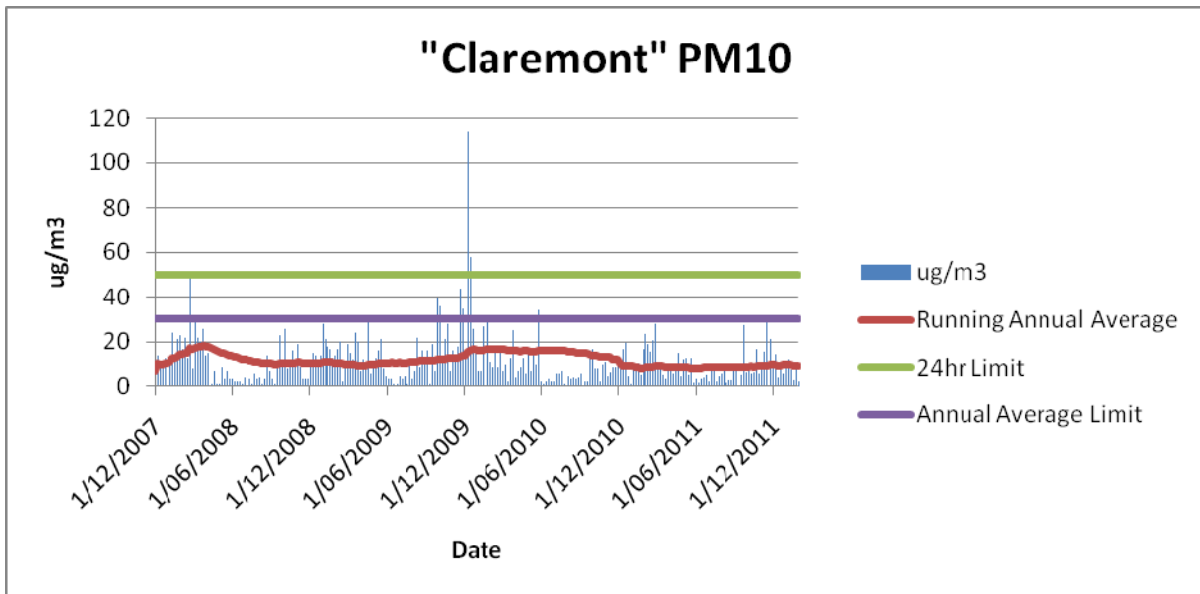
Month	ND1 Turrabaa	ND2 Claremont	ND3 Bow Hills	ND4 Matoppo	ND5 Claremont	ND6 Willarah	ND7 Claremont	ND8 Claremont	ND4a New Matoppo	ND9 Oakleigh
February 2011	1.1	2.5	0.5	1.5	4	2.1	2.3	2.6	3.6	
March 2011	1.4	1.6	2.5	3	46.6	5	1.6	2.1	3.2	
April 2011	0.6	1.8	3.6	5	3.8	0.8	1	0.7	1.8	
May 2011	0.1	0.4	1.8	7.8	3.3	0.8	0.8	0.4	1.1	
June 2011	0.8	0.9	2.2	48.1	4	1.5	1.3	3.1	4.3	0.8
July 2011	1.3	0.6	2.6	10.4	1.6		3.8	0.2	1.5	0.2
August 2011	0.4	2.3	1.8	12.2	12.4	1.9	1.5	1.2	0.6	0.5
September 2011	0.8	3.3	1.7	18.7	2.9	1	1.2	0.6	0.5	0.6
October 2011	1	1.5	2.1	4.9	7.5	1	2	0.7	0.7	0.4
November 2011	5	1	3.8	24.9	2.9	1	1.4	0.7	2.1	1.6
December 2011	4.7	2.8	2.3	23.3	5.7	4.9	1.8	3.5	0.6	3.5
January 2012	3.6	2.2	2	35	2.5	1.2	1.8	2	1.1	2.9
Annual Average	1.7	1.7	2.2	16.2	8.1	1.9	1.7	1.5	1.8	1.3

Deposited dust results have remained at relatively low levels since the last meeting, with the exception of ND4 “Matoppo” and ND5 “Claremont”. ND4 is in the process of being replaced with ND4a which is closer to site operations and consistently shows lower concentrations than that of ND4, indicating other sources of material may be responsible for the high annual average. The high results reported in March and August 2011 in monitor ND5 have adversely affected the annual average for this gauge. All other annual average results have generally declined.

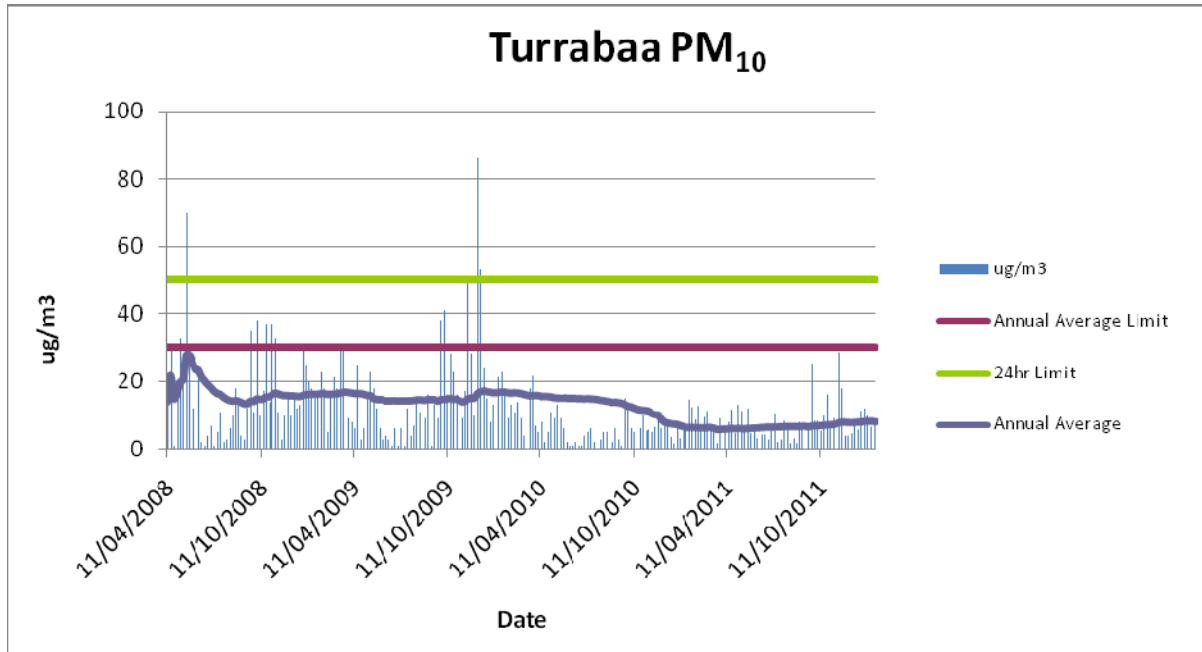
Monitor ND9, located at “Oakleigh”, continues to report results well within compliance limits.

High Volume Air Sampling (PM₁₀)

PM₁₀ measurements taken to date for the “Claremont” High Volume Air Sampler are returning a running annual average of 9.15 µg/m³ which is well below the annual average limit of 30 µg/m³.



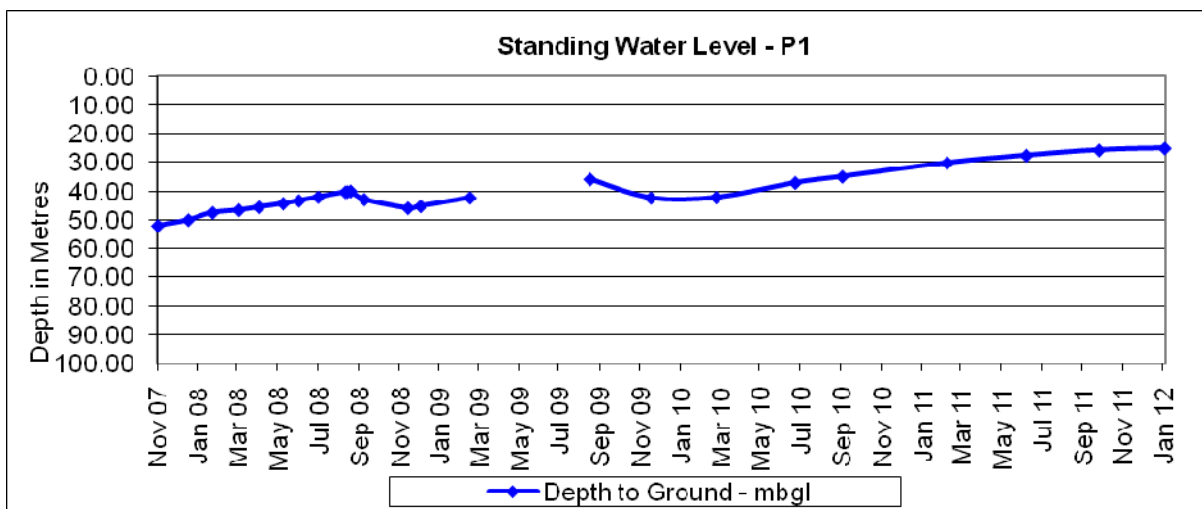
PM₁₀ measurements taken to date for the “Turrabaa” High Volume Air Sampler are returning a running annual average of 8.14 µg/m³ which is also well below the annual average limit of 30 µg/m³.

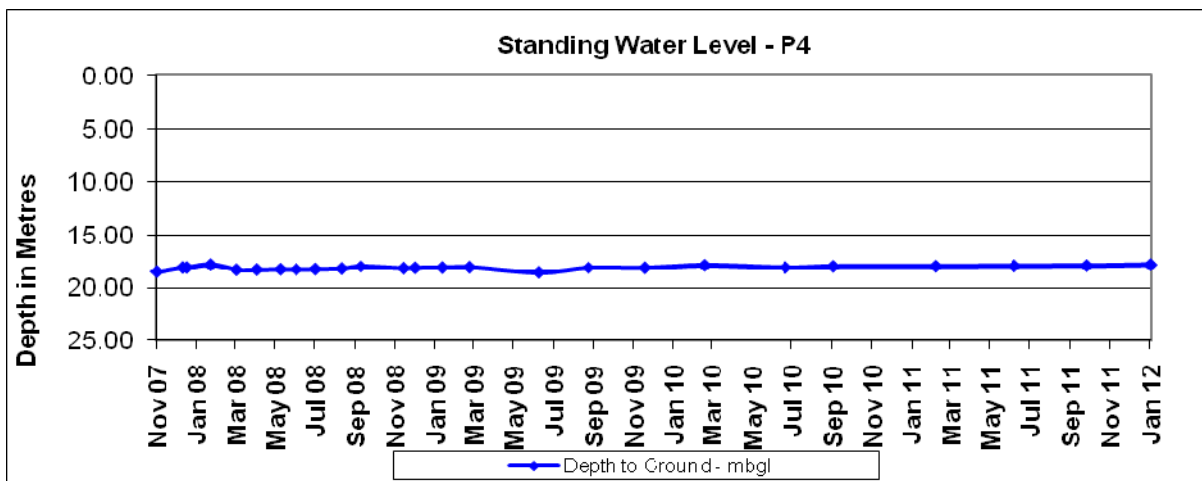
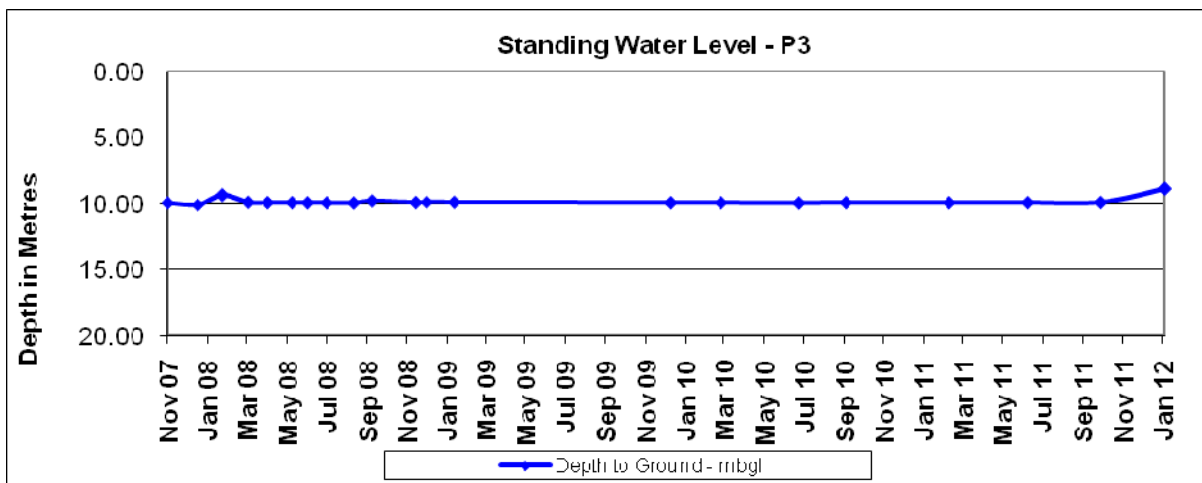
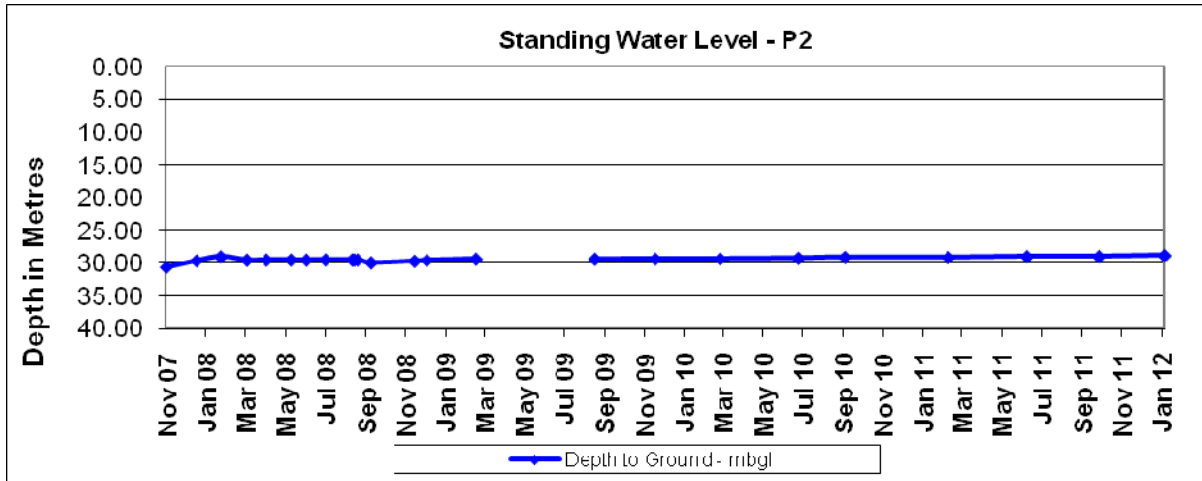


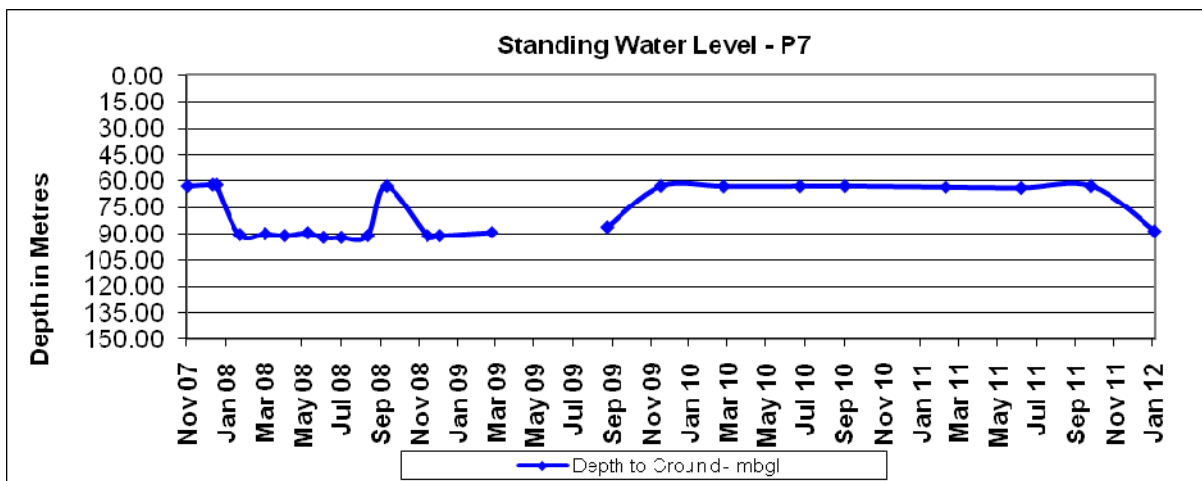
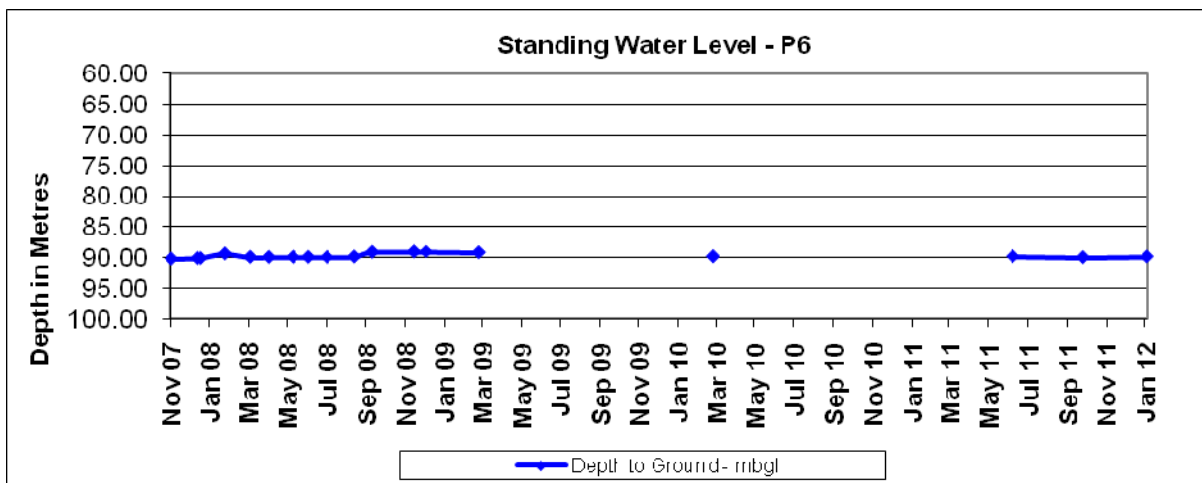
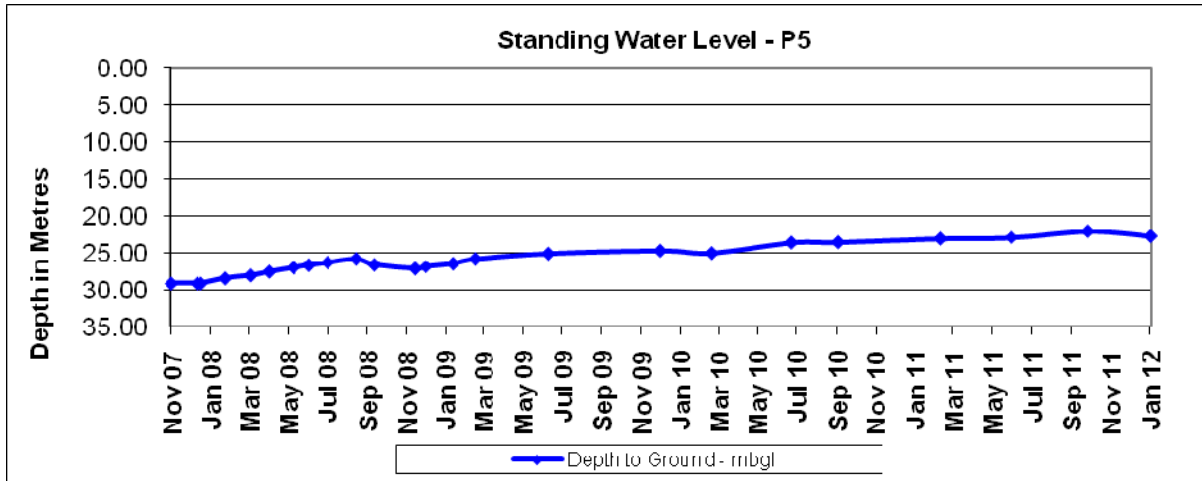
PM₁₀ levels have remained compliant since the last meeting with annual averages at both sites displaying a stabilising trend.

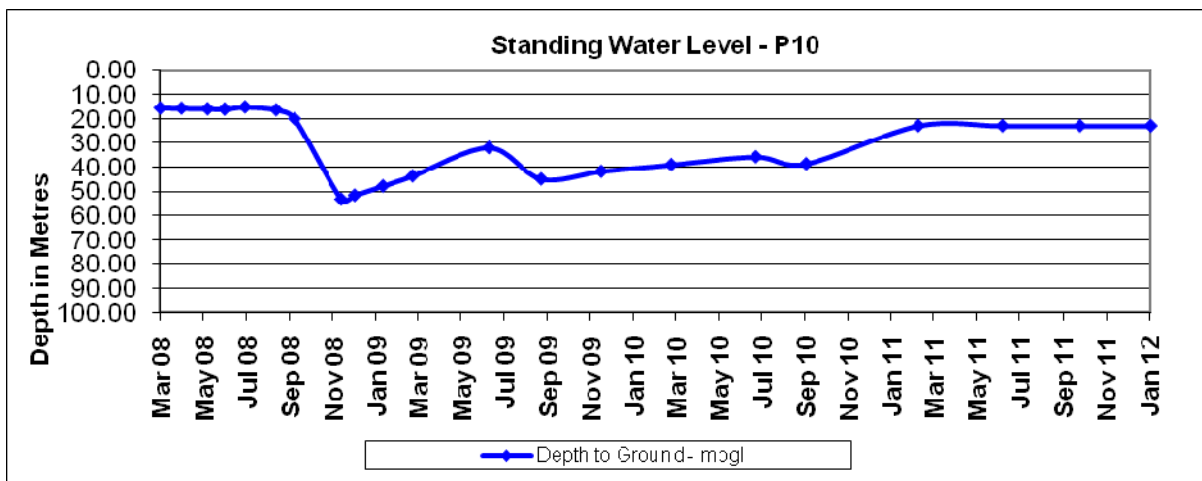
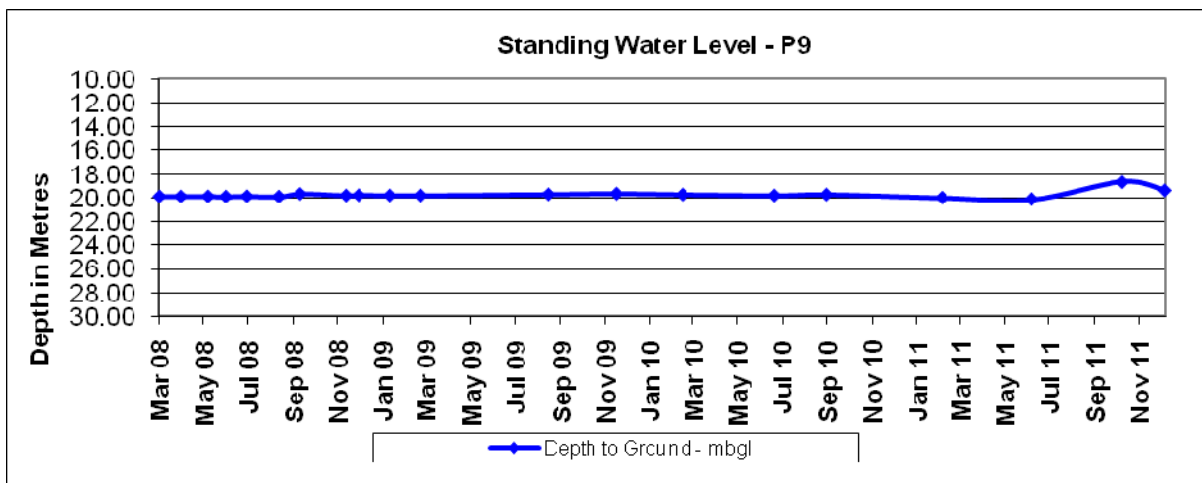
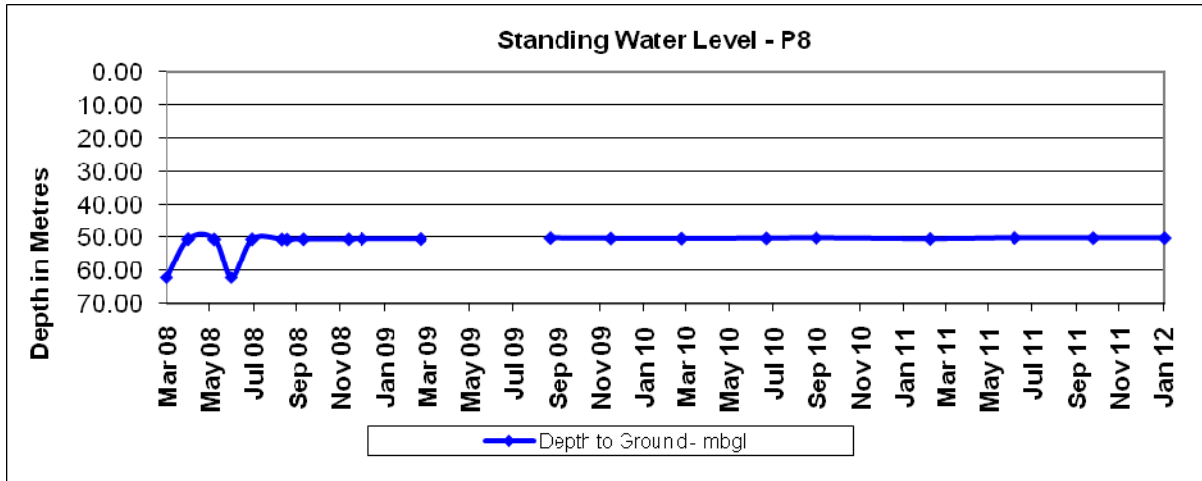
Groundwater Monitoring

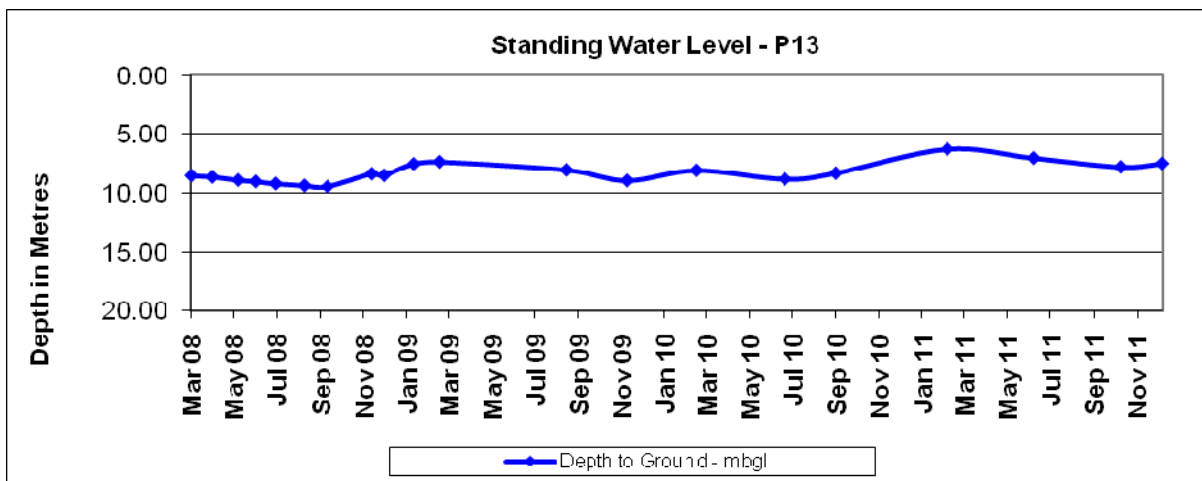
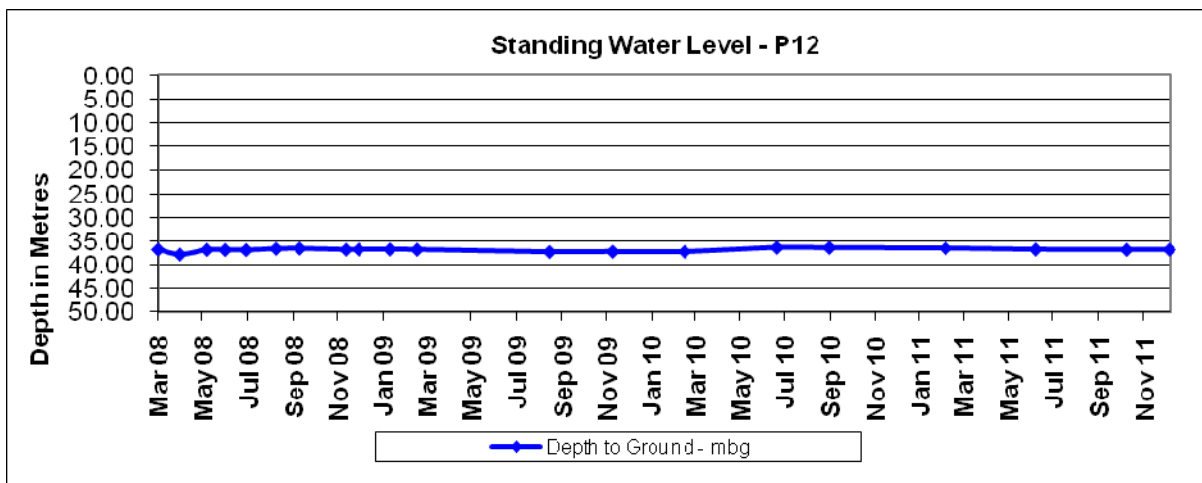
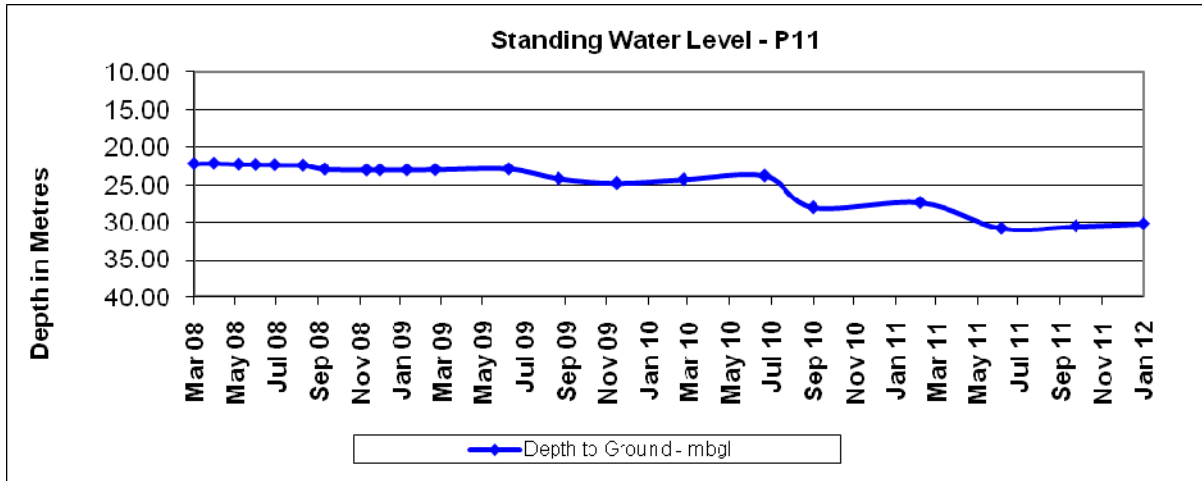
Groundwater monitoring was completed during December and January. Results indicate that groundwater levels are remaining relatively consistent with prior measurements. P7, located in “Jacks Creek State Forest”, was noted as dropping over 15m during the previous sampling period. As longwall mining has not commenced and other peizometers between the site and P7, e.g. P14, P15 and P16, have not shown any reduced levels of this magnitude, Narrabri Mine does not consider its operation is affecting this peizometer. The results for this piezometer will continued to be monitored.

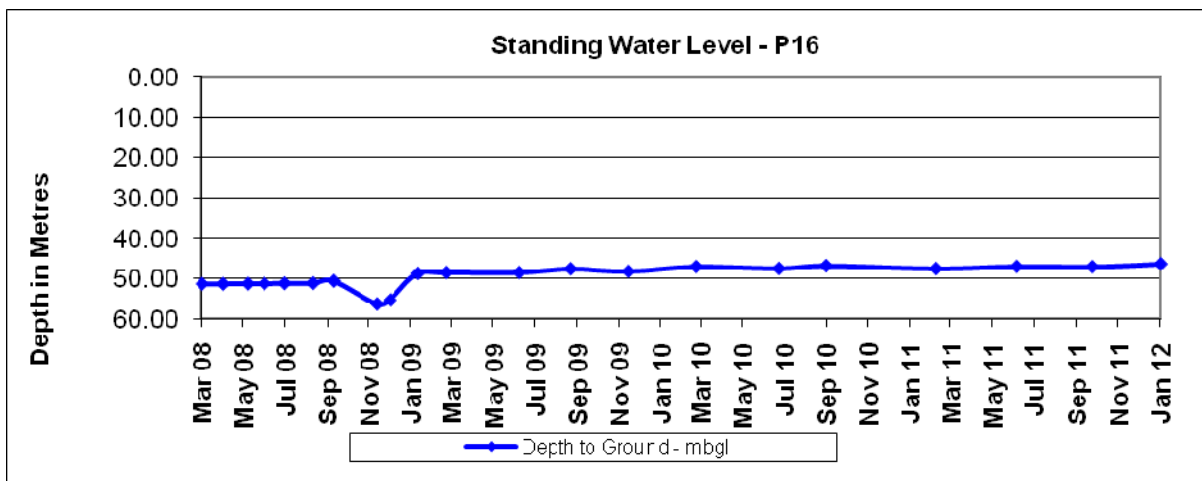
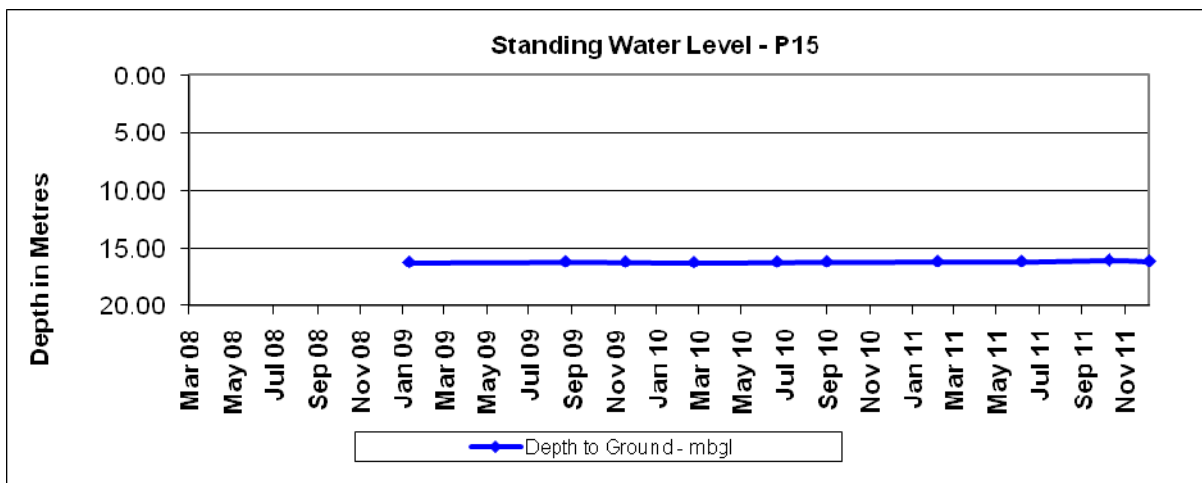
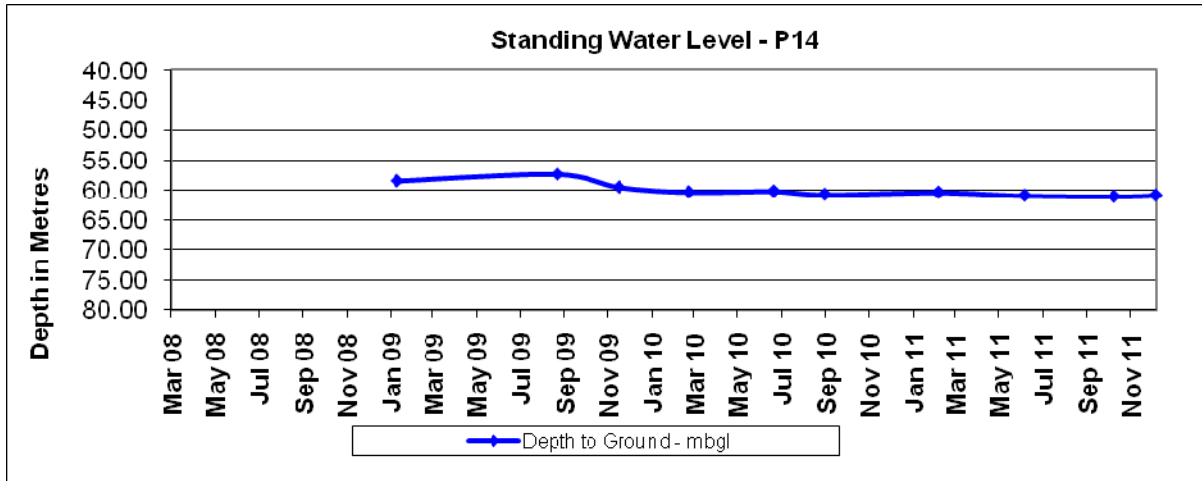


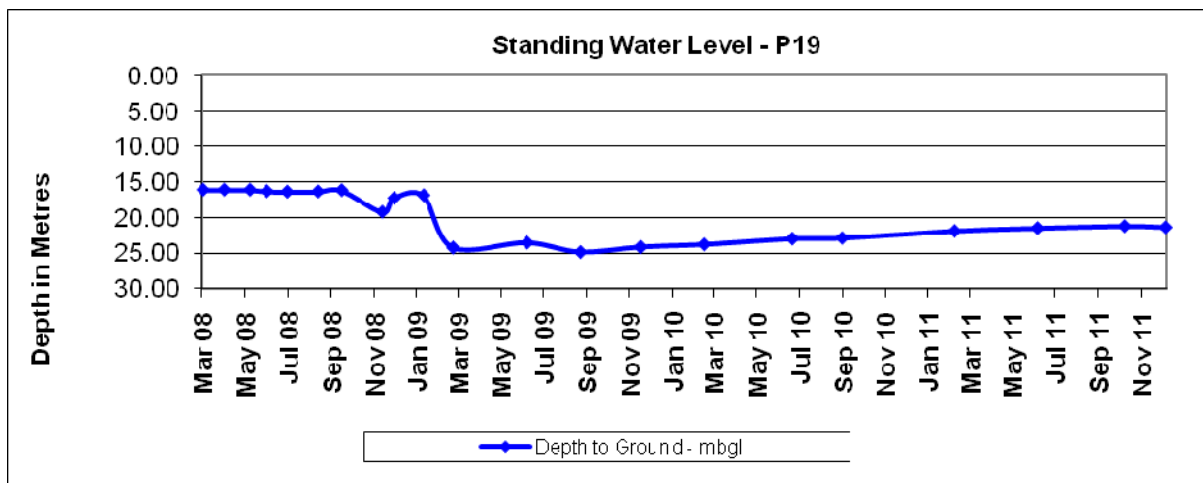
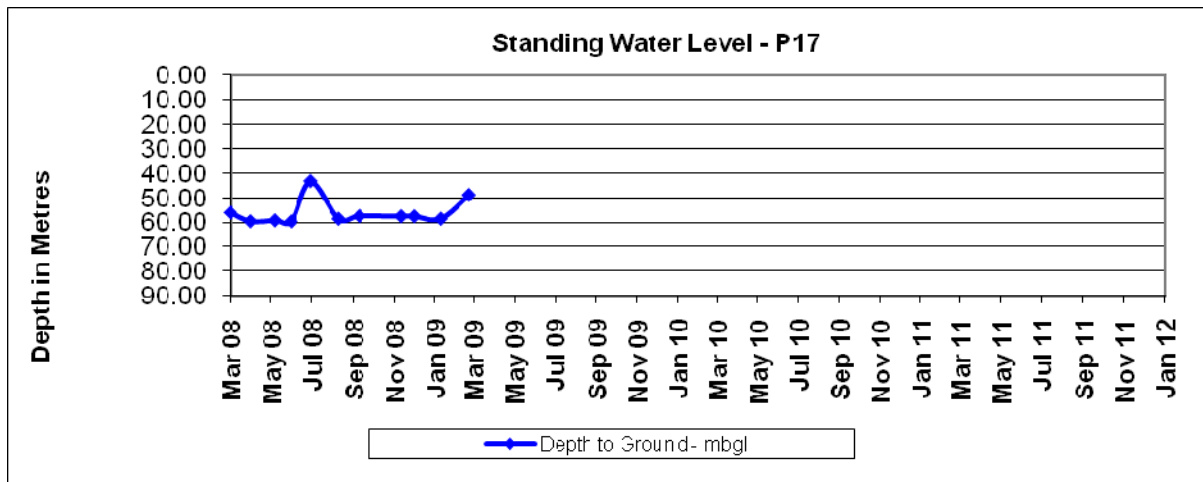












Surface Water Monitoring

Two wet weather discharges from licensed discharge points occurred during November 2011 and February 2012. The Environmental Protection Licence (EPL) outlines the limits for the following water quality parameters: Oil and Grease – 10mg/L; pH – 6.5-8.5; and Total Suspended Solids – 50mg/L (no limits are set for Total Organic Carbon (TOC) or Electrical Conductivity (EC)). It is important to note that the EPL also outlines that if 38.4mm of rain falls within a consecutive 5-day period that these limits can be exceeded, which was the case for both discharge events.

Table 1: Discharge Water Quality – 25th November 2011

Site	Date	Time	pH	EC (us/cm)	TSS (mg/L)	TOC (mg/L)	Oil/Grease (mg/L)
SD2	25/11/2011	1210	7.24	83	42	7	<5
SD4	25/11/2011	1410	7.52	131	166	7	<5
SD5	25/11/2011	1230	7.48	125	83	6	<5
SD2	1/02/2012	1130	7.91	178	20	6	<5
SD4	1/02/2012	1140	7.90	212	247	5	<5
SD5	1/02/2012	1145	7.84	148	36	7	<5

Flows were also monitored in surrounding creek points during these events on 25th November 2011 and 2nd February 2012.

Complaints

One formal complaint has been received since November 2011. The complainant advised that contractors accessing their property to undertake monitoring on behalf of Narrabri Mine were not contacting complainant and leaving gates open in paddocks where stock is located. Narrabri Mine contacted the contractor and advised that they **MUST** contact complainant when onsite (phone call not required but to present themselves if they are home) and all gates are to be shut immediately after driving through them.

Independent Environmental Audit

The Action Plan relevant to the Independent Environmental Audit has been approved by the Department of Planning and Infrastructure and is available on Whitehaven's website. The Action Plan and Audit document will be made available to the CCC for their information.