

Narrabri Coal Mine Community Consultative Committee Meeting #12

Environmental Monitoring Report November 2010 – January 2011

Noise Monitoring

Attended noise monitoring was undertaken on the 13th December 2010 to verify if noise levels were within compliance limits. The results from this monitoring are detailed in the tables below.

Noise Monitoring Results – 13 December 2010 (Day)				
Location	Time	dB(A) _{Leq}	Wind speed/ direction	Identified Noise Sources
Bow Hills	5:27 pm	42	1.5 m/s SE	Tractor (39), traffic (38), insects (33) NCM inaudible
Naroo	3:30 pm	46	1.5 m/s SE	Birds & insects (44), traffic (40) NCM inaudible
Claremont*	3:50 pm	37	1.5 m/s SE	Birds & insects (36), traffic (30), NCM inaudible
Westhaven	4:28 pm	41	1.5 m/s SE	NCM** (38), insects (37), birds (32)
Greylands	5:00 pm	40	1.5 m/s SE	Birds & insects (39), traffic (32), NCM Faintly audible

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

** Road construction NCM

Noise Monitoring Results – 13 December 2010 (Evening)				
Location	Time	dB(A) _{Leq}	Wind speed/ direction	Identified Noise Sources
Bow Hills	9:26 pm	49	<0.5 m/s SE	Traffic (49), insects (36), NCM inaudible
Naroo	9:05 pm	50	<0.5 m/s SE	Frogs & insects (50), traffic (35) NCM inaudible
Claremont	8:46 pm	42	<1 m/s S	Birds and Insects (41), NCM (35)
Westhaven	8:20 pm	43	<1 m/s S	Birds and Insects (41), NCM (38)
Greylands	8:00 pm	44	<1 m/s S	Birds and Insects (45), NCM (34)

Noise Monitoring Results – 13 December 2010 (Night)				
Location	Time	dB(A) _{Leq}	Wind speed/ direction	Identified Noise Sources
Bow Hills	10:30 pm	42	Calm	Insects (42), NCM inaudible
Naroo	10:49 pm	52	Calm	Frogs & insects (52), NCM (30)
Claremont	11:10 pm	49	Calm	Insects (39), NCM barely audible (<25)
Westhaven	11:35 pm	44	Calm	Frogs & insects (44), NCM (28)
Greylands	12:01 am	45	Calm	Insects (45), NCM (34)

The results indicate that noise emissions from the mine exceeded the criterion of 35 dB(A)_{Leq(15min)} at the "Westhaven" monitoring location during the day and evening

surveys. During the day, road construction activity near “Westhaven” dominated the noise measurement. In the evening the noise was related to drilling activities at the site of the vent fan construction. Narrabri Coal expects the noise levels to return below criteria upon completion of the nearby roadworks and construction of the vent pad given that no other locations in the area recorded noise levels above criteria. “Westhaven” is a project related property, and on this basis, no referral of elevated noise results to regulatory authorities is necessary.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) $L_{1(1 \text{ min})}$ 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 $L_{1(1 \text{ min})}$ noise from the mine did not exceed 45 dB(A) at any monitoring location.

Deposited Dust Monitoring

Month	ND1 Turrabaa	ND2 Claremont	ND3 Bow Hills	ND4 Matoppo	ND5 Claremont	ND6 Willarah	ND7 Claremont	ND8 Claremont
February 2010	5.2	1.3	1.2	2.9	1.6	2.3	0.9	2.0
March 2010	1.3	1.5	1.0	26.3	2.9	4.3	5.2	2.6
April 2010	1.4	1.0	1.4	36.1	1.4	0.8	4.5	2.1
May 2010	1.3	2.2	1.0	8.0	18.3	3.3	1.6	1.0
June 2010	1.0	1.4	4.8	16.0	7.8	2.2	3.0	1.2
July 2010	1.4	0.8	3.0	21.0	4.2	0.6	11.1	0.9
August 2010	0.6	1.6	4.7	19.4	1.7	1.0	0.6	0.4
September 2010	0.9	2.0	2.8	17.9	4.7	0.5	3.2	0.9
October 2010	0.7	4.9	1.0	24.9	3.2	1.4	0.9	0.8
November 2010	1.1	2.3	0.3	27.3	3.6	4.1	2.2	0.5
December 2010	1.5	4.4	3.2	8.3	4.1	0.8	3.1	1.4
January 2011	1.1	4.4	0.7	0.1	2.1	7.1	3.7	0.9
Annual Average	1.5	2.3	2.1	17.4	4.6	2.4	3.3	1.2

Deposited dust results have remained at relatively low levels since the last meeting, with the exception of ND4 Matoppo. Only two sites (ND4 Matoppo & ND5 Claremont) remain above the annual average limit of 4 g/m²/month.

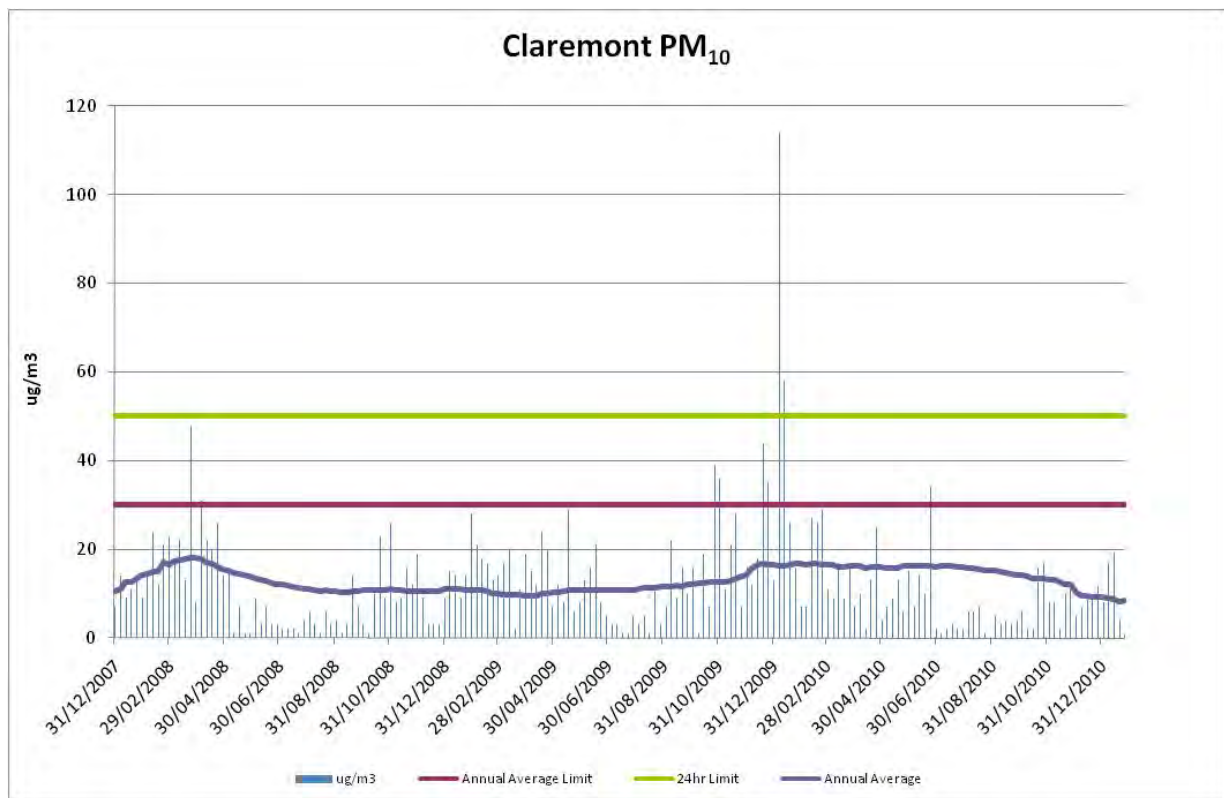
ND4 at “Matoppo” has returned elevated dust levels since January 2010. As previously discussed a burning drum located in close proximity to the dust gauge was thought to be the cause of earlier elevated levels. Since the drum was moved in July 2010 dust levels have remained elevated with the exception of January 2011. With the approval of the residents a second deposited dust monitor was placed in a new location at “Matoppo” during January 2011. The new monitor is further away from the house and in closer proximity to the pit top area of the mine site and expected to record more reliable results due to less interference from household activities. This monitor may eventually replace the original ND4 monitor. The first

results in February 2011 recorded a lower reading of 3.6 g/m²/month. Monitoring at the new location (ND4a) will continue for the duration of operations.

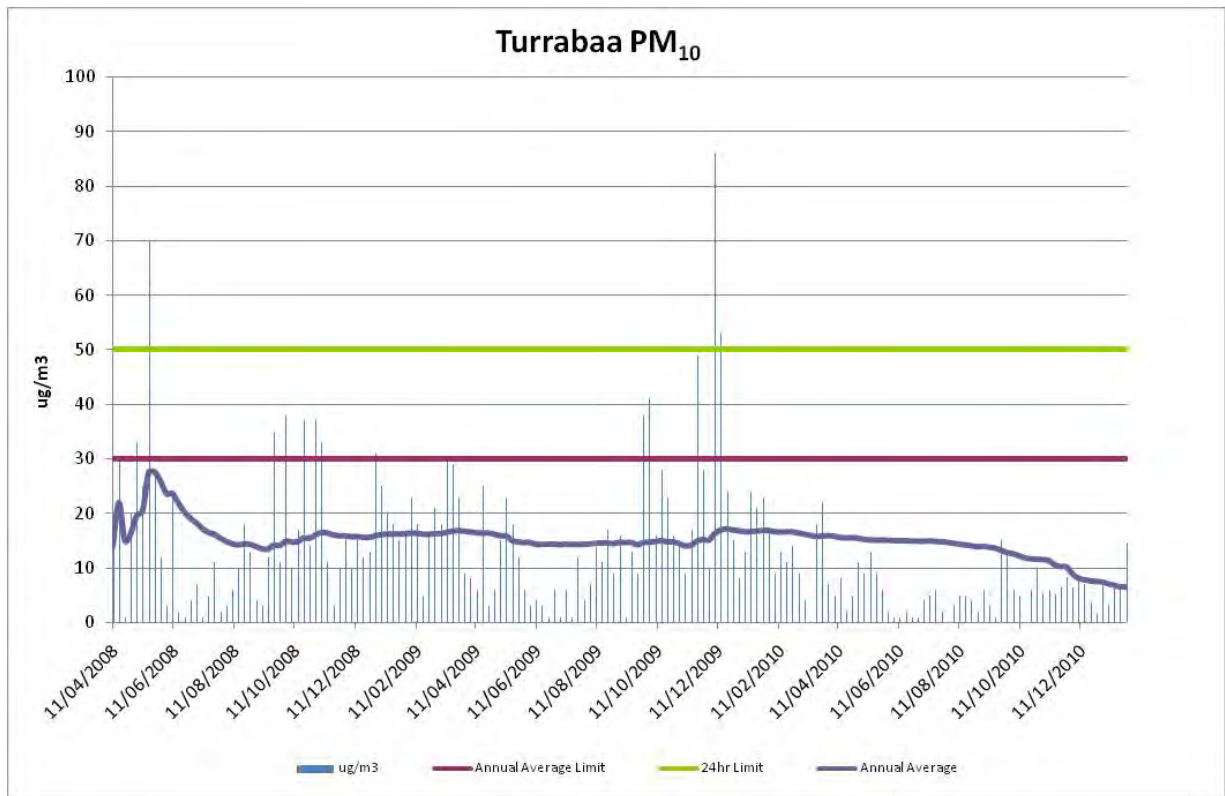
ND5 “Claremont” remains only slightly in exceedance (4.6 g/m²/month) which can be explained by the elevated results over May to July 2010, but in particular the May result of 18.3 which has substantially skewed the annual average. The period of elevated results may have been caused by nearby earthworks at the time. Once the outlying results from this period become redundant the annual average for ND5 is expected to drop below the limit of 4 g/m²/month.

High Volume Air Sampling (PM₁₀)

PM₁₀ measurements taken to date for the “Claremont” High Volume Air Sampler is returning a running annual average of 8.38 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 is returning a running annual average of 6.44 µg/m³ which is also well below the annual average limit of 30 µg/m³.

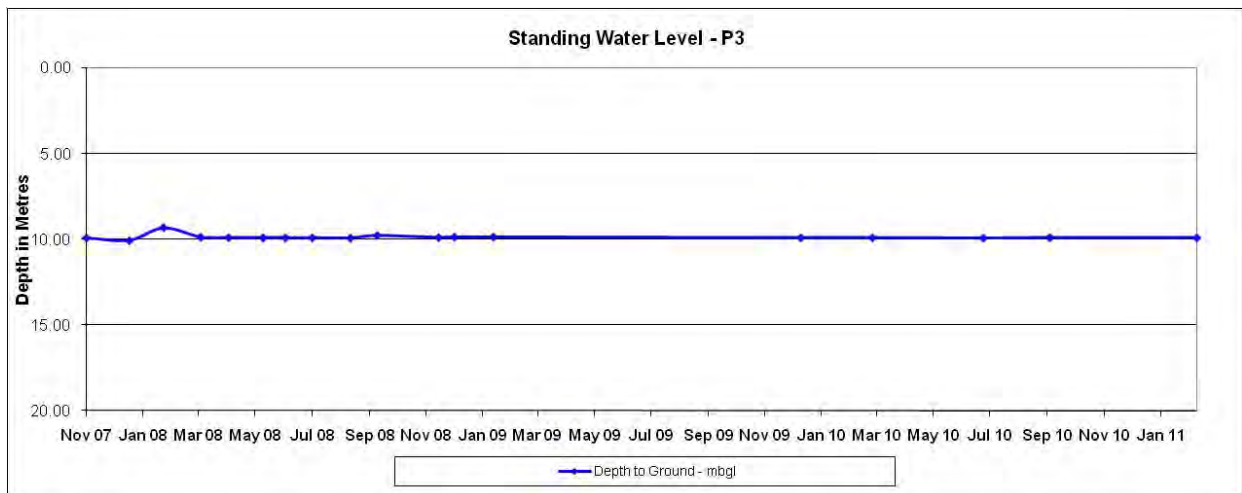
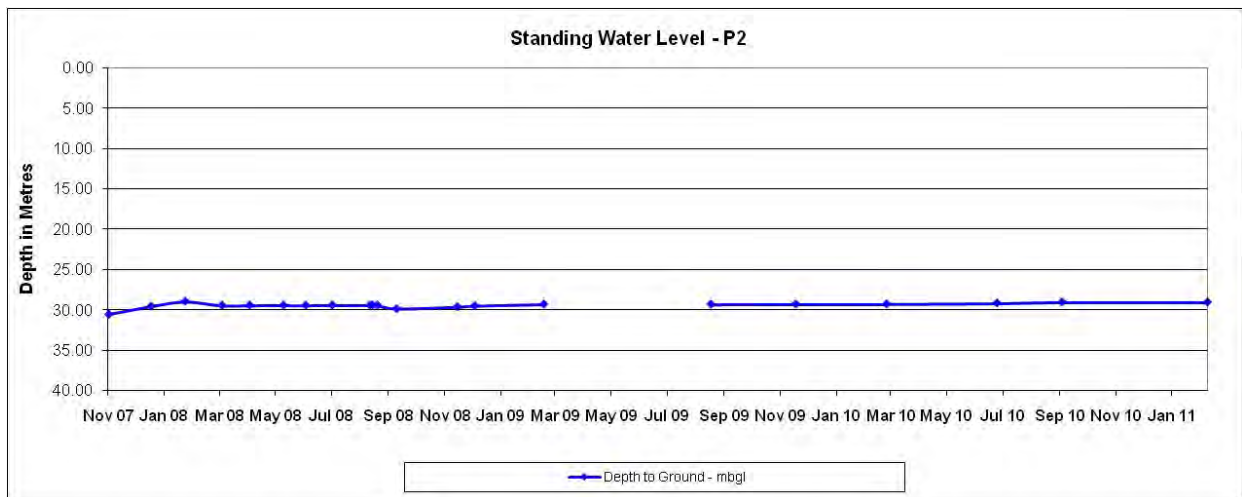
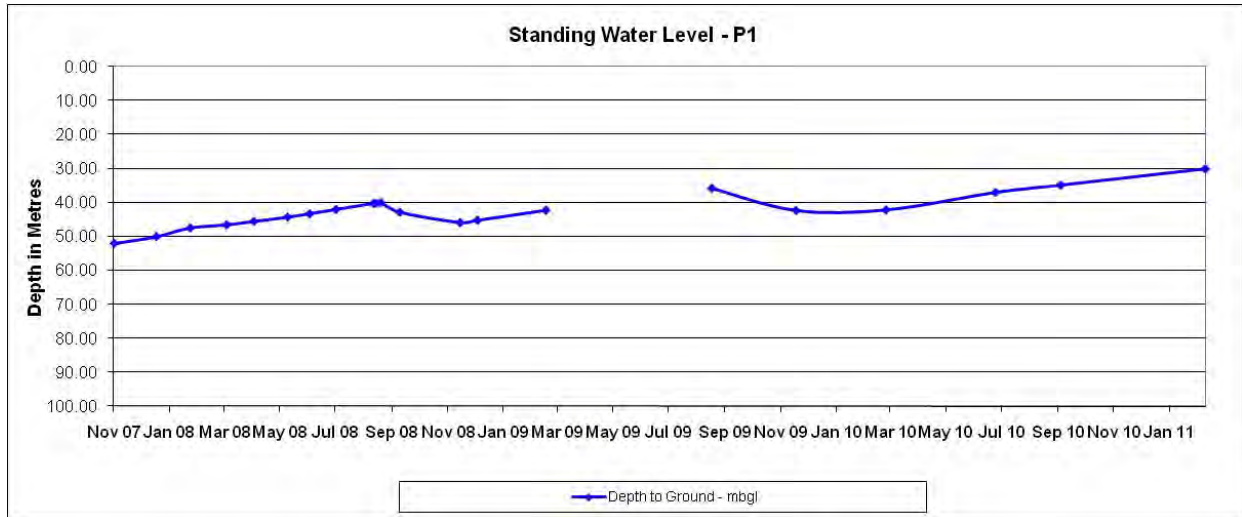


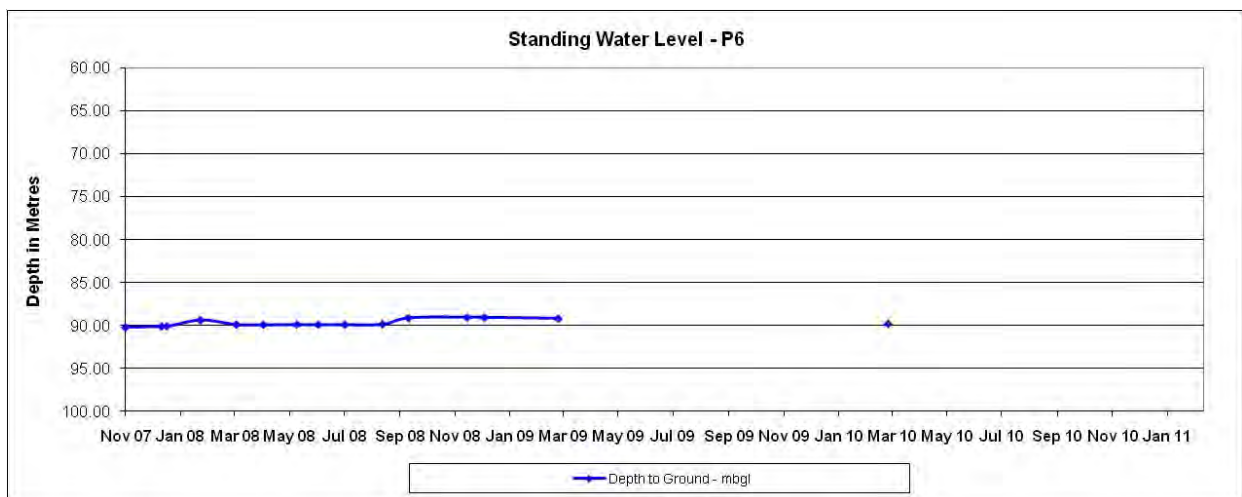
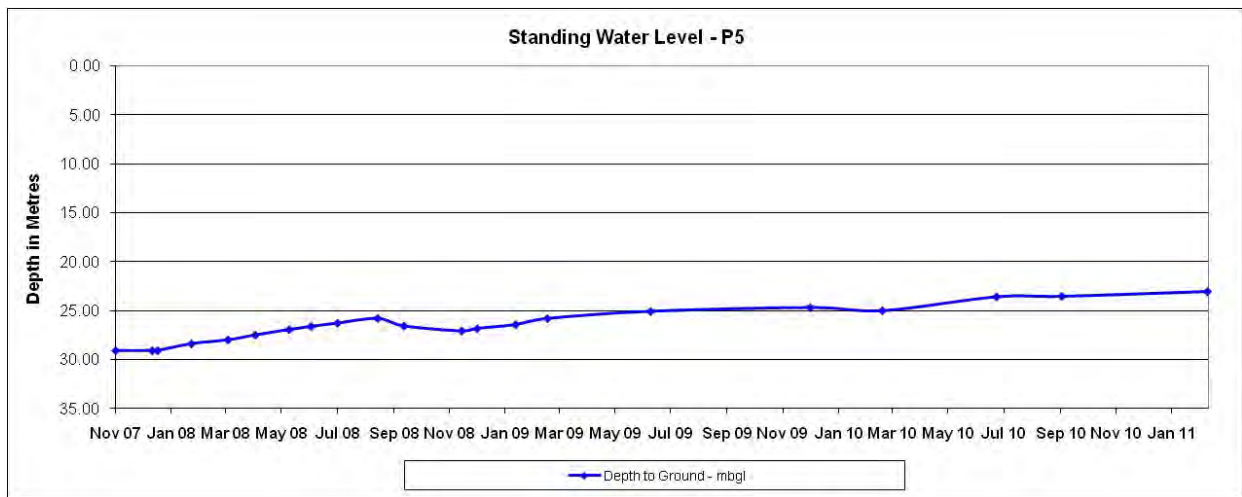
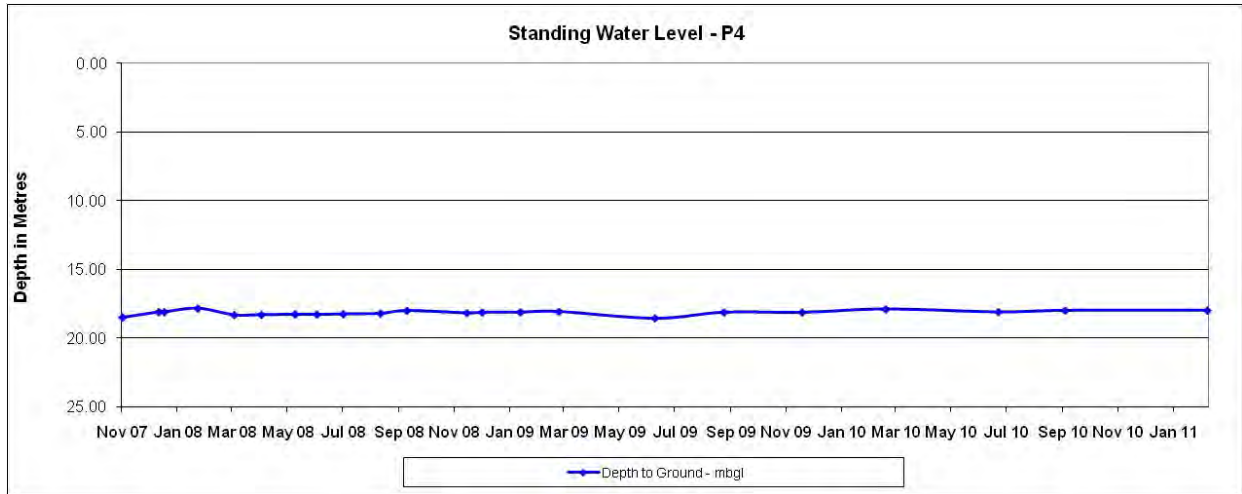
PM₁₀ levels have remained compliant since the last meeting with annual averages at both sites displaying a continued downward trend representative of the previous year.

Groundwater Monitoring

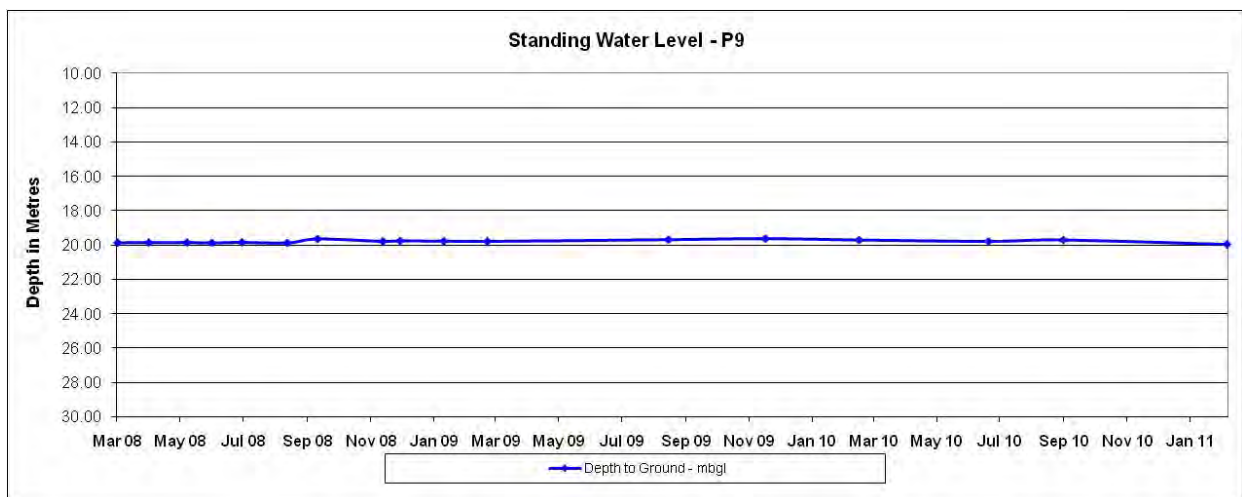
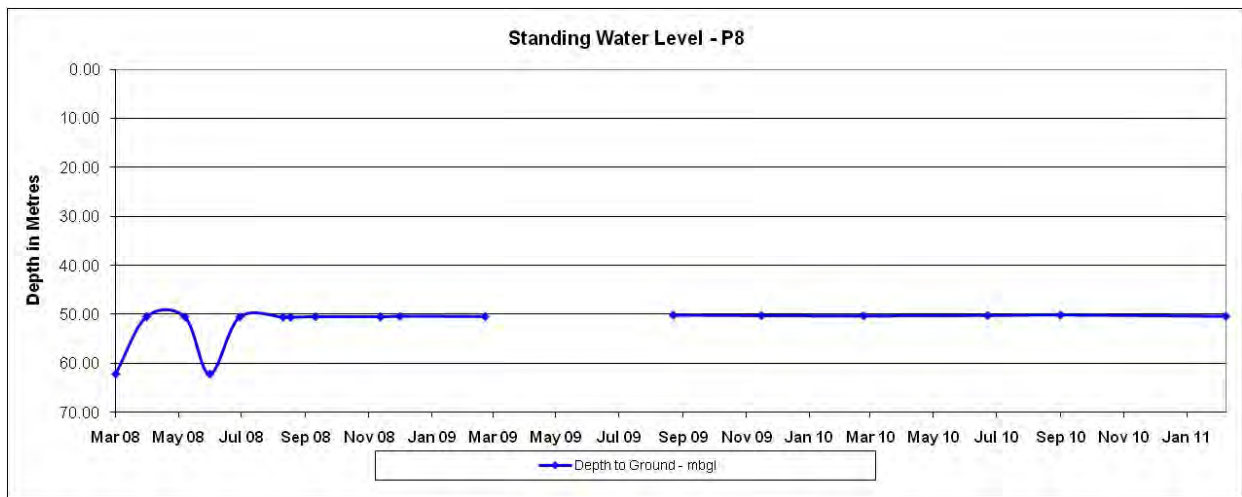
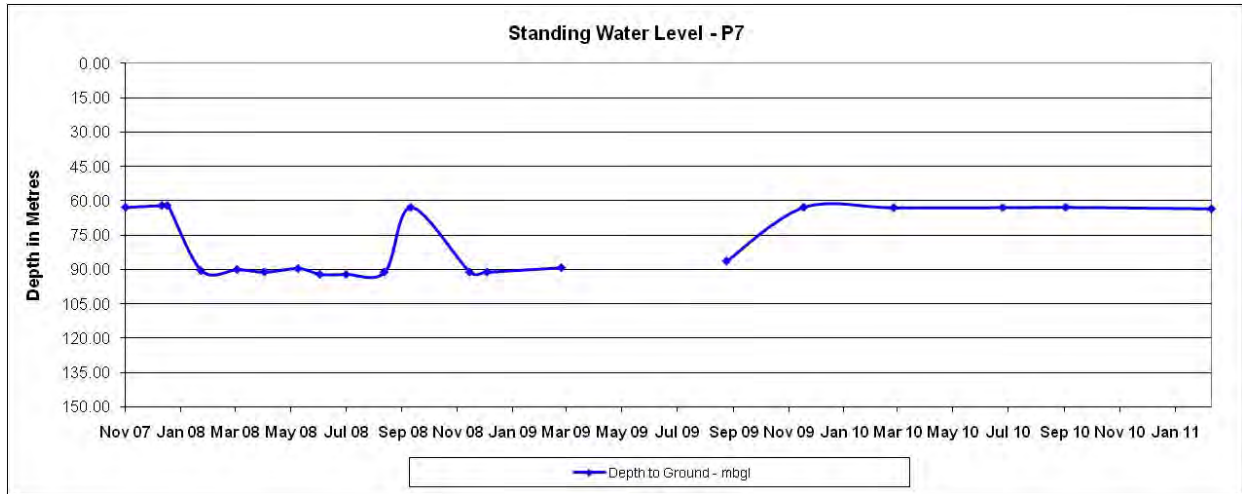
The graphs below show the SWL trends at each site since monitoring commenced. Groundwater levels have remained relatively constant over the last 12 months with the exception of P18 which was recorded dry as of the 10/02/2011. This piezometer is located approximately 1.5km north-east of the surface facilities and is dry due to nearby water extraction from the coal seam. The same result occurred at P20 which is now no longer monitored due to mining activity.

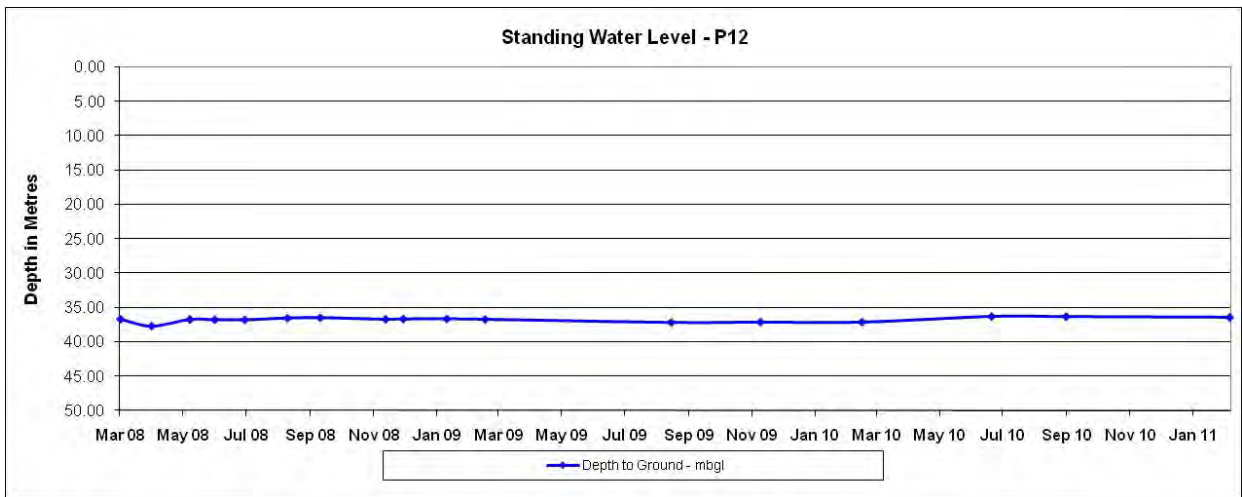
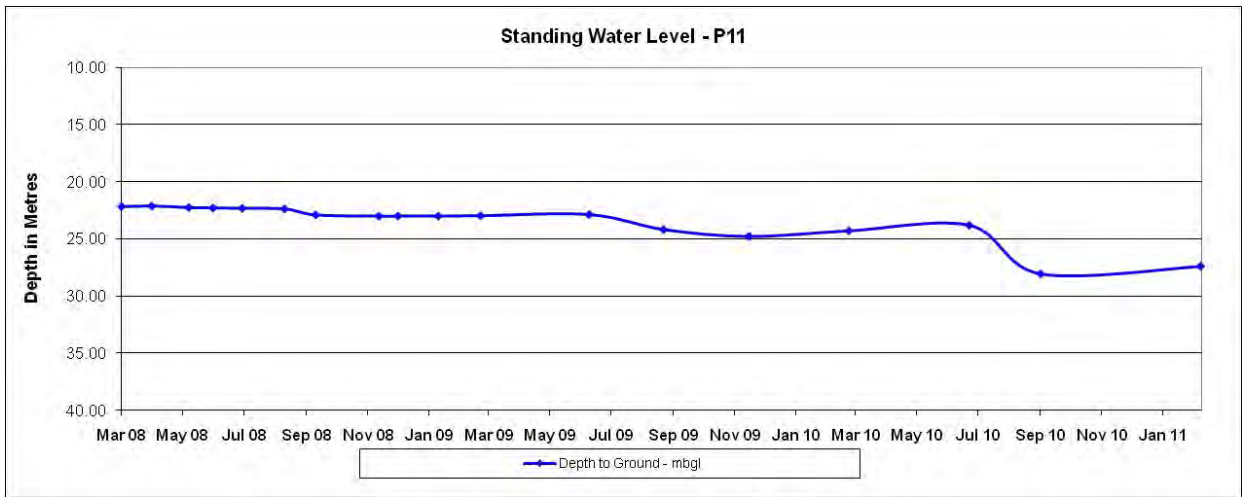
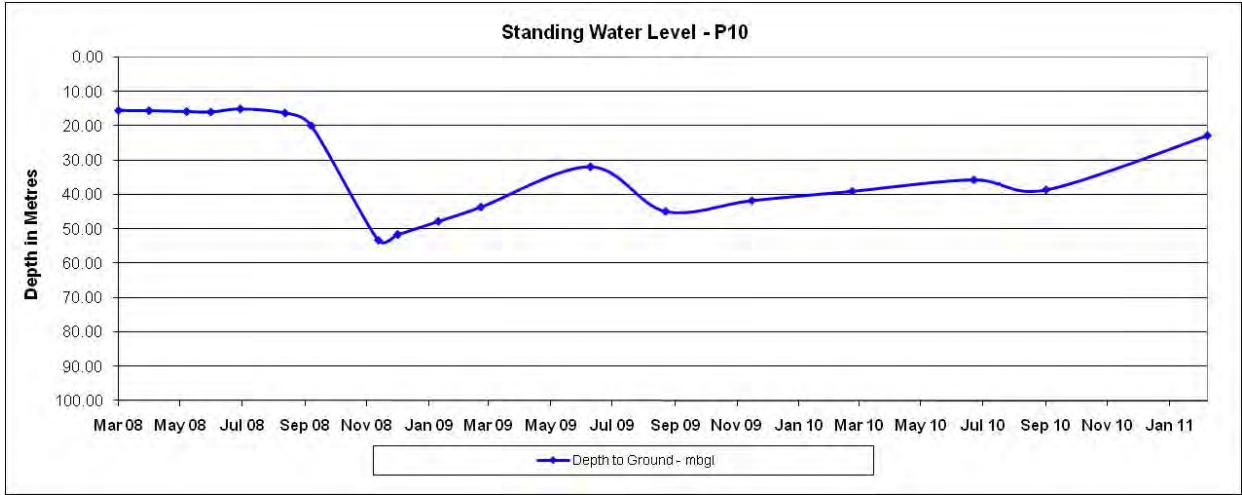
Standing water levels at P1, P10 and P13 have risen by 4.78m, 15.82m and 2.2 m respectively since September 2010. This is thought to be associated with the recharge of groundwater after rainfall events and variations in water pumped from bores for agricultural use. Continued monitoring will determine any future trends with results displayed and discussed in the next report.

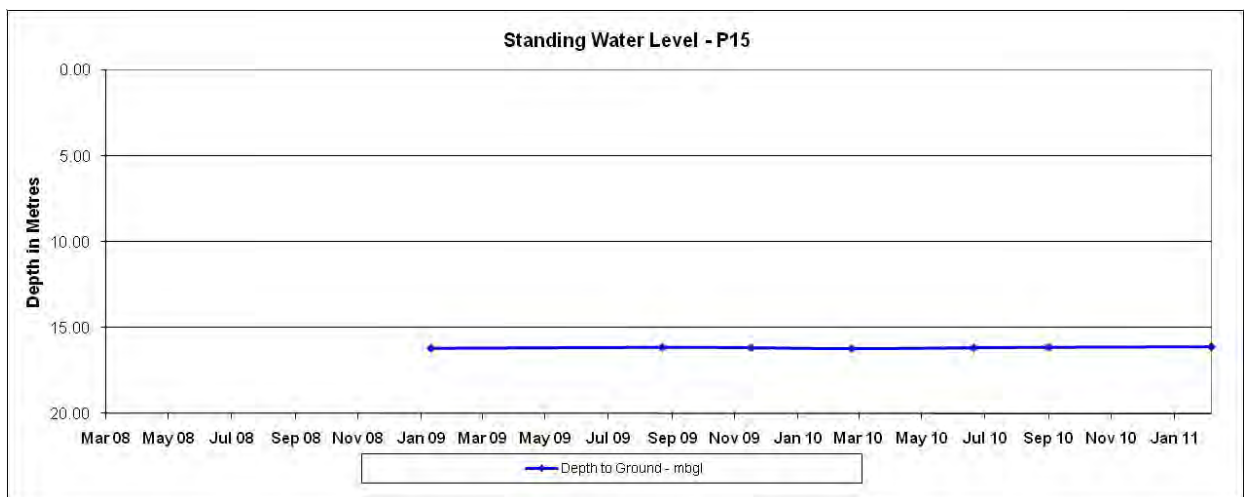
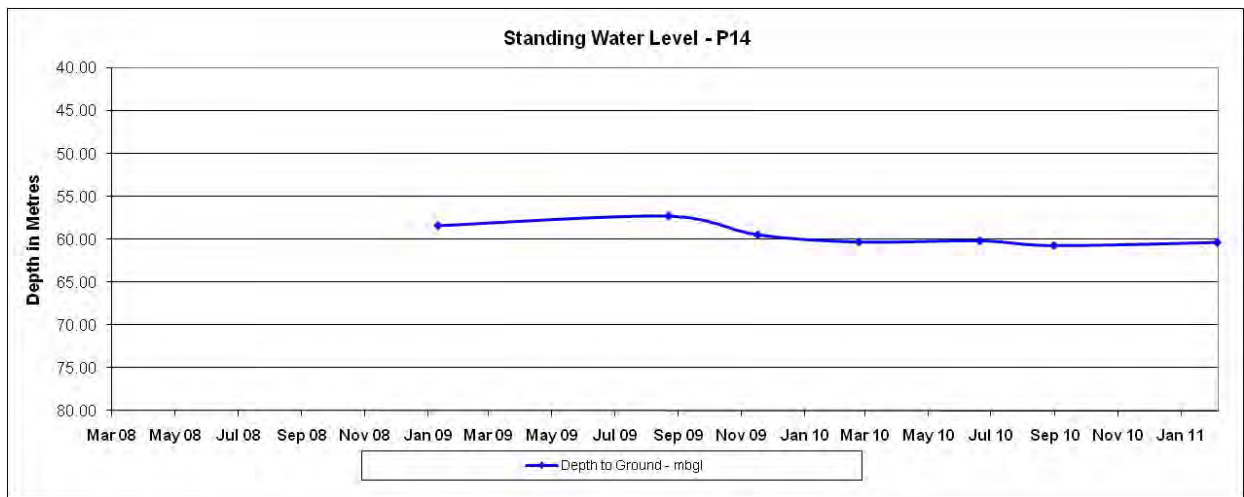
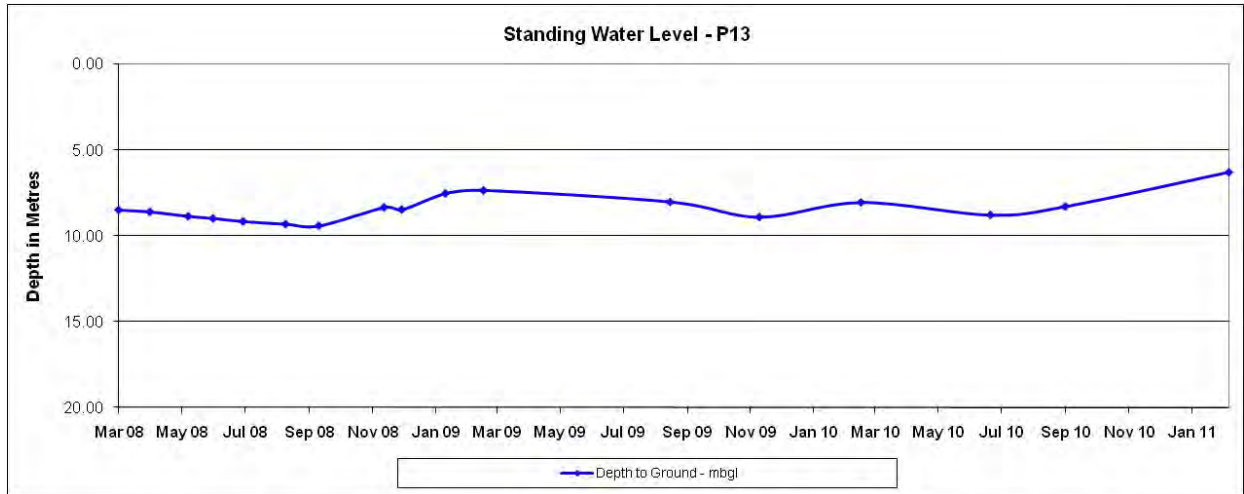


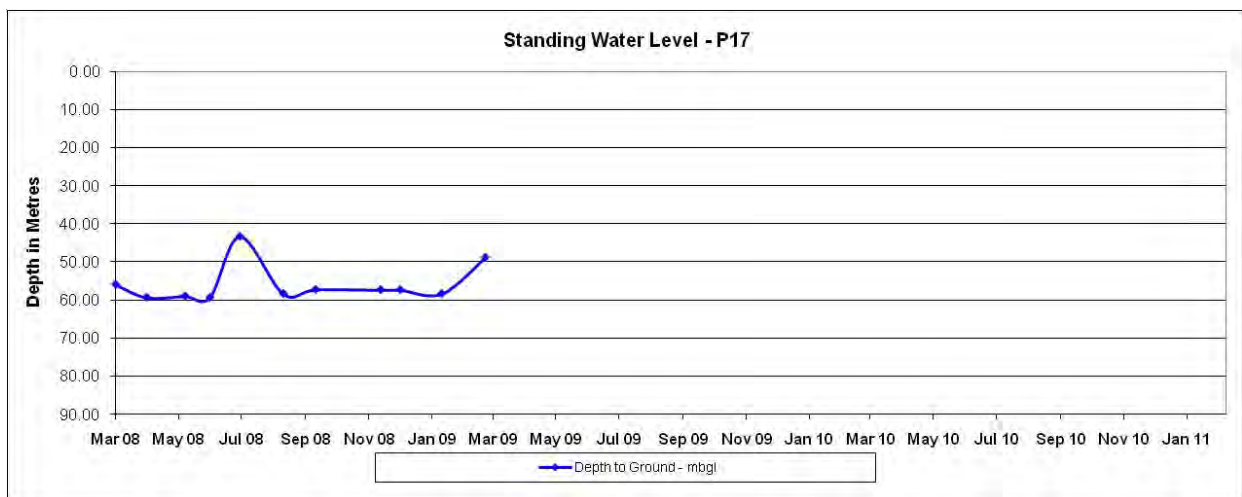
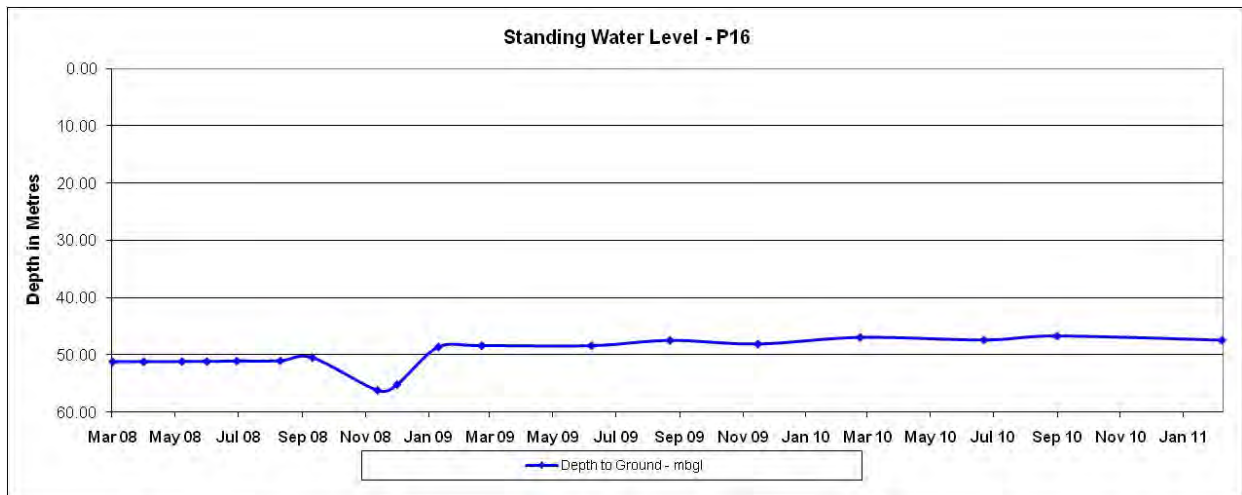


*P6 – Dry

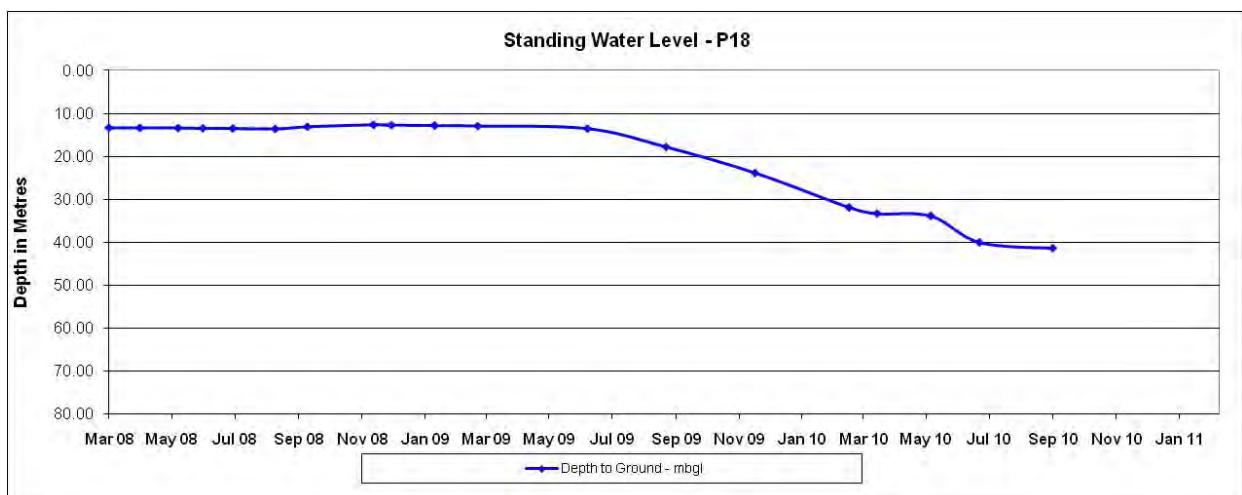




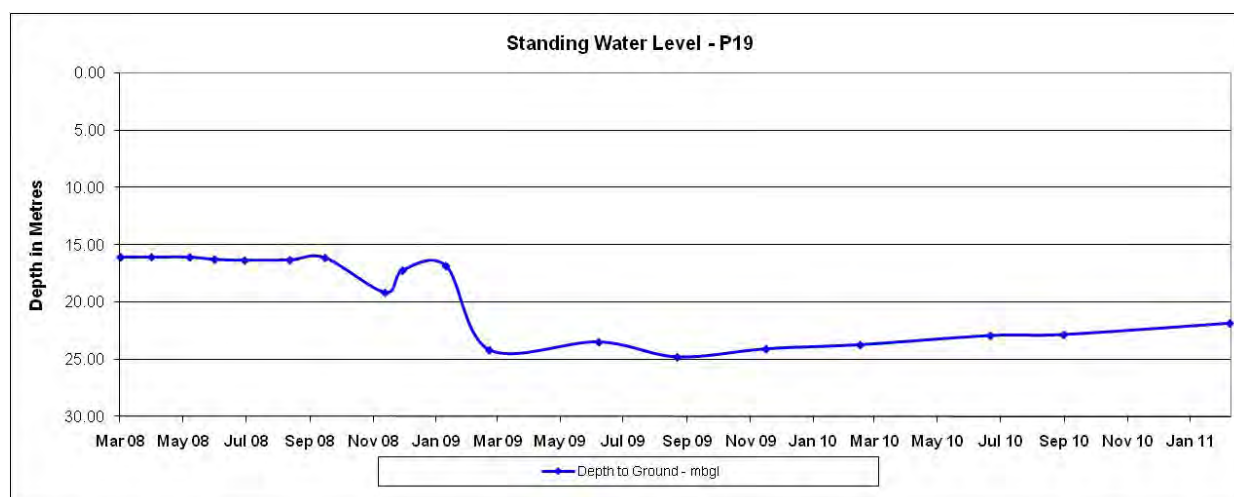




***P17 - Dry**



***P18 - Dry**



Surface Water Monitoring

No wet weather discharges have occurred during the last 3 months. However, monitoring of surrounding creek points whilst they are flowing has occurred to obtain baseline water quality data. Results from the upstream and downstream points remained consistent. A drop in the Total Suspended Solids (TSS) was evident since the last round of monitoring and is most likely due to decreased rainfall allowing further settling time in the creek. The Electrical Conductivity (EC) reading at downstream point KC1DS also dropped significantly from 955 $\mu\text{S}/\text{cm}$ to 150 $\mu\text{S}/\text{cm}$ since the last round of monitoring. No concentration limits apply to these monitoring locations.

Routine monitoring of onsite dams was conducted during December 2010 to obtain background water quality data.. The water quality at licensed discharge points SD2, SD4 and SD5 was acceptable, however the TSS levels at points SD2 & SD4 were above 50mg/L. No concentration limits apply until discharge actually occurs and given reduced rainfall over the period and management of water storages (ie. pumping out discharge dams to avoid discharge) the chances of a discharge event at these points is relatively low. The dams will continue to be monitored and if a discharge event becomes more prominent a liquid flocculent may be used if required to bring TSS levels below criteria.

Complaints

No complaints were received over the period of November 2010 to January 2011. A complaint was received on the 9th March 2011 (outside this reporting period) in relation to what was believed to be a mine related vehicle pulling onto the Highway in front of the School bus causing heavy braking by the bus to avoid collision. This matter was referred to site for contractor managers and supervisors to tool box with those contractors to ensure safe driving practices.

Rehabilitation

160 Native Orange seedlings have been propagated from local seed source and planting of the seedlings has begun around the site. This is the first step towards re-establishing the species within the area.

Independent Environmental Audit

An Independent Environmental Audit was conducted onsite over two days at the beginning of February 2011, as required by the Stage 2 consent. A draft of the audit report has been reviewed by Narrabri Coal personnel and it is expected that the final report will be issued within the next month.

Narrabri Coal is required to submit the audit report to Department of Planning with an action plan to address any non-compliances. The report will be available on the Whitehaven website and a copy will also be issued to the CCC.