

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), SCM (25)
Ferndale	12:25 pm	42	2 m/s NW	Birds & insects (42), SCM inaudible
Plain View	2:02 pm	42	1.5 m/s NW	Birds & insects (42), SCM (22)
Lilydale	3:35 pm	46	3 m/s NW	Traffic (44), birds & insects (39), SCM (32)

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), SCM (<20)
Ferndale	8:10 pm	25	Calm	Insects (23), SCM (21)
Plain View	6:48 pm	42	0.5 m/s SE	Insects (41), traffic (35), SCM (21)
Lilydale	6:30 pm	43	0.5 m/s SE	Traffic (41), birds & insects (38), SCM (<20)

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), SCM (<20)
Ferndale	2:27 pm	47	1 m/s N	Traffic (45), birds & insects (42), SCM inaudible
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), SCM inaudible
Ferndale	8:03 pm	29	1 m/s N	Sheep (26), insects (25), traffic (20), SCM inaudible
Plain View	9:19 pm	33	0.5 m/s N	Traffic (31), insects (29), SCM inaudible

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), SCM inaudible
Ferndale	12:34 pm	47	1.5 m/s NW	Traffic (46), birds & insects (43), SCM barely audible
Plain View	4:05 pm	41	0.5 m/s NW	Birds & insects (40), traffic (35), SCM (25)

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), SCM inaudible
Ferndale	6:59 pm	47	Calm	Traffic (47), insects (32), SCM (<20)
Plain View	7:39 pm	41	Calm	SCM (39) , 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 8th 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 $4\text{g/m}^2/\text{month}$.

Sunnyside Mine – Deposited Dust

Month	SD1 Ferndale	SD3 Plainview	SD4 Lilydale	SD5 Ivanhoe	SD6 Illili	SD7 Innisvale	SD8 Woodlawn
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
Annual Average	1.3	1.4	2.3	3.1	1.2	1.3	1.8

PM₁₀ Data

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

PM₁₀ measurements taken for the “Illili” High Volume Air Sampler (HVAS) are returning a running annual average of $13.13\mu\text{g/m}^3$, which is well below the annual average limit of $30\mu\text{g/m}^3$.

PM₁₀ measurements taken for the “Lilydale” HVAS are returning an annual average of $8.56\mu\text{g/m}^3$, which is also well below the annual average limit of $30\mu\text{g/m}^3$.

Blast Monitoring

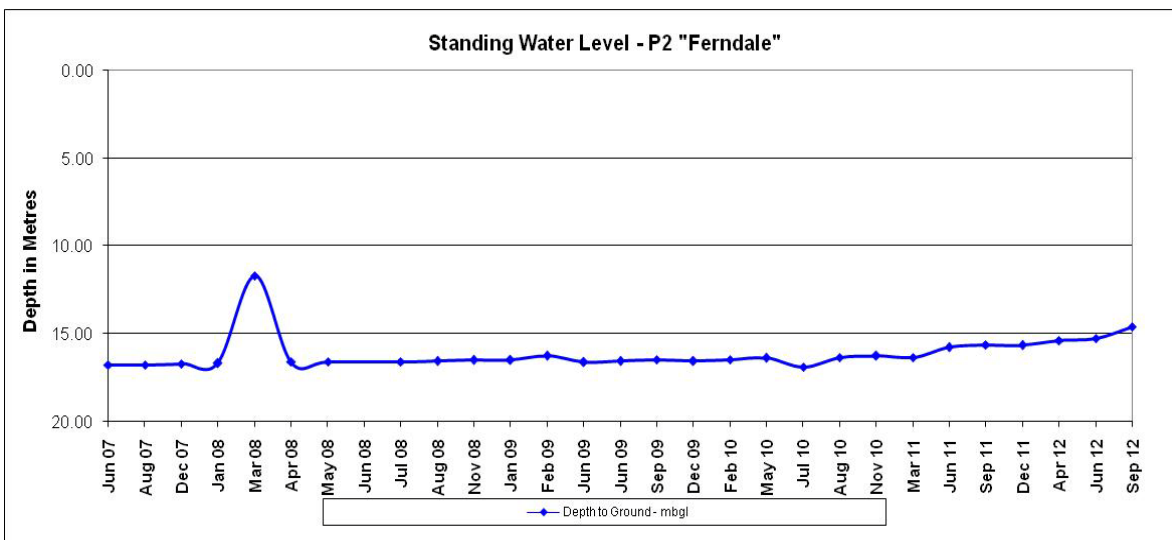
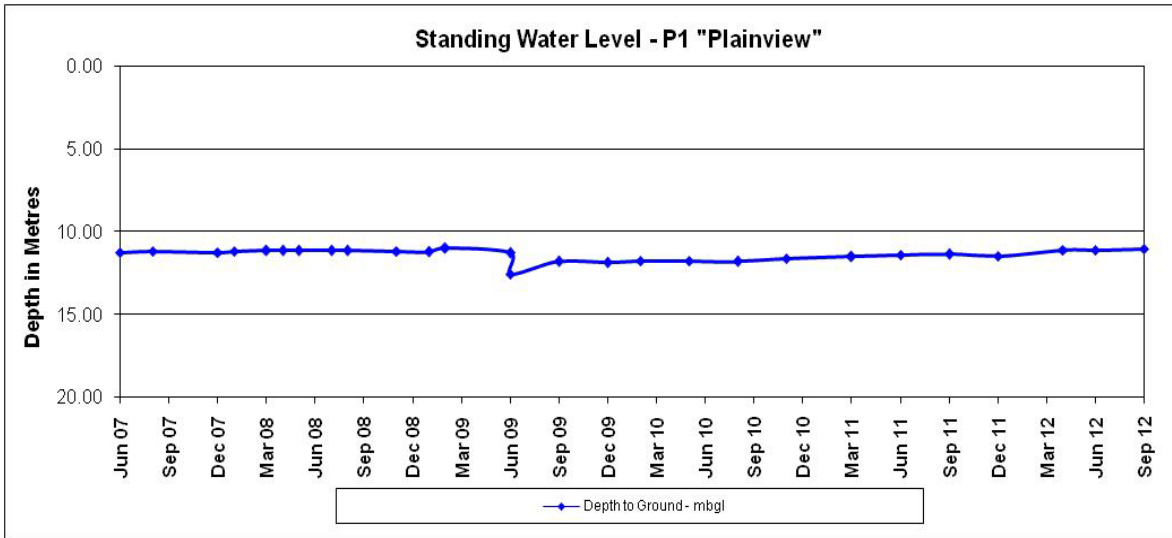
Since the first blast there have been 60 blasts (until the end of November). All blasts have been compliant with ground vibration and airblast overpressure criteria since the last CCC meeting.

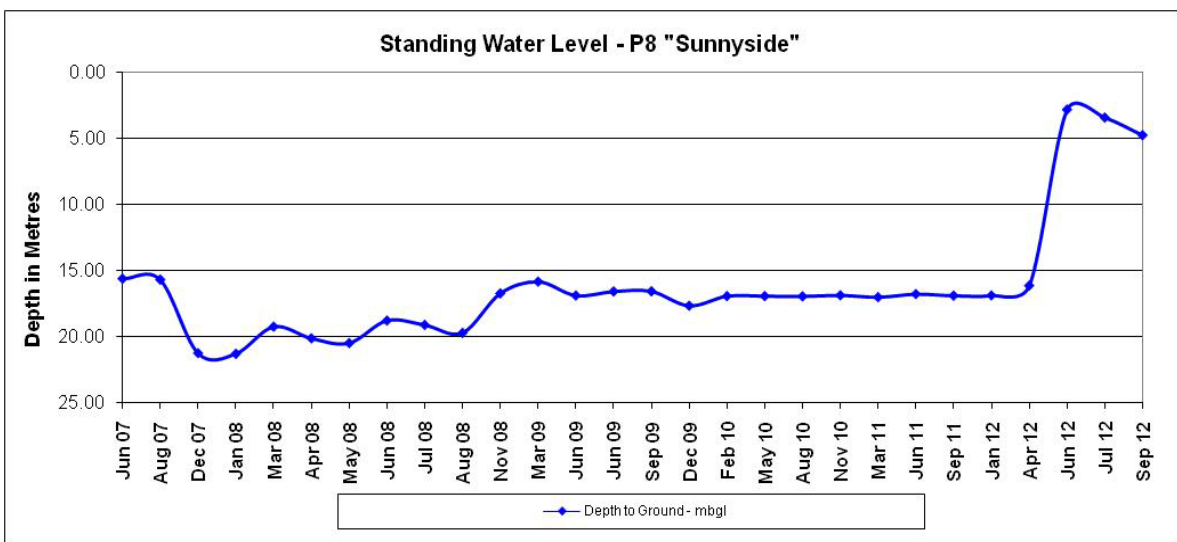
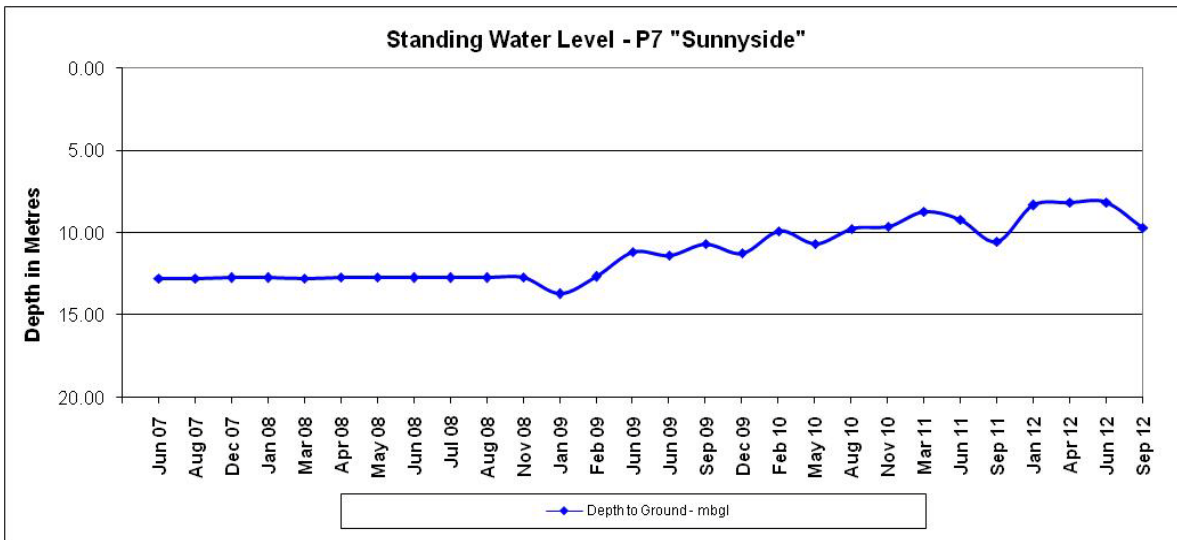
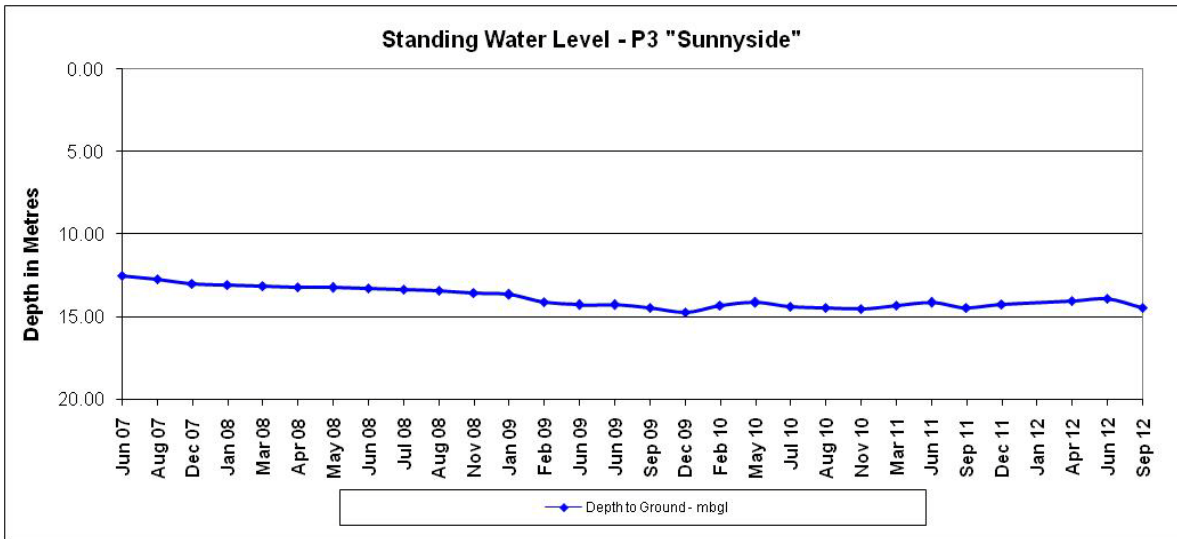
Groundwater Monitoring

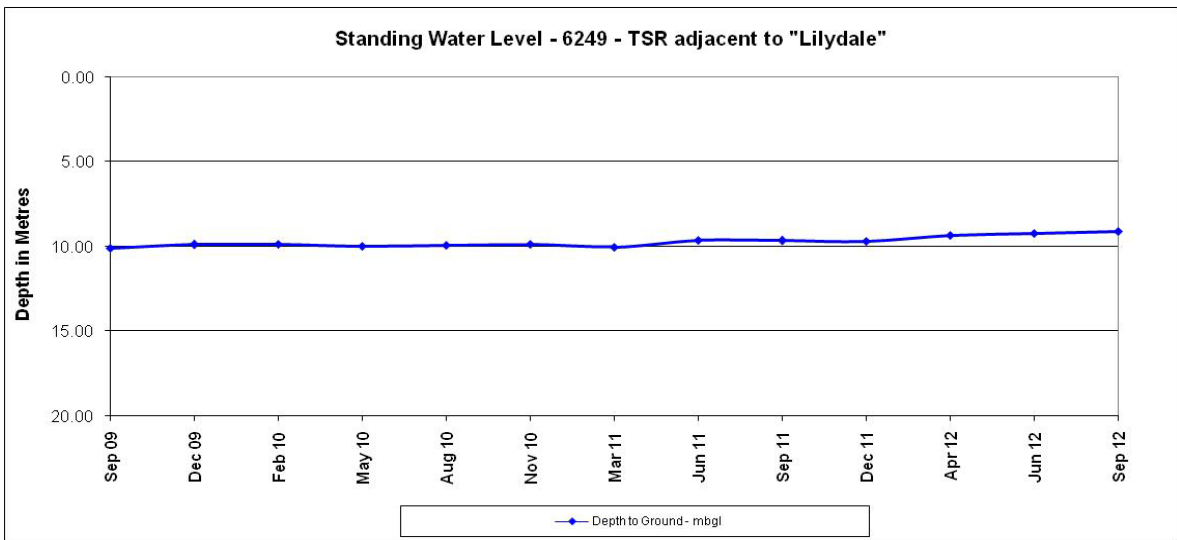
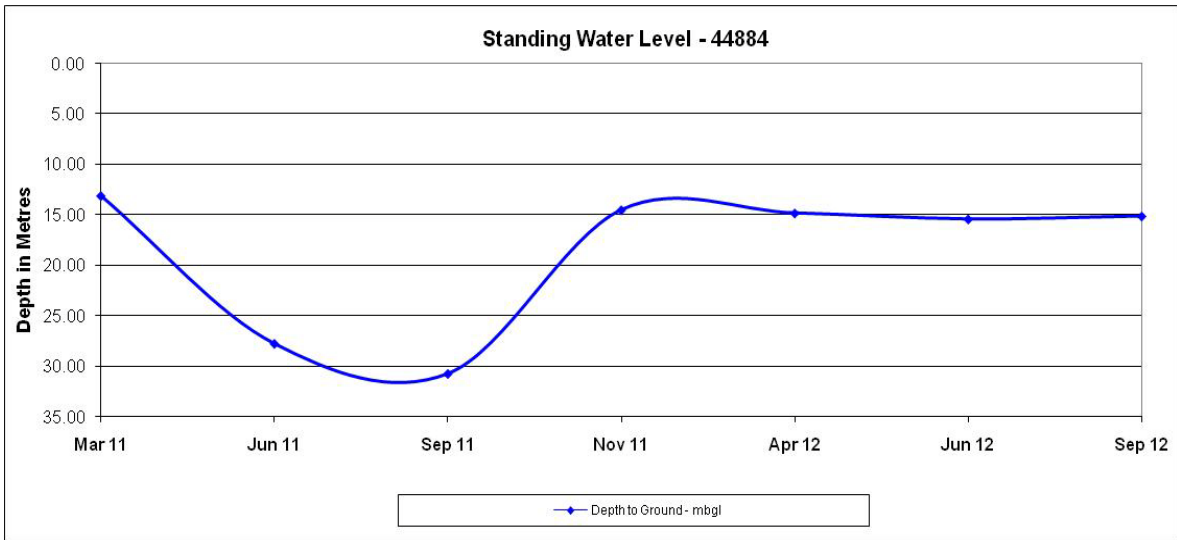
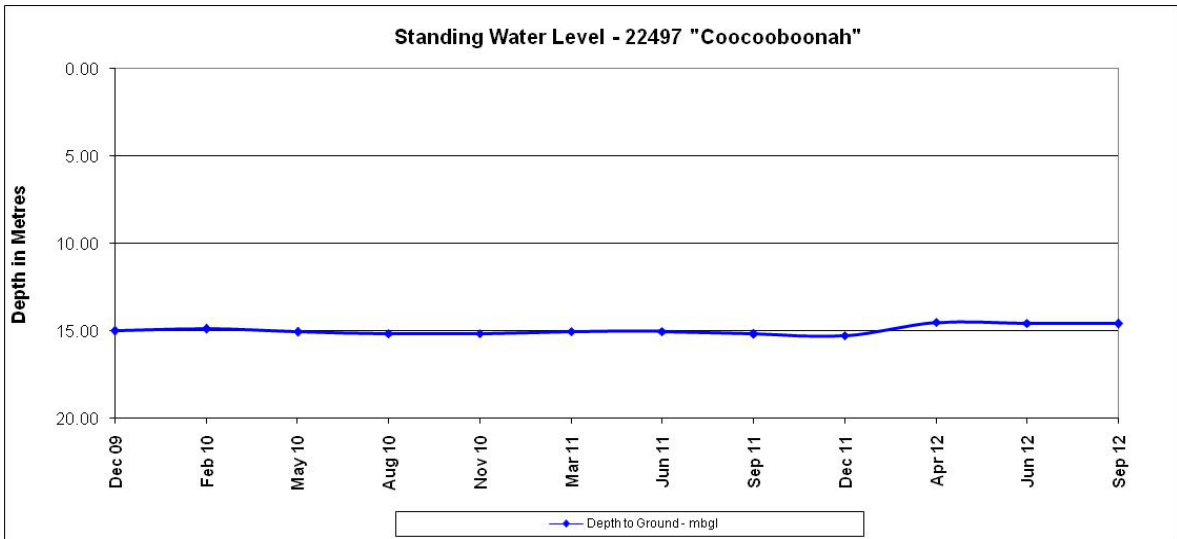
Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the mine site. Standing Water Level (SWL) checks are undertaken on a quarterly basis, with full water quality sampling undertaken on a 6 monthly basis.

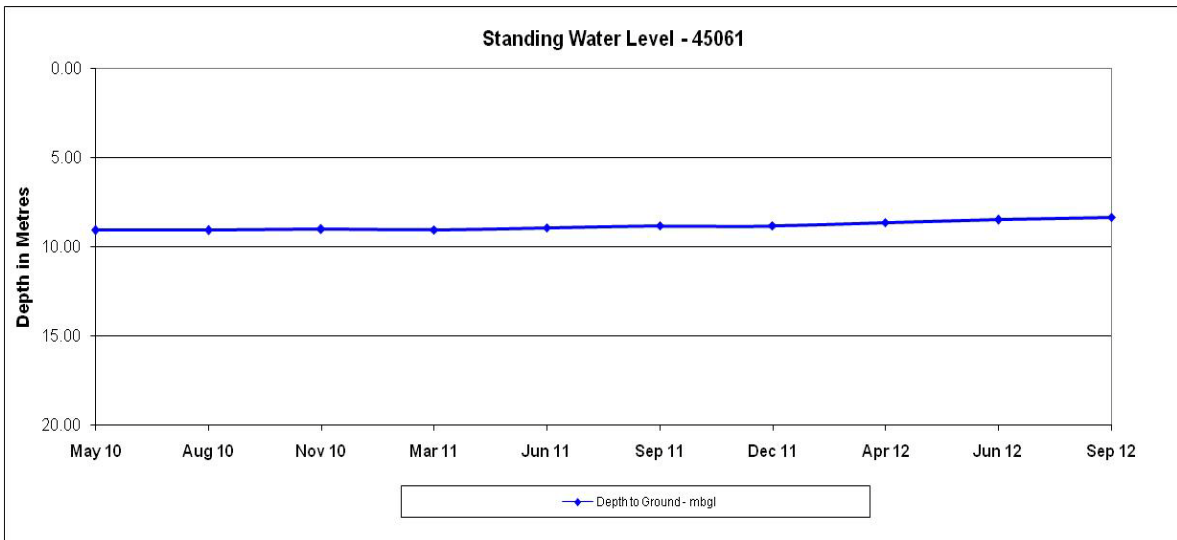
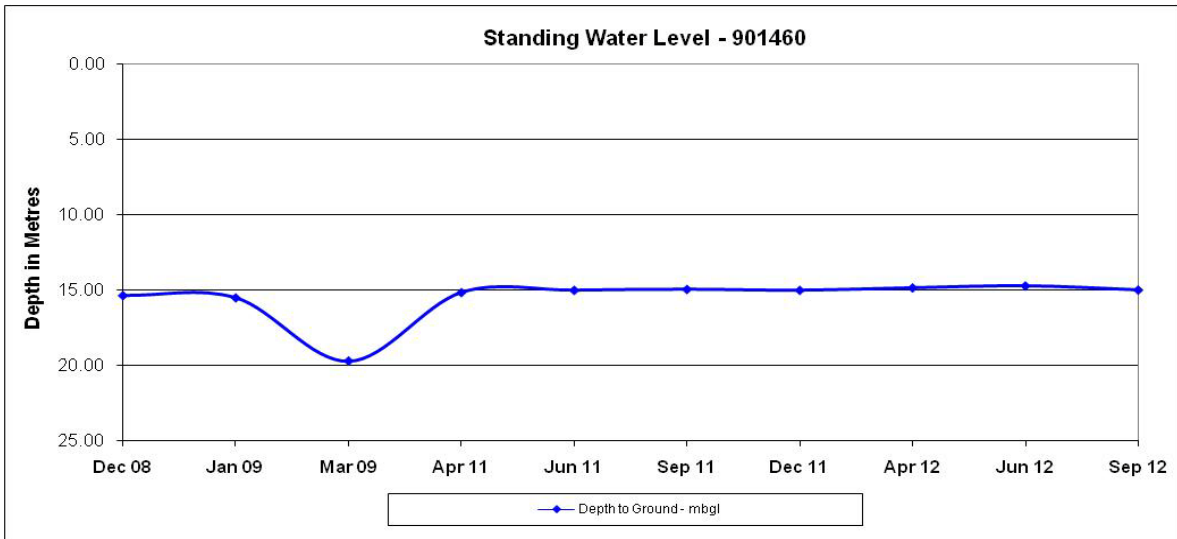
6 monthly quality sampling was undertaken in September 2012. Results for SWL are shown below with no significant impact/trend indicated from mining operations, with the exception of P7 and P8.

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.