

Sunnyside Coal Mine Community Consultative Committee Meeting #11

Environmental Monitoring Report June 2011 – August 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 4th August 2011 with results outlined below:

SCM Noise Monitoring Results – 4 August 2011 (Day)				
Location	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
Illili	3:35 pm	37	0.5m/s SE	Birds (37), traffic (39), SCM (25)
Ferndale	4:17 pm	45	1m/s SE	Traffic (45), birds (35), SCM (<20)
Plain View	3:13 pm	33	1m/s SE	Birds (32), SCM (25)
Lilydale	2:55 pm	54	2m/s SE	Birds (54), SCM (30)

SCM Noise Monitoring Results – 4 August 2011 (Evening)				
Location	Time	dB(A),Leq	Wind speed/ direction	Identified Noise Sources
Illili	8:23 pm	29	0.4m/s SE	SCM (29)
Ferndale	9:02 pm	30	1.2m/s S	SCM (30)
Plain View	8:00 pm	42	0.5m/s SE	Plane (40), SCM (37) , traffic (30)
Lilydale	7:38 pm	39	0.5m/s SE	Traffic (36), SCM (36)

The results indicate compliance at all non-project related receivers except "Plain View" which recorded 37dB(A). At the time of monitoring, it was determined that a temperature inversion was present as verified by meteorological data obtained. This inversion would have exacerbated noise levels from the mine. As a consequence of the presence of inversion, the noise measurements taken are not strictly an exceedance in criteria under the development consent.

Monitoring was also conducted at the "Glendower" residence on the 4th August 2011 to confirm if mine noise remained within compliance limits at that residence, with results confirming compliance as per the table below:

SCM Noise Monitoring Results – 4 August 2011 - Glendower				
Date	Time	dB(A),Leq (15 min)	Wind speed/ direction	Identified Noise Sources as dB(A) Leq (15 min)
4 August	3:55 pm	42	0.6m/s SE	Birds (42), traffic (30), SCM (<20)
4 August	8:41 pm	28	Calm	Dog (27), SCM (22)

Road noise monitoring was undertaken on Friday the 5th August 2011 for a one hour period from 8:05am. A total of 8 heavy vehicles travelled along Torrens Lane during the monitoring period, consisting of 4 full and 4 empty coal haulage trucks entering and leaving the CHPP. The measured Leq noise level from all vehicles on Torrens Lane was of 51.6 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
September 2010	0.7	0.6	0.9	2.5	6.3	1.8	-
October 2010	10.8	0.5	0.5	1.2	0.3	0.5	-
November 2010	2.8	1.3	2.2	0.8	1.1	2.0	2.0
December 2010	0.5	2.5	33.0	1.5	1.1	4.8	1.4
January 2011	7.1	N/A	18.6	3.5	2.0	6.1	1.0
February 2011	7.4	N/A	2.6	0.7	0.6	0.8	1.0
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
Annual Average	2.9	1.1	5.2	1.7	1.2	1.9	0.9

Deposited dust rates over the last few months have generally been at very low levels. SD5 at “Ivanhoe” had an elevated result in May, due to sample contamination (bird droppings and plant material). All other results at SD5 were well below criterion during the reporting period. Annual average dust levels remain similar to those reported in the last monitoring report, with all sites below the 4g/m²/month criterion with the exception of project-related “Lilydale”. This monitoring location was affected by anomalous results in December 2010 and January 2011.

PM₁₀ Data

Compliance with the 24hr criterion of 50µg/m³ 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 9.33µg/m³, which is well below the annual average limit of 30µg/m³.

PM₁₀ measurements taken for the “Lilydale” HVAS are returning an annual average of 7.24µg/m³, which is also well below the annual average limit of 30µg/m³.

Blast Monitoring

Since the first blast there has been 36 blasts. On the 25th of June 2011, during blast 31, a minor exceedance of the overpressure (site criteria 115.0dBL) was recorded at monitoring point “Plain View” (115.9dBL). An investigation into the cause of the overpressure exceedance was carried out by the blasting contractor Orica.

It was identified though the blast video and an analysis of blast monitor data, that there was no stemming ejection or face burst, and that the cause of the overpressure exceedance was face movement.

The following recommendations were made by Orica:

- Future designs where stand up blasts are to occur should be vertical holes, with the initiation through the centre of the blast
- If initiation is through the free face then avoid the use of fast timing that promotes forward movement of the blast
- Consideration of using soft start or deliberate slowing of lead holes when initiating through the free face

In response to the complaint lodged at the previous CCC meeting, the results of blast 27 are presented below; showing compliance across all monitors, with “Ivanhoe” not showing data due to monitor malfunction. Despite this, a Whitehaven representative was at “Ivanhoe” at the time of the blast and noted ground vibration and overpressure similar to other standard blasts.

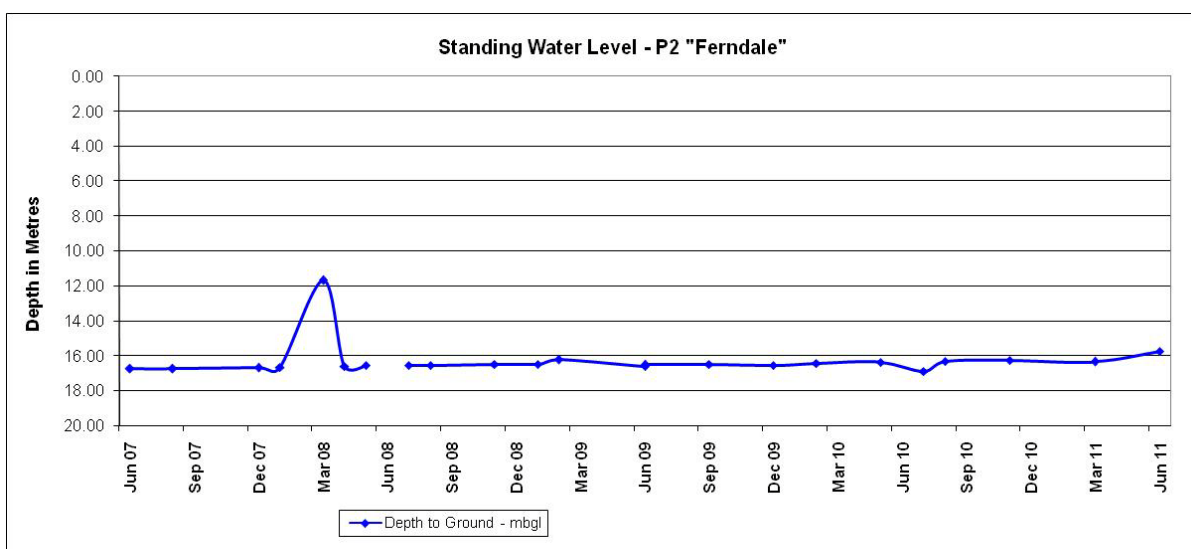
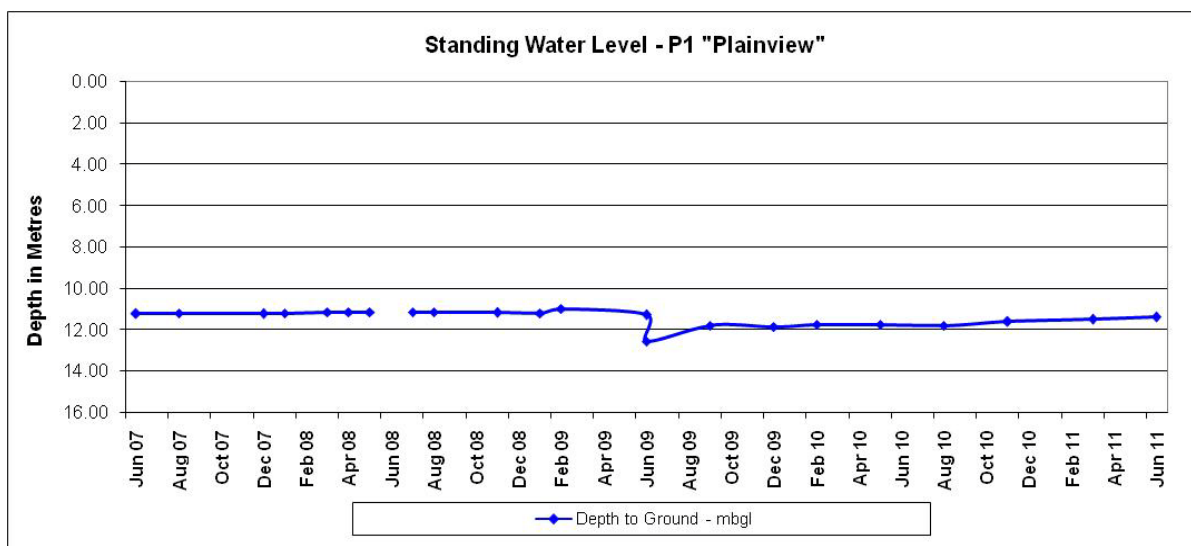
Blast no. 27 monitoring results

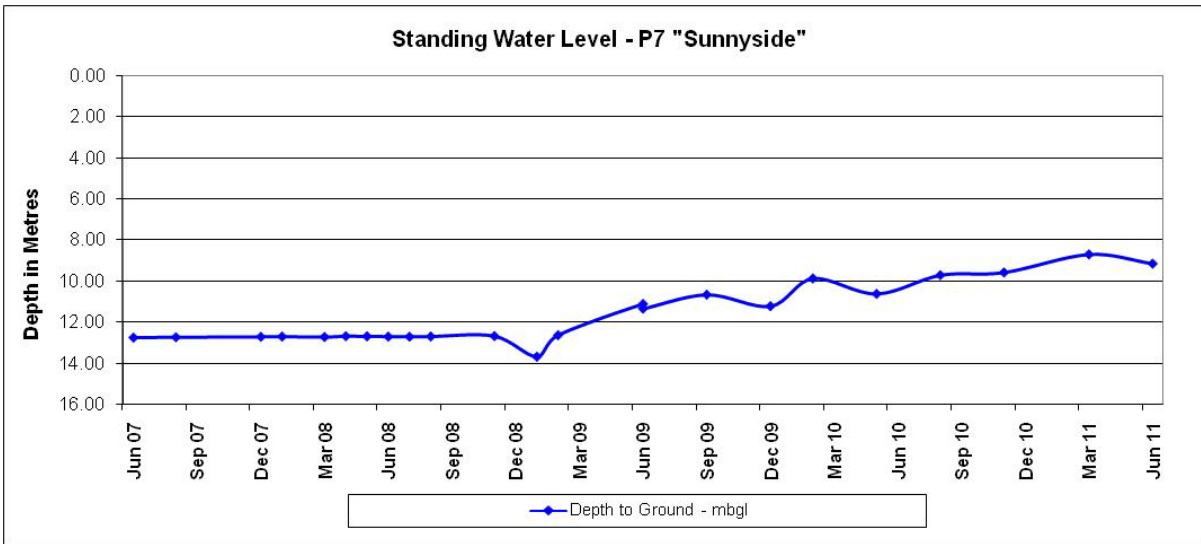
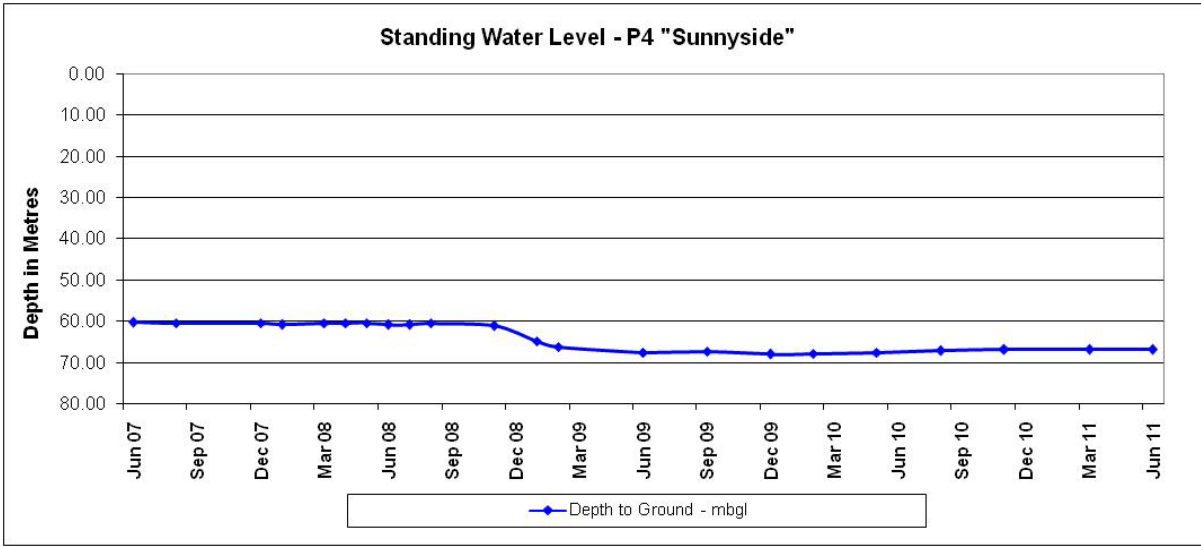
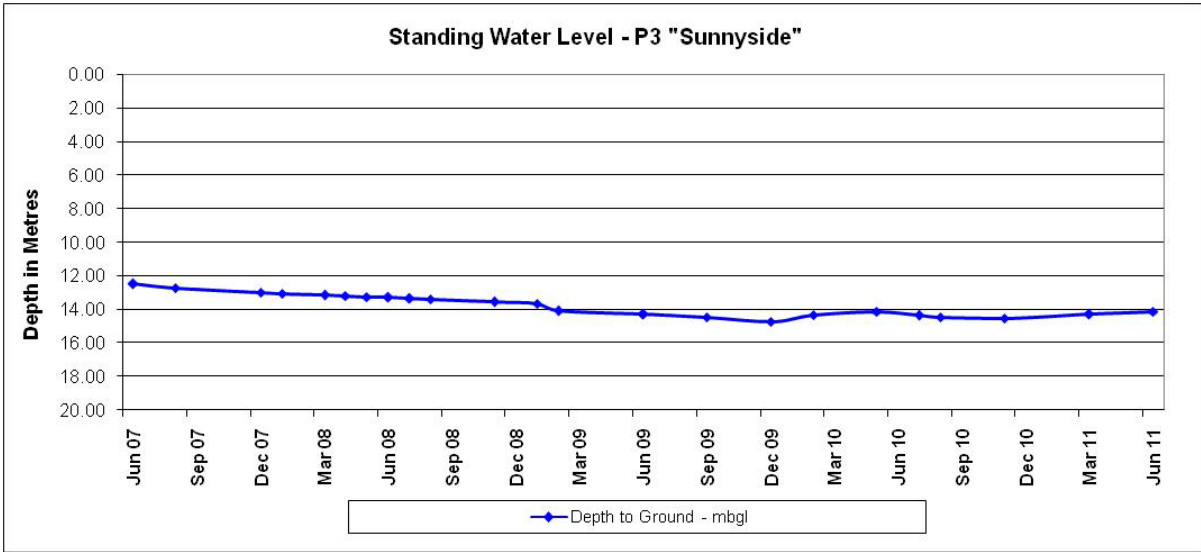
SHOT NO.	DATE	MONITOR LOCATION	PEAK GROUND PRESSURE (mm/s)	PEAK OVERPRESSURE (dBL)	TIME
27	09/Apr/11	Innisvale	0.99	105.3	10:51:21 AM
27	09/Apr/11	Plain View	DNT	DNT	10:51:00 AM
27	09/Apr/11	Illili	DNT	DNT	10:51:00 AM
27	09/Apr/11	Ivanhoe	No data	No data	No data

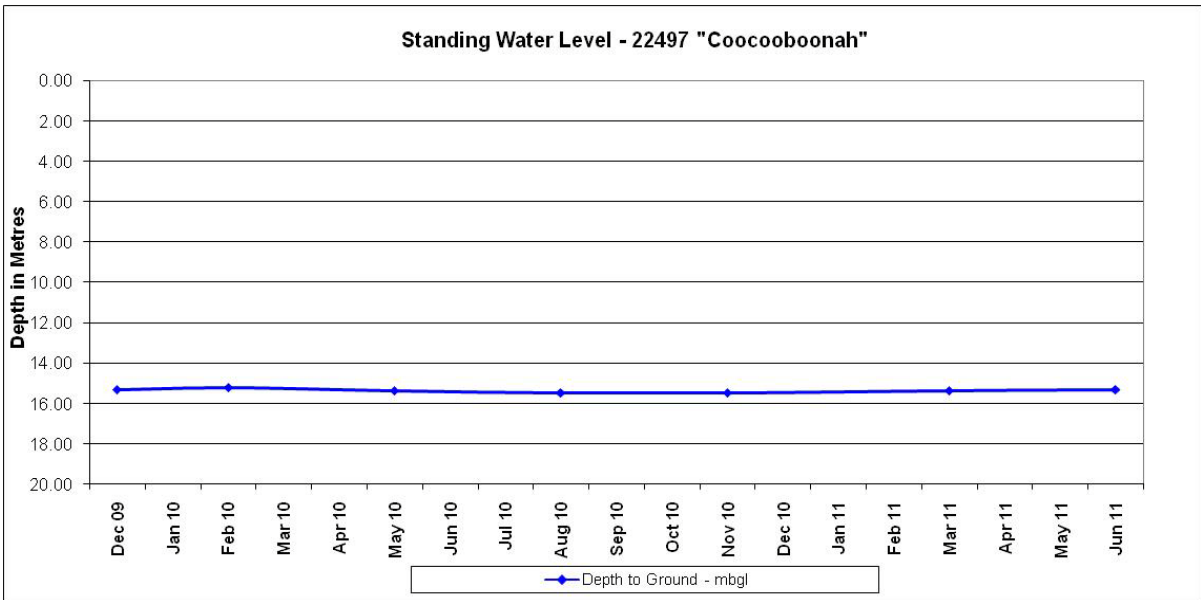
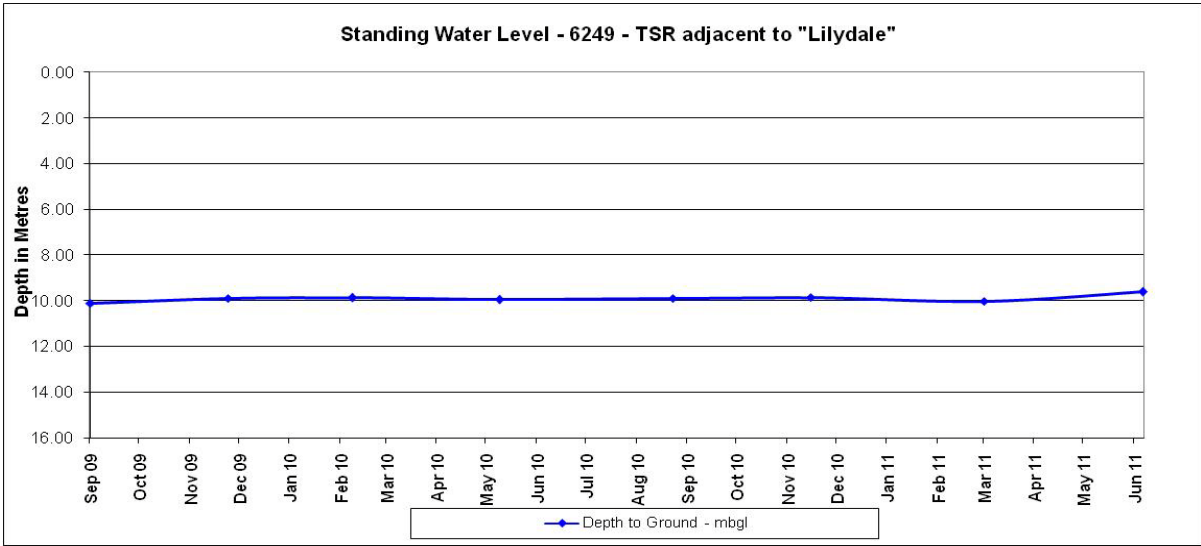
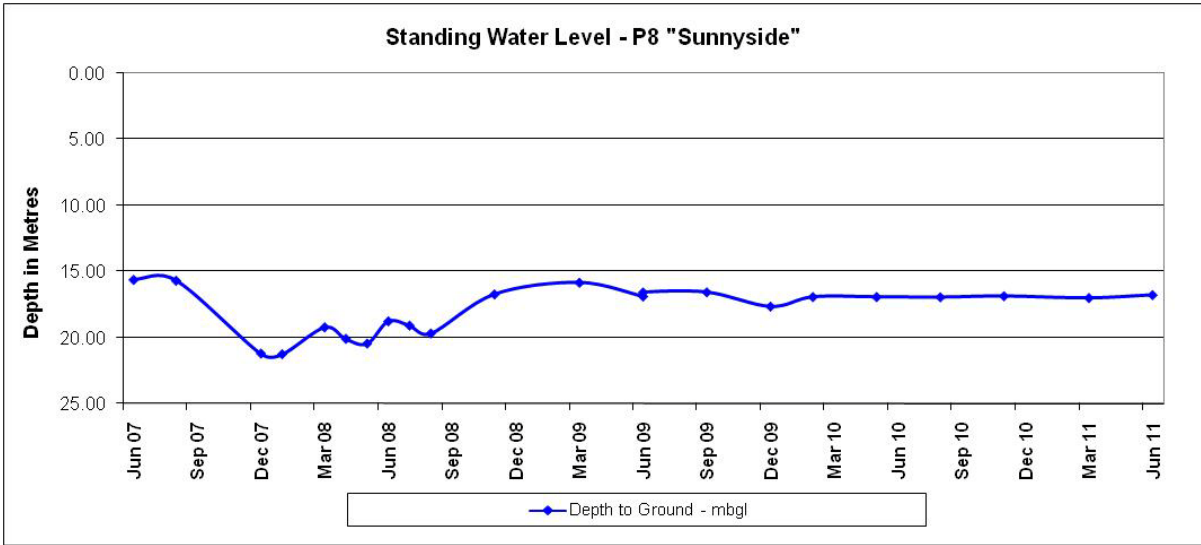
Since blasting commenced, the highest recorded overpressure was 128.8 dBL recorded at “Innisvale” on the 3rd May 2011. The highest ground vibration recorded is 2.39mm/s recorded at “Plain View” on the 17th April 2009.

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 14th and 21st June 2011. Results for SWL are shown below with no significant impact/trend indicated from mining operations. These graphs represent water bores and piezometers which are currently accessible for monitoring. The next round of monitoring is expected to be conducted during September 2011.







Surface Water

Surface water sampling was carried out in August 2011. Results from the sampling were generally good with some elevated Total Suspended Solids detected in some of the site's sediment basins. However, as the water level in these storages has dropped over an extended dry period there is limited potential for any discharge of sediment laden water. No wet weather discharge has occurred during the reporting period. The pH of storages ranged from 8 to 9.

Complaints

Two complaints were received during this reporting period. The first was on the 1st June 2011 during the previous CCC meeting regarding a blast on the 9th of April 2011, and as a result, the blast monitoring results from the blast in question are presented above.

The second complaint was received on the 11th August at 3:10pm, via a phone call 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 2/3 as bad as the shot that they complained about previously. The complainant also believed Orica to be deficient in their blast practices as this is the second event in the last 4 months.

The complainant was advised that at the time the monitoring results were not available but that Whitehaven would investigate their concerns once the monitoring results were available. On review of monitoring data, all monitoring locations were well below the blasting limits with the highest overpressure recorded being 105.9dBL at "Plain View" and the highest vibration being 0.7mm/s, also at "Plain View". These results indicate the blast performed as expected.

Review of the video of the shot also did not indicate any significant ejection from the blast. The blast had already been delayed from 10am that day due to unfavourable weather conditions and the shot was taken at a time more conducive to blasting. Written advice was issued to the complainant confirming the blast was within allowable limits.

Rehabilitation

Approximately 5 hectares of the north western corner of the emplacement area has been shaped and spread with topsoil. This area will be seeded with a summer pasture and cover crop mix in the coming months. Previous seeding on the adjacent emplacement area has had slow progress due to dry conditions, but should make better progress due to the recent rainfall.