



Licensee: Perilya Broken Hill Limited
Environmental Protection Licenses: 2688 and 2683
Locations: Southern, Northern and Potosi Operations

Blast Monitoring

Perilya Broken Hill Limited (PBHL) has six (6) blast monitors which have been located at a number of what are considered to be noise sensitive locations surrounding their operations. These locations include; residential dwellings, schools and nursing homes that are within close proximity to PBHL operations (Southern and Potosi).

The monitors are also compliant with and are managed in keeping with the Australian Standard AS 2187.2:2006. In addition the blast monitors are routinely calibrated to ensure this equipment remains in calibration and that the information that is collected is representative.

Two (2) blast monitors set up to record peak particle velocity (PVS) and overpressure, have been located at Potosi operations. Blast monitors elsewhere record PVS only as PBHL EPL's for these operations only require this parameter.

PHBL's EPL's stipulate that PVS must not be greater than 10 mm/s for any blasts and that >95% of blasting conducted at both operations and for each reporting period must have a PVS of less than 5 mm/sec. Overpressure is not recorded at PBHL's Southern Operation's as it will have no significant impact on surrounding neighbour's due to being conducted deep underground. However, overpressure is recorded for blasting conducted on the Potosi Operation. This is a relatively new operation and blasting may still be conducted close to the surface. As development moves further underground, overpressure will become less relevant. According to the Potosi EPL, overpressure must not exceed 130dB for the period 7:00am to 7:00pm (day). For the period 7:00pm to 7:00am (night), the level must not exceed 110dB.

Results

Southern Operation (EPL 2688)

A total of 21 production blasts were conducted at the Southern Operation for the month. All blasts conducted at the Southern Operation were within license conditions (Table 1).

Table 1. Southern Operation production blast results (EPL 2688).

Perilya Broken Hill Ltd (PBHL)
 EPL No. 2688
 Southern Operations

Monitoring frequency required by licence:

All blasts carried out in or on the premises
 All results are received immediately following each blast.

Date results received:

29/01/2013

Published on website:

Date	Time (24hr)	Peak Particle Velocity Limit (mm/s)	Peak Particle Velocity (PPV) (mm/s)			
			Nursing Home	Rainbow Ave	Westside Drive	Gaffney St
1/12/2012	0648h	10	1.140	1.470	<0.200	0.287
4/12/2012	0700h	10	0.856	0.314	<0.200	0.422
4/12/2012	0707h	10	<0.200	<0.200	<0.200	<0.200
4/12/2012	0707h	10	0.856	0.314	<0.200	0.422
7/12/2012	0658h	10	0.656	0.335	2.190	2.760
9/12/2012	0646h	10	0.782	0.350	0.216	0.261
11/12/2012	1850h	10	<0.200	0.326	<0.200	0.241
16/12/2012	1855h	10	0.979	1.820	0.275	0.486
16/12/2012	1856h	10	0.919	0.361	<0.200	0.248
18/12/2012	1848h	10	0.293	0.535	0.338	<0.200
19/12/2012	1852h	10	<0.200	0.365	0.228	0.385
20/12/2012	0645h	10	<0.200	<0.200	<0.200	<0.200
21/12/2012	0646h	10	0.915	1.510	0.403	0.643
21/12/2012	0646h	10	0.915	1.510	0.403	0.643
22/12/2012	1848h	10	0.251	0.258	0.556	<0.200
23/12/2012	1846h	10	0.358	1.290	2.390	3.570
25/12/2012	0648h	10	0.263	<0.200	0.265	0.283
26/12/2012	1854h	10	<0.200	<0.200	0.240	0.508
30/12/2012	0647h	10	0.343	0.892	<0.200	0.432
31/12/2012	0648h	10	1.130	0.441	<0.200	0.459
31/12/2012	1848h	10	0.358	<0.200	1.320	2.550

*The blast monitors are set to trigger at 0.2 mm/s. If the blast does not trigger the unit it indicates the PPV was <0.200.

Potosi Operation (EPL 2683)

A total of 90 blasts were conducted at the Potosi Operation for the month. One blast (8/12/2012) had an elevated overpressure (Table 2). However, this blast did not trigger the Hall St blast monitor. After inspection of the blast report it appears the overpressure was most likely a result of high wind speed.

Table 2. Potosi blast results.

Perilya Broken Hill Ltd (PBHL)

EPL No. 2683

Northern and Potosi

Operations

Monitoring frequency required by licence:

All blasts carried out in or on the premises

All results are received immediately following each blast.

Date results received:

Published on website:

29/01/2013

Date	Time (24hr)	Peak Particle Velocity Limit (mm/s)	Peak Particle Velocity (mm/s)		Overpressure Limit (dB)	Overpressure Recorded (dB)	
			Potosi	Hall St		Potosi	Hall St
1/12/2012	0716h	10	0.160	<0.200	130	<88	<110.0
2/12/2012	0355h	10	0.114	NR	110	95.9	NR
2/12/2012	0717h	10	0.361	NR	130	102.8	NR
2/12/2012	1854h	10	4.660	NR	130	115.6	NR
2/12/2012	2312h	10	0.858	NR	110	101	NR
3/12/2012	0652h	10	0.191	NR	110	95.9	NR
4/12/2012	0526h	10	0.219	<0.200	110	94	<110.0
4/12/2012	0529h	10	0.214	<0.200	110	95.9	<110.0
4/12/2012	1713h	10	0.137	<0.200	130	105.5	<110.0
4/12/2012	1844h	10	0.218	<0.200	130	<88	<110.0
4/12/2012	1852h	10	0.250	<0.200	130	<88	<110.0
5/12/2012	0630h	10	0.129	<0.200	110	95.9	<110.0
5/12/2012	0921h	10	0.103	<0.200	130	101.9	<110.0
5/12/2012	1503h	10	0.130	<0.200	130	91.5	<110.0
5/12/2012	1830h	10	0.291	<0.200	130	<88	<110.0
6/12/2012	0334h	10	0.343	<0.200	110	124	<110.0
6/12/2012	0913h	10	0.145	<0.200	130	97.5	<110.0
6/12/2012	1817h	10	0.113	<0.200	130	<88	<110.0
7/12/2012	0516h	10	0.102	<0.200	110	<88	<110.0
7/12/2012	0634h	10	0.095	<0.200	110	<88	<110.0
8/12/2012	0612h	10	0.184	<0.200	110	115.2	<110.0
8/12/2012	0640h	10	0.192	<0.200	110	105.5	<110.0
8/12/2012	1131h	10	0.162	<0.200	130	91.5	<110.0
8/12/2012	1721h	10	0.138	<0.200	130	<88	<110.0
9/12/2012	0626h	10	0.293	<0.200	110	101	<110.0
9/12/2012	1330h	10	0.175	<0.200	130	104.9	<110.0
9/12/2012	1742h	10	0.708	<0.200	130	106	<110.0

10/12/2012	0617h	10	0.333	<0.200	110	<88	<110.0
10/12/2012	1336h	10	0.209	<0.200	130	104.2	<110.0
11/12/2012	0306h	10	0.111	<0.200	110	101	<110.0
11/12/2012	1211h	10	0.214	<0.200	130	108	<110.0
12/12/2012	0602h	10	0.360	NR	110	<88	NR
12/12/2012	0707h	10	2.910	NR	130	94	NR
12/12/2012	1153h	10	0.124	NR	130	104.2	NR
12/12/2012	1829h	10	0.204	<0.200	130	98.8	<110.0
13/12/2012	0620h	10	0.270	<0.200	110	95.9	<110.0
13/12/2012	0716h	10	0.355	<0.200	130	97.5	<110.0
14/12/2012	0234h	10	0.186	NR	110	<88	NR
14/12/2012	0639h	10	0.285	NR	110	91.5	NR
14/12/2012	2232h	10	0.281	NR	110	91.5	NR
15/12/2012	0540h	10	0.192	NR	110	<88	NR
15/12/2012	0524h	10	0.104	NR	110	91.5	NR
16/12/2012	1348h	10	0.254	NR	130	<88	NR
16/12/2012	1857h	10	0.098	NR	130	91.5	NR
17/12/2012	0626h	10	0.712	NR	110	<88	NR
18/12/2012	0405h	10	0.113	<0.200	110	<88	<110.0
18/12/2012	0450h	10	0.237	<0.200	110	<88	<110.0
18/12/2012	1913h	10	0.095	<0.200	110	<88	<110.0
19/12/2012	0334h	10	0.519	<0.200	110	<88	<110.0
19/12/2012	0631h	10	0.352	<0.200	110	<88	<110.0
19/12/2012	1824h	10	0.087	NR	130	94	NR
19/12/2012	2213h	10	1.100	NR	110	<88	NR
20/12/2012	0640h	10	0.367	NR	110	101	NR
20/12/2012	0649h	10	0.166	NR	110	94	NR
20/12/2012	1643h	10	0.146	<0.200	130	<88	<110.0
20/12/2012	1831h	10	0.122	<0.200	130	<88	<110.0
20/12/2012	2019h	10	3.220	<0.200	110	<88	<110.0
21/12/2012	0632h	10	0.150	<0.200	110	<88	<110.0
21/12/2012	0645h	10	0.314	<0.200	110	<88	<110.0
21/12/2012	1831h	10	0.137	<0.200	130	<88	<110.0
22/12/2012	0638h	10	0.239	<0.200	110	<88	<110.0
22/12/2012	0639h	10	0.120	<0.200	110	<88	<110.0
22/12/2012	1608h	10	0.117	<0.200	130	<88	<110.0
22/12/2012	1832h	10	0.164	<0.200	130	95.9	<110.0
22/12/2012	2231h	10	0.689	<0.200	110	<88	<110.0
23/12/2012	0712h	10	0.389	<0.200	130	<88	<110.0
23/12/2012	1830h	10	0.208	<0.200	130	<88	<110.0
24/12/2012	0620h	10	0.245	NR	110	104.2	NR
24/12/2012	0915h	10	0.675	NR	130	115.7	NR
24/12/2012	1718h	10	0.395	NR	130	95.9	NR
25/12/2012	0650h	10	0.385	NR	110	100	NR
26/12/2012	0753h	10	0.501	NR	130	91.5	NR
27/12/2012	0617h	10	0.158	NR	110	91.5	NR

28/12/2012	0701h	10	0.305	NR	130	91.5	NR
28/12/2012	0901h	10	0.228	NR	130	100	NR
28/12/2012	2319h	10	0.394	NR	110	<88	NR
29/12/2012	0735h	10	0.735	NR	130	98.8	NR
29/12/2012	0816h	10	0.102	NR	130	98.8	NR
29/12/2012	0830h	10	0.294	NR	130	97.5	NR
29/12/2012	1849h	10	0.574	NR	130	95.9	NR
30/12/2012	0703h	10	0.655	NR	130	94	NR
30/12/2012	0858h	10	0.116	NR	130	97.5	NR
30/12/2012	1655h	10	0.128	NR	130	<88	NR
30/12/2012	1832h	10	4.440	NR	130	97.5	NR
31/12/2012	0011h	10	0.103	NR	110	106	NR
31/12/2012	0021h	10	0.207	NR	110	104.9	NR
31/12/2012	0720h	10	0.783	NR	130	101.9	NR
31/12/2012	0851h	10	2.320	NR	130	91.5	NR
31/12/2012	1838h	10	0.227	NR	130	<88	NR
31/12/2012	2236h	10	0.162	NR	110	<88	NR

*NR for Hall St Indicates the blast monitor was not recording at the time of the blast.

*The blast monitors are set to trigger at 0.2 mm/s. If the blast does not trigger the unit it indicates the PVS was <0.2

* The blast monitor at Hall St is set to trigger at 110 dB. If the blast does not trigger the unit it indicates the overpressure was <110.

* The blast monitors do not recorded overpressures less than 88 dB. This is the reason for the <88 result.