

## Appendix 6

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# BLAST MONITORING RESULTS

**Sunnyside Coal Mine  
Environmental Blast Monitoring**

Consent Criteria = 5mm/s and 115 dBL

| SHOT NO. | DATE      | MONITOR LOCATION | PEAK GROUND PRESSURE (mm/s)             | PEAK OVERPRESSURE (dBL) | TIME        |
|----------|-----------|------------------|---|-------------------------|-------------|
| 1        | 18/Nov/08 | Ivanhoe          | 0.91                                    | 110.7                   | 1:44:48 PM  |
| 1        | 18/Nov/08 | Plain View       | 0.86                                    | 107.8                   | 1:44:58 PM  |
| 1        | 18/Nov/08 | Illili           | 0.56                                    | 107.4                   | 1:42:25 PM  |
| 2        | 25/Nov/08 | Innisvale        | 0.40                                    | 103.2                   | 3:10:59 PM  |
| 2        | 25/Nov/08 | Plain View       | DNT                                     | DNT                     | DNT         |
| 2        | 25/Nov/08 | Illili           | 0.61                                    | 105.5                   | 3:10:48 PM  |
| 3        | 28/Nov/08 | Ivanhoe          | 0.65                                    | 96.7                    | 9:59:16 AM  |
| 3        | 28/Nov/08 | Plain View       | 0.50                                    | 112.3                   | 9:59:16 AM  |
| 3        | 28/Nov/08 | Illili           | 1.24                                    | 100.9                   | 9:59:07 AM  |
| 4        | 28/Jan/09 | Illili           | 0.10                                    | 112.0                   | 9:59:26 AM  |
| 4        | 28/Jan/09 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 4        | 28/Jan/09 | Plain View       | DNT                                     | DNT                     | DNT         |
| 5        | 09/Mar/09 | Ivanhoe          | 0.28                                    | 109.4                   | 2:04:23 PM  |
| 5        | 09/Mar/09 | Innisvale        | 0.33                                    | 109.7                   | 2:04:29 PM  |
| 6        | 06/Apr/09 | Illili           | 0.35                                    | 97.4                    | 1:53:19 PM  |
| 6        | 06/Apr/09 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 6        | 06/Apr/09 | Plain View       | DNT                                     | DNT                     | DNT         |
| 7        | 11/Jun/09 | Innisvale        | 0.30                                    | 97.0                    | 12:21:02 PM |
| 7        | 11/Jun/09 | Ivanhoe          | 0.53                                    | 99.6                    | 12:20:57 PM |
| 7        | 11/Jun/09 | Plain View       | 0.53                                    | 109.3                   | 12:12:21 AM |
| 8        | 18/Jun/09 | Illili           | 0.35                                    | 106.7                   | 2:58:16 PM  |
| 8        | 18/Jun/09 | Ivanhoe          | 0.37                                    | 96.4                    | 2:57:20 PM  |
| 8        | 18/Jun/09 | Plain View       | DNT                                     | DNT                     | DNT         |
| 9/10     | 21/Aug/09 | Innisvale        | 0.61                                    | 111.0                   | 10:06:36 AM |
| 9/10     | 21/Aug/09 | Ivanhoe          | 0.97                                    | 111.8                   | 10:07:46 AM |
| 9/10     | 21/Aug/09 | Plain View       | 0.51                                    | 111.5                   | 10:06:49 AM |
| 11       | 24/Nov/09 | Innisvale        | DNT                                     | DNT                     | DNT         |
| 11       | 24/Nov/09 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 11       | 24/Nov/09 | Plain View       | DNT                                     | DNT                     | DNT         |
| 11       | 24/Nov/09 | Illili           | 0.43                                    | 109.6                   | 12:11:41 PM |
| 12       | 18/Dec/09 | Innisvale        | 1.09                                    | 101.9                   | 12:07:40 PM |
| 12       | 18/Dec/09 | Ivanhoe          | 1.70                                    | 107.0                   | 12:05:20 PM |
| 12       | 18/Dec/09 | Plain View       | 1.16                                    | 101.9                   | 12:05:34 PM |
| 12       | 18/Dec/09 | Illili           | 0.05*                                   | 114.1                   | 12:05:50 PM |
| 13       | 11/Feb/10 | Innisvale        | DNT                                     | DNT                     | DNT         |
| 13       | 11/Feb/10 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 13       | 11/Feb/10 | Plain View       | 0.91                                    | 107.4                   | 12:06:42 PM |
| 13       | 11/Feb/10 | Illili           | 0.41                                    | 106.5                   | 12:05:52 PM |
| 14       | 17/Apr/10 | Innisvale        | 0.96                                    | 108.6                   | 12:01:29 PM |
| 14       | 17/Apr/10 | Ivanhoe          | 2.04                                    | 110.1                   | 11:57:36 AM |
| 14       | 17/Apr/10 | Plain View       | 2.39                                    | 96.3                    | 12:03:38 PM |
| 14       | 17/Apr/10 | Illili           | 0.61                                    | 114.8                   | 11:59:07 AM |
| 15       | 23/Jun/10 | Innisvale        | 1.10                                    | 102.4                   | 12:13:47 PM |
| 15       | 23/Jun/10 | Ivanhoe          | 1.54                                    | 114.1                   | 12:13:59 PM |
| 15       | 23/Jun/10 | Plain View       | DNT                                     | DNT                     | DNT         |
| 15       | 23/Jun/10 | Illili           | 0.09                                    | 114.8                   | 12:15:17 PM |
| 16       | 09/Jul/10 | Innisvale        | 0.42                                    | 100.8                   | 10:04:11 AM |
| 16       | 09/Jul/10 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 16       | 09/Jul/10 | Plain View       | 1.11                                    | 103.2                   | 10:04:27 AM |
| 16       | 08/Jul/10 | Illili           | 1.60                                    | 99.1                    | 10:04:29 AM |
| 17       | 12/Aug/10 | Innisvale        | DNT                                     | DNT                     | DNT         |
| 17       | 12/Aug/10 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 17       | 12/Aug/10 | Plain View       | 0.18                                    | 110.3                   | 11:57:01 AM |
| 17       | 12/Aug/10 | Illili           | 0.52                                    | 108.0                   | 11:56:56 AM |
| 18       | 01/Sep/10 | Innisvale        | 0.52                                    | 101.4                   | 11:59:00 AM |
| 18       | 01/Sep/10 | Ivanhoe          | 0.53                                    | 103.6                   | 12:02:42 PM |
| 18       | 01/Sep/10 | Plain View       | DNT                                     | DNT                     | DNT         |
| 18       | 01/Sep/10 | Illili           | DNT                                     | DNT                     | DNT         |
| 20       | 30/Sep/10 | Innisvale        | 0.58                                    | 105.6                   | 12:00:08 PM |
| 20       | 30/Sep/10 | Ivanhoe          | 0.83                                    | 86.6                    | 12:04:38 PM |
| 20       | 30/Sep/10 | Plain View       | 1.20                                    | 92.5                    | 12:00:53 PM |
| 20       | 30/Sep/10 | Illili           | 0.47                                    | 87.5                    | 11:58:03 AM |
| 21       | 22/Nov/10 | Innisvale        | 0.66                                    | 108.4                   | 15:04:15 PM |
| 21       | 22/Nov/10 | Ivanhoe          | No access to property - monitor not set |                         |             |
| 21       | 22/Nov/10 | Plain View       | DNT                                     | DNT                     | DNT         |
| 21       | 22/Nov/10 | Illili           | 0.45                                    | 107.9                   | 15:05:12 PM |
| 22       | 24/Nov/10 | Innisvale        | DNT                                     | DNT                     | DNT         |
| 22       | 24/Nov/10 | Plain View       | 0.76                                    | 100.2                   | 12:14:40 PM |
| 22       | 24/Nov/10 | Illili           | DNT                                     | DNT                     | DNT         |
| 22       | 24/Nov/10 | Ivanhoe          | DNT                                     | DNT                     | DNT         |
| 23       | 21/Jan/11 | Innisvale        | 0.49                                    | 83.70                   | 0.52        |
| 23       | 21/Jan/11 | Plain View       | 0.55                                    | 110.1                   | 12:24:14 PM |
| 23       | 21/Jan/11 | Illili           | 0.24                                    | 100.20                  | 0.52        |
| 23       | 21/Jan/11 | Ivanhoe          | 0.56                                    | 80.70                   | 0.52        |
| 24       | 16/Feb/11 | Innisvale        | 0.57                                    | 104.50                  | 0.51        |
| 24       | 16/Feb/11 | Plain View       | DNT                                     | DNT                     | 12:13:00 PM |
| 24       | 16/Feb/11 | Illili           | 1.45                                    | 106.10                  | 0.51        |
| 24       | 16/Feb/11 | Ivanhoe          | DNT                                     | DNT                     | 0.51        |

| SHOT NO. | DATE      | MONITOR LOCATION | PEAK GROUND PRESSURE (mm/s) | PEAK OVERPRESSURE (dB) | TIME        |
|----------|-----------|------------------|-----------------------------|------------------------|-------------|
| 25       | 21/Feb/11 | Innisvale        | DNT                         | DNT                    | 0.51        |
| 25       | 21/Feb/11 | Plain View       | 1.73                        | 97.7                   | 12:09:27 PM |
| 25       | 21/Feb/11 | Illili           | 0.26                        | 109.00                 | 0.51        |
| 25       | 21/Feb/11 | Ivanhoe          | DNT                         | DNT                    | 0.51        |
| 26       | 16/Mar/11 | Innisvale        | 0.49                        | 108.30                 | 0.50        |
| 26       | 16/Mar/11 | Plain View       | DNT                         | DNT                    | 12:02:00 PM |
| 26       | 16/Mar/11 | Illili           | DNT                         | DNT                    | 0.50        |
| 26       | 16/Mar/11 | Ivanhoe          | DNT                         | DNT                    | 0.50        |
| 27       | 09/Apr/11 | Innisvale        | 0.99                        | 105.30                 | 0.45        |
| 27       | 09/Apr/11 | Plain View       | DNT                         | DNT                    | 10:51:00 AM |
| 27       | 09/Apr/11 | Illili           | DNT                         | DNT                    | 0.45        |
| 27       | 09/Apr/11 | Ivanhoe          | No data                     | No data                | No data     |
| 28       | 03/May/11 | Innisvale        | 0.52                        | 128.80                 | 0.46        |
| 28       | 03/May/11 | Plain View       | 0.40                        | 120.6                  | 11:02:59 AM |
| 28       | 03/May/11 | Ferndale         | 0.10                        | 124.0                  | 11:03:05 AM |
| 28       | 03/May/11 | Illili           | 0.13                        | 120.30                 | 0.46        |
| 28       | 03/May/11 | Ivanhoe          | No Data                     | No Data                | No Data     |
| 29       | 18/May/11 | Innisvale        | 0.47                        | 104.50                 | 0.50        |
| 29       | 18/May/11 | Plain View       | 0.78                        | 106.9                  | 12:01:42 PM |
| 29       | 18/May/11 | Ferndale         | No monitor available        | No monitor available   |             |
| 29       | 18/May/11 | Illili           | DNT                         | DNT                    | 0.50        |
| 29       | 18/May/11 | Ivanhoe          | 0.42                        | 103.30                 | 0.50        |
| 30       | 31/May/11 | Innisvale        | DNT                         | DNT                    | 0.50        |
| 30       | 31/May/11 | Plain View       | DNT                         | DNT                    | 12:01:00 PM |
| 30       | 31/May/11 | Ferndale         | DNT                         | DNT                    | 12:01:00 PM |
| 30       | 31/May/11 | Illili           | DNT                         | DNT                    | 0.50        |
| 30       | 31/May/11 | Ivanhoe          | DNT                         | DNT                    | 0.50        |
| 31       | 25/Jun/11 | Innisvale        | 0.44                        | 104.30                 | 0.56        |
| 31       | 25/Jun/11 | Plain View       | 0.50                        | 115.9                  | 1:27:00 PM  |
| 31       | 25/Jun/11 | Ferndale         | 0.72                        | 104.8                  | 1:27:21 PM  |
| 31       | 25/Jun/11 | Illili           | 1.92                        | 99.10                  | 0.56        |
| 31       | 25/Jun/11 | Ivanhoe          | 0.69                        | 90.50                  | 0.56        |
| 32       | 15/Jul/11 | Innisvale        | 0.12                        | 113.40                 | 0.43        |
| 32       | 15/Jul/11 | Plain View       | 0.70                        | 113.3                  | 10:13:25 AM |
| 32       | 15/Jul/11 | Ferndale         | No monitor available        | No monitor available   |             |
| 32       | 15/Jul/11 | Illili           | DNT                         | DNT                    | 0.43        |
| 32       | 15/Jul/11 | Ivanhoe          | 0.11                        | 112.80                 | 0.43        |
| 33       | 01/Aug/11 | Innisvale        | DNT                         | DNT                    | 0.47        |
| 33       | 01/Aug/11 | Plain View       | DNT                         | DNT                    | 11:11:00 AM |
| 33       | 01/Aug/11 | Ferndale         | No monitor available        | No monitor available   |             |
| 33       | 01/Aug/11 | Illili           | DNT                         | DNT                    | 0.47        |
| 33       | 01/Aug/11 | Ivanhoe          | DNT                         | DNT                    | 0.47        |
| 34       | 11/Aug/11 | Innisvale        | DNT                         | DNT                    | 0.63        |
| 34       | 11/Aug/11 | Plain View       | 0.70                        | 105.9                  | 3:03:25 PM  |
| 34       | 11/Aug/11 | Ferndale         | No monitor available        | No monitor available   |             |
| 34       | 11/Aug/11 | Illili           | DNT                         | DNT                    | 0.63        |
| 34       | 11/Aug/11 | Ivanhoe          | 0.58                        | 81.02                  | 0.63        |
| 35       | 29/Aug/11 | Innisvale        | 0.72                        | 109.70                 | 0.42        |
| 35       | 29/Aug/11 | Plain View       | 0.54                        | 113.5                  | 10:10:58 AM |
| 35       | 29/Aug/11 | Ferndale         | 0.38                        | 110.20                 | 10:11:21 AM |
| 35       | 29/Aug/11 | Illili           | 0.1                         | 113.40                 | 0.42        |
| 35       | 29/Aug/11 | Ivanhoe          | 0.91                        | 84.51                  | 0.42        |
| 36       | 31/Aug/11 | Innisvale        | DNT                         | DNT                    | 0.51        |
| 36       | 31/Aug/11 | Plain View       | DNT                         | DNT                    | 12:12:00 PM |
| 36       | 31/Aug/11 | Ferndale         | DNT                         | DNT                    | 12:12:00 PM |
| 36       | 31/Aug/11 | Illili           | DNT                         | DNT                    | 0.51        |
| 36       | 31/Aug/11 | Ivanhoe          | DNT                         | DNT                    | 0.51        |
| 37       | 14/Sep/11 | Innisvale        | 0.58                        | 112.00                 | 0.50        |
| 37       | 14/Sep/11 | Plain View       | DNT                         | DNT                    | 12:03:00 PM |
| 37       | 14/Sep/11 | Ferndale         | DNT                         | DNT                    | 12:03:00 PM |
| 37       | 14/Sep/11 | Illili           | DNT                         | DNT                    | 0.50        |
| 37       | 14/Sep/11 | Ivanhoe          | DNT                         | DNT                    | 0.50        |
| 38       | 25/Oct/11 | Innisvale        | DNT                         | DNT                    | 0.50        |
| 38       | 25/Oct/11 | Plain View       | 1.31                        | 115.1                  | 11:59:20 AM |
| 38       | 25/Oct/11 | Ferndale         | 0.52                        | 88.80                  | 11:59:23 AM |
| 38       | 25/Oct/11 | Illili           | 0.41                        | 102.60                 | 40841.50    |
| 38       | 25/Oct/11 | Ivanhoe          | 1.37                        | 110.80                 | 0.50        |
| 39       | 28/Oct/11 | Innisvale        | DNT                         | DNT                    | 0.50        |
| 39       | 28/Oct/11 | Plain View       | DNT                         | DNT                    | 12:01:00 PM |
| 39       | 28/Oct/11 | Ferndale         | DNT                         | DNT                    | 12:01:00 PM |
| 39       | 28/Oct/11 | Illili           | DNT                         | DNT                    | 0.50        |
| 39       | 28/Oct/11 | Ivanhoe          | DNT                         | DNT                    | 0.50        |
| 40       | 10/Nov/11 | Innisvale        | DNT                         | DNT                    | 0.56        |
| 40       | 10/Nov/11 | Plain View       | DNT                         | DNT                    | 1:20:00 PM  |
| 40       | 10/Nov/11 | Ferndale         | DNT                         | DNT                    | 1:20:00 PM  |
| 40       | 10/Nov/11 | Illili           | DNT                         | DNT                    | 0.56        |
| 40       | 10/Nov/11 | Ivanhoe          | DNT                         | DNT                    | 0.56        |

\* Circa believes the monitor was triggered by something other than the blast. This assumption is based on the high overpressure and very low ground pressure