



#### INTRODUCTION

Broken Hill Operations Pty Ltd (BHOP) [a wholly owned subsidiary of CBH Resources Limited (CBH)] owns and operates the Rasp Mine (the Mine), which is located centrally within the City of Broken Hill on Consolidated Mine Lease 7 (CML7).

Mining has been undertaken within CML7 since 1885. The existing operations at the Rasp Mine include underground mining operations, a processing plant producing zinc and lead concentrates and a rail siding for concentrate dispatch. These operations are undertaken in accordance with Project Approval 07\_0018 granted 31 January 2011, under Part3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

As the holder of an Environmental Protection Licence, 12559, BHOP is required, under Section 66(6) of the NSW *Protection of the Environment Operations Act 1997,* to publish pollution monitoring data. In addition BHOP is required to publish data in accordance with its Project Approval 07\_0018 Schedule 4 Condition 9. These documents can be found on the Rasp Mine web site.

#### **TABLE OF CONTENTS**

1 /	AIR QUALITY	
1.1	·	
1.2	,	8
1.3		
1.4	4 VENTILATION OUTLETS AND BAG HOUSE MONITORING	11
2 1	NOISE	12
2.1		12
2.2	Noise	13
3 \	WATER	14
3.1		
3.2	2 Surface Water Sample Record	14
4 ١	WEATHER DATA	15
5. [	DATA LOG	17
5 (	CORRECTION LOG	



# 1 Air Quality

The following criteria as listed in the Project Approval (MOD4 6 September 2017) apply to air quality monitoring:

#### **Long Term Criteria for Particulate Matter**

Pollutant	Averaging Period	Criterion
Total solid particles (TSP)	Annual	90 μg/m³
Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	25 μg/m³

#### **Short Term Criterion for Particulate Matter**

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	50 μg/m³

#### **Long Term Criteria for Deposited Dust**

Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust Level	
Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month	

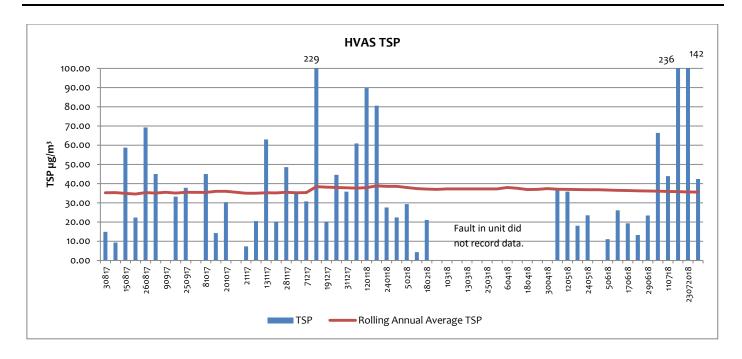
#### 1.1 High Volume Air Samplers

There are three high volume air samplers used to measure ambient air quality at the Rasp Mine - HVAS (EPL10) and HVAS1 (EPL11) are located at the Silver Tank, central and to the south of the mine lease, and HVAS2 (EPL12) is located adjacent to and north of Blackwood Pit. A map indicating these locations can be found on the Rasp Mine web site. HVAS samples for total suspended particulates (TSP) and lead dust, and HVAS1 and HVAS2 sample for particulate matter less than 10 microns (PM $_{10}$ ) and lead dust.

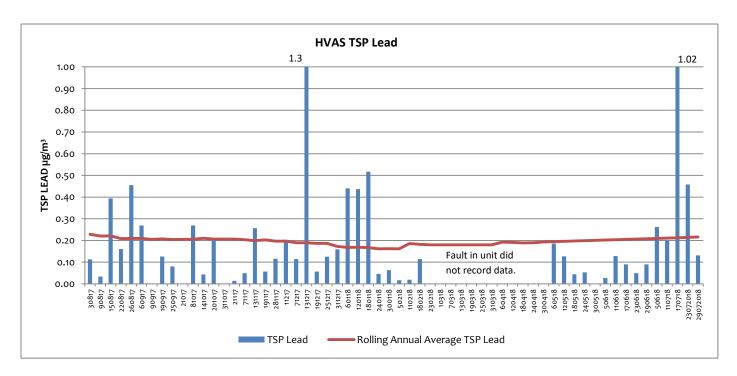
#### HVAS (EPL10) - Silver Tank (On Site) Results for July

DATE	TSP (μg/m³)	Lead (μg/m³)
5-07-2018	66.40	0.26
11-07-2018	43.90	0.20
17-07-2018	236.00	1.02
23-07-2018	142.00	0.46
29-07-2018	42.40	0.13





HVAS (EPL10) is located on the Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location. Overall the trend for TSP at this location remains consistent with the previous 12 months. Results for both TSP and Lead were elevated on July 17 and 23 due to gusting winds from the general dust storms experienced in Broken Hill on those days. The rolling annual average TSP at 29 July is 35.58  $\mu$ g/m³ which is below the annual criterion of 90  $\mu$ g/m³.

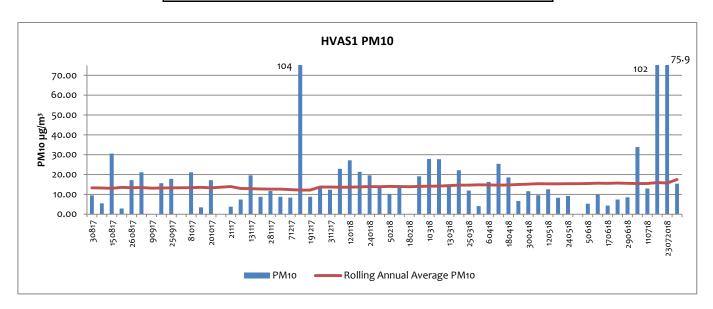


Lead dust results were also affected by the general dust storms in the Broken Hill region in July. Guidelines for air quality are provided by the EPA Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, 2016. In regards to ambient lead dust the Rasp Mine annual average for July is  $0.2 \, \mu g/m^3$  which is below the EPA guideline of  $0.5 \, \mu g/m^3$ .

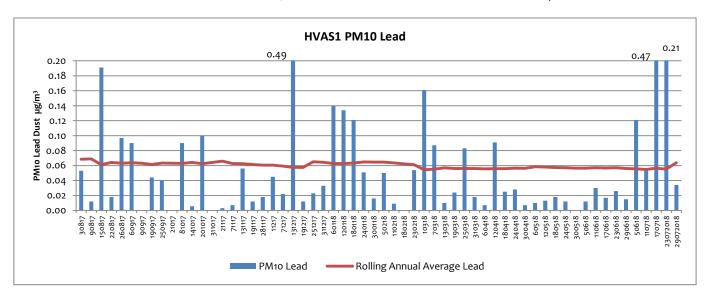


#### HVAS1 (EPL11) - Silver Tank (On Site) Results for

DATE	PM10 (μg/m³)	PM10 Lead (μg/m³)
5-07-2018	33.90	0.12
11-07-2018	13.00	0.05
17-07-2018	102.00	0.47
23-07-2018	75.90	0.21
29-07-2018	15.40	0.03



HVAS (EPL11) is located on the Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location. Results for both PM10 and Lead were elevated on July 17 and 23 due to due to the gusting winds general dust storms experienced in Broken Hill on those days. The recorded annual average for PM<sub>10</sub> to July is 17.5  $\mu$ g/m³ which is below the PM<sub>10</sub> annual average criterion of 25  $\mu$ g/m³ required at the nearest residential location. Overall the trend for PM<sub>10</sub> at this location remains consistent with the previous 12 months.

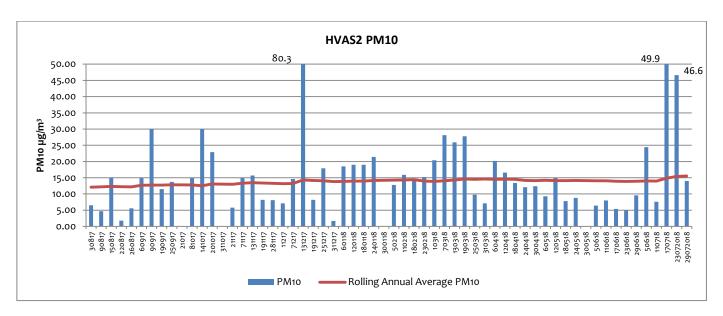




There is no guideline for assessing  $PM_{10}$  lead dust; the trend for lead dust at this location remains consistent with the previous 12 months.

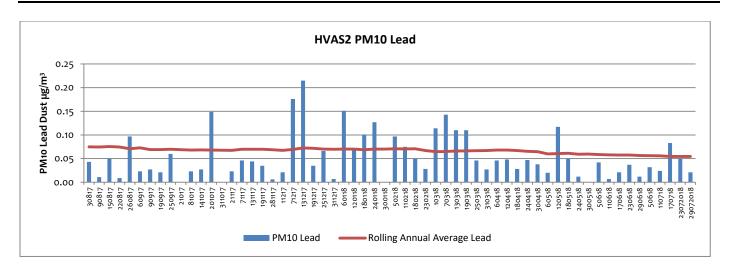
HVAS 2 (EPL12) - Blackwood Pit (On Site) Results for

DATE	PM10 (μg/m³)	Lead (μg/m³)
5-07-2018	24.40	0.032
11-07-2018	7.60	0.02
17-07-2018	49.90	0.08
23-07-2018	46.60	0.05
29-07-2018	14.00	0.02



HVAS (EPL12) is located on the Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location. Results for both PM10 and Lead were elevated on July 17 and 23 due to gusting winds from general dust storms experienced in Broken Hill on those days. The recorded annual average PM<sub>10</sub> to July is 15.56  $\mu$ g/m³ which is below the PM<sub>10</sub> annual average criterion 25  $\mu$ g/m³ required at the nearest residential location. Overall the trend for PM<sub>10</sub> at this location remains consistent with the previous 12 months.





There is no guideline for assessing PM10 lead dust; the trend for lead dust at this location remains consistent with the previous 12 months.



#### 1.2 Tapered Element Oscillating Microbalance Sampling (TEOM)

There are two Tapered Element Oscillating Microbalance (TEOM) sampling units used to measure ambient air quality at the Rasp Mine – TEOM1 (EPL13) is located off-site within the perimeter fence of Essential Water south of the mine lease, and TEOM2 (EPL14) is located on-site adjacent to Blackwood Pit to the north of the mine lease. A map indicating these locations can be found on the Rasp Mine web site. TEOM1 and TEOM2 operate continuously and sample for particulate matter less than 10 microns (PM<sub>10</sub>) in size.

TEOM1 (EPL13) (Off Site) and TEOM2 (EPL14) (On Site) Results for July

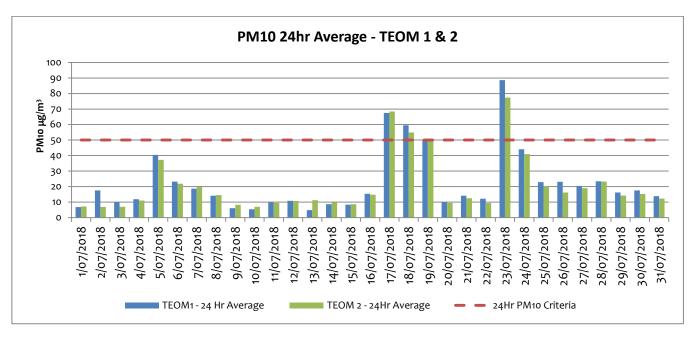
01-07-18  02-07-18  03-07-18  04-07-18  05-07-18  06-07-18  07-07-18  08-07-18  10-07-18  11-07-18  12-07-18  13-07-18  15-07-18  16-07-18  17-07-18  18-07-18	6.78 17.52 10.04 11.88 40.45 23.22 18.67 14.09 6.13 5.35	24hr average?	7.21 6.86 7.02 11.00 37.23 21.82 19.67	24hr average?
03-07-18 04-07-18 05-07-18 06-07-18 07-07-18 08-07-18 09-07-18 10-07-18 11-07-18 12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18	10.04 11.88 40.45 23.22 18.67 14.09 6.13	Y Y Y Y Y Y Y	7.02 11.00 37.23 21.82 19.67	Y Y Y Y
04-07-18 05-07-18 06-07-18 07-07-18 08-07-18 09-07-18 11-07-18 11-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18	11.88 40.45 23.22 18.67 14.09 6.13	Y Y Y Y	11.00 37.23 21.82 19.67	Y Y Y
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07-07-18  08-07-18  09-07-18  10-07-18  11-07-18  12-07-18  13-07-18  14-07-18  15-07-18  16-07-18  17-07-18	18.67 14.09 6.13	Y Y	19.67	
08-07-18 09-07-18 10-07-18 11-07-18 12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18	14.09 6.13	Υ		Υ
09-07-18 10-07-18 11-07-18 12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18	6.13		1457	
10-07-18 11-07-18 12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18		Υ	14.57	Υ
11-07-18 12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18 18-07-18	5.35		8.22	Υ
12-07-18 13-07-18 14-07-18 15-07-18 16-07-18 17-07-18		Υ	6.97	Υ
13-07-18 14-07-18 15-07-18 16-07-18 17-07-18 18-07-18	9.75	Υ	9.48	Υ
14-07-18 15-07-18 16-07-18 17-07-18 18-07-18	10.82	Υ	10.76	Υ
15-07-18 16-07-18 17-07-18 18-07-18	4.85	Υ	11.24	Υ
16-07-18 17-07-18 18-07-18	8.66	Υ	9.70	Υ
17-07-18 18-07-18	8.32	Υ	8.68	Υ
18-07-18	15.39	Υ	14.77	Υ
	67.52	Y <sub>1</sub>	68.42	Y <sub>1</sub>
19-07-18	59.50	Y <sub>1</sub>	54.84	Y <sub>1</sub>
	49.88	Υ	49.41	Υ
20-07-18	10.06	Υ	9.53	Υ
21-07-18	14.09	Υ	12.43	Υ
22-07-18	12.12	Υ	9.35	Υ
23-07-18	88.58	Y <sub>1</sub>	77.43	Y <sub>1</sub>
24-07-18	44.05	Υ	40.91	Υ
25-07-18	22.89	Υ	20.42	Υ
26-07-18	23.12	Υ	16.22	Υ
27-07-18	20.38	Υ	18.99	Υ
28-07-18	23.44	Υ	23.17	Υ
29-07-18	16.15	Υ	14.25	Υ
30-07-18	17.53	Υ	15.28	Υ

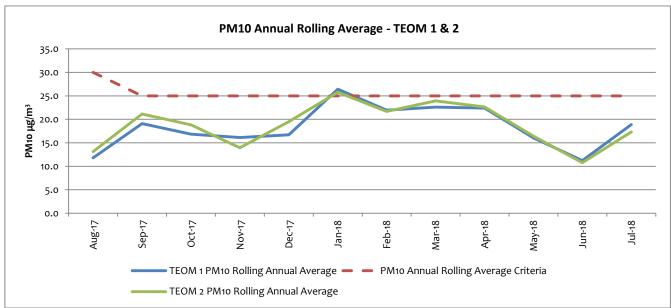
<sup>&</sup>lt;sub>1</sub> = Monitoring results affected by general dust storms and high winds.



The TEOM1 monitoring unit is located off-site from the Rasp Mine and the criteria as listed in the Project Approval 07\_0018 apply at this point. There are two criteria listed for  $PM_{10}$ , a 24 hour average and an annual average. TEOM 1 recorded elevated dust levels on July 17, 18 and 23 (67.52  $\mu g/m^3$ , 59.2  $\mu g/m^3$  and 88.58  $\mu g/m^3$  respectively). These elevated levels were the result of dust storms across Broken Hill with wind gusts of up to 63 km/h and winds predominantly from the north. The Project Approval excludes extraordinary events such as dust storms and therefore the criteria does not apply. The  $PM_{10}$  annual average at the end of July was 18.7  $\mu g/m^3$  and is below the listed criteria of 25  $\mu g/m^3$ .

The TEOM2 monitoring unit is located on the Rasp Mine and limit criteria do not apply at this point, criteria apply to the closest residential location. Elevated dust levels were also recorded at TEOM2 on July 17, 18 and 23 (68.42  $\mu g/m^3$ , 54.84  $\mu g/m^3$  and 77.43  $\mu g/m^3$  respectively) resulting from the dust storms in the Broken Hill region. The PM<sub>10</sub> annual average at the end of July was 19.1  $\mu g/m^3$  and is below the listed criteria of 25  $\mu g/m^3$ .





**Note 1:** Criteria change to 25μg/m<sup>3</sup> in September 2017 as per PA MOD4.



The Rasp Mine is in compliance with this criterion. Overall the trend for  $PM_{10}$  at this location remains consistent with the previous 12 months. Results have also been affected by recent dry conditions with as there has been only 2.04 mm recorded at the Rasp Mine weather station in the six months to the end of July.

#### 1.3 Dust Deposition Sampling

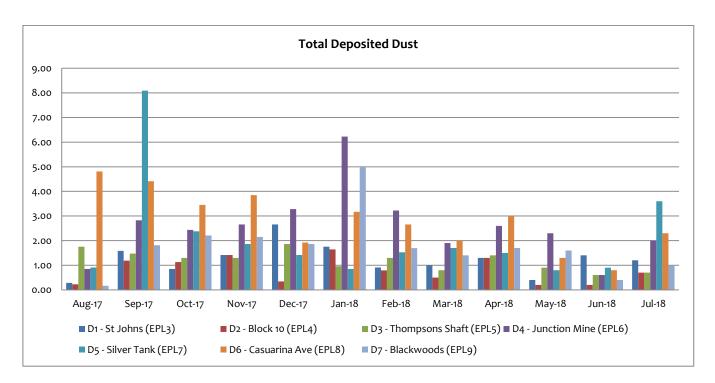
There are seven dust deposition gauges to measure ambient air quality at the Rasp Mine – D1 to D7. D1 and D6 are located off-site, D1 near the St Johns training facility north of the Rasp Mine and D6 in Casuarina Avenue south of the Rasp Mine. D2 to D5 and D7 are located on the mine lease in various locations. A map indicating these locations can be found on the Rasp Mine web site. Dust samples are collected monthly and analysed for total deposited dust and deposited lead dust.

#### Dust Deposition Gauges (D1 (EPL3) to D7 (EPL9)) – Results for July

	Total Deposited Dust (g/m <sup>2/</sup> Month)						
Date	D1	D2	D3	D4	D5	D6	D7
	(off site)	(on site)	(on site)	(on site)	(on site)	(off site)	(on site)
July 2018	1.2	0.7	0.7	2.0	3.6	2.3	1.0
Background (2010)	4.0	3.1	4.3	5.7	-1	5.8	-1
Compliant?	Υ	N/A	N/A	N/A	N/A	Υ	N/A

Note: "1"= background not available

N/A = not applicable as dust deposition unit is located on site

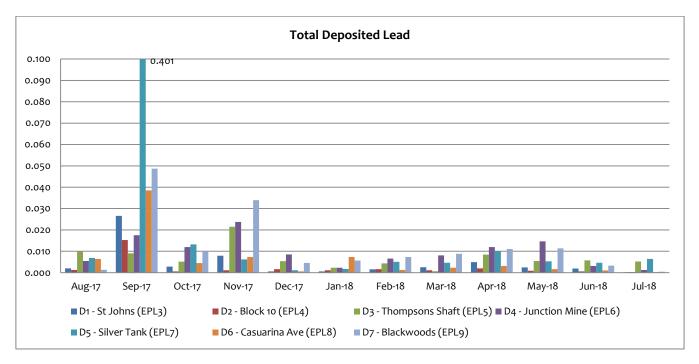


The Rasp Mine is in compliance with criteria. Dust storms in July contributed to the dust levels recorded.



	Total Deposited Lead (g/m²/Month)						
Date	D1	D2	D3	D4	D5	D6	D7
	(off Site)	(on site)	(on site)	(on site)	(on site)	(off Site)	(on site)
July 2018	0.00023	0.00026	0.00520	0.00127	0.00643	0.00023	0.00039
Background (2010)	0.0034	0.005	0.005	0.006	-1	0.004	-1

Note: "1" = background not available



There are no guidelines for deposited lead dust. The results are low and consistent with previous months.

#### 1.4 Ventilation Outlets and Bag House Monitoring

There are three locations to measure pollutants from exhausts or stacks, these include the Primary Ventilation Shaft and Shaft 6, both measuring pollutants from underground firings, and the Baghouse Stack at the crusher measuring dust. All are located on site; the Primary Ventilation Shaft is located centrally and to the north of the mine lease and Shaft 6 is located centrally within the lease. The Primary Crusher Baghouse Stack is located within the area of the processing plant to the east of the lease. A map indicating these locations can be found on the Rasp Mine web site. Samples are collected quarterly and analysed for a number parameters listed in below. Reference to the item required in the Rasp Mine Environment Protection Licence (EPL) is provided below.

Quarterly sampling is undertaken in March, June, September and December.

The following criteria apply:

Primary Ventilation Shaft (EPL1) and Shaft 6 (EPL56)

	Unit	Criteria
Nitrogen Oxides	mg/m³	350
Volatile Organic Compounds	mg/m³	40



#### Primary Ventilation Shaft (EPL1), Shaft 6 (EPL56) and Crusher Baghouse (EPL2)

	Unit	Criteria
Total Suspended particles	mg/m <sup>3</sup>	20
Type 1 and Type 2 <sup>1</sup>	mg/m³	1

**Note 1:** "Type 1 substance" means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

#### Primary Vent Shaft (EPL1), Crusher Baghouse (EPL2) and Vent Shaft 6 (EPL56) Results for July

There are no results for July; sampling is scheduled for September 2018.

#### 2 Noise

#### 2.1 Blasting (Vibration and Overpressure)

There are 6 vibration monitors at various locations to measure for vibration and overpressure from blast firings. These include V1 to V5 which are located off-site and V6 which is located on-site near Shaft 4. A map indicating these locations can be found on the Rasp Mine web site. In addition there are 2 roving monitors, which may be used to monitor vibration and overpressure at particular locations as required. Monitors operate continuously and are automatically triggered when a blast occurs. The following conditions apply as listed in the PA 07\_0018 and EPL 12559:-

#### Blasting Criteria (Western Mineralisation and Main Lodes excluding Block 7)

Location	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedance (for production and development blasts)
Residence on privately		5	5% of the total number
owned land	115		of blasts over a 12-month
(7am-7pm)			period <sup>1</sup>
(7am-7pm)	120	10	0%
(7pm-10pm)	105	=	-
(10pm-7am)	95	=	-
Public Infrastructure	-	100	0%

**Note 1**: Does not apply until completion of Pollution Reduction Program on the EPL at the end of 2018. Applies to EPL criteria in the period for the Annual Return 3 Nov to 2 Nov the following year and to DPE criteria in the reporting period 1 Jul to 30 Jun each year.

#### **Blasting Criteria (Block 7)**

Location	Airblast Overpressure (dB(Lin Peak)	Ground Vibration (mm/s)	Allowable Exceedance (for production and development blasts)
Residence on privately owned land (7am-7pm)	115	3 (interim)	5% of the total number of blasts over a 12-month period <sup>1</sup>
(7am-7pm)	120	10	0%
(7pm-10pm)	105	-	-
(10pm-7am)	95	-	-

<sup>&</sup>quot;Type 2 substance" means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements.



Broken Hill Bowling			
Club, Italio (Bocce)	-		
Club, Heritage Items		50	0%
within CML7			
Perilya Southern	-		
Operations		100	0%
Public Infrastructure	-	100	0%

**Note 1**: Applies to EPL criteria in the period for the Annual Return 3 Nov to 2 Nov the following year and to DPE criteria in the reporting period 1 Jul to 30 Jun each year.

In addition the following conditions also apply:-

- Production blasts may occur between 6.45 am and 7.15 pm on any day
- 1 production blast per day, with 6 per week averaged over a calendar year
- 6 development blasts per day, with 42 per week averaged over a calendar year

#### **Blasting Data Summary Results for July**

#### **Total Blasts:**

- 0 production blasts occurred before 6.45 am or after 7.15 pm
- The number of Production blasts averaged 4.7 per week over the previous calendar year
- The number of Development blasts averaged 35.1per week over the previous calendar year

#### Western Mineralisation and Main Lodes (excluding Block 7):

- 1 Blast recorded >5 mm/s
- 0 Blasts recorded >10 mm/s
- 0 development blasts recorded an over pressure level over 95 dBL (10pm to 7am)
- 0 development blasts recorded an over pressure level over 105 dBL (7pm to 10pm)
- 0 Blasts recorded an over pressure level over 115dBL (7am to 7pm)
- 0 Blasts recorded an over pressure level over or 120 dBL at any time
- Percentage of development blasts over 5 mm/sec = 0% (1 August 2017 until 30 July 2018)
- Percentage of production blasts over 5 mm/sec = 4.7% (1 August 2017 until 30 July 2018)

#### Block 7:

- 0 Blasts recorded >3 mm/s
- 0 Blasts recorded >10 mm/s
- 0 Blasts recorded >50 mm/s at V6
- 0 development blasts recorded an over pressure level over 95 dBL (10pm to 7am)
- 0 development blasts recorded an over pressure level over 105 dBL (7pm to 10pm)
- 0 Blasts recorded an over pressure level over 115 dBL (7am to 7pm)
- Percentage of development blasts over 3mm/sec = 0% (1 August 2017 until 30 July 2018)
- Percentage of production blasts over 3mm/sec = 8.1% (1 August 2017 until 30 July 2018) (criteria does not apply in this period as not a regulator reporting period)

There was no blasting in Block 7 during July. However, during the last 12 months 5 blasts in Block 7 have exceeded 3 mm/s - 3.54 (Sept), 3.07 (Dec), 3.1 (Dec), 3.1 (Jan) and 3.45 (Jan) and effect the rolling average.

#### 2.2 Noise

Noise monitoring is undertaken as per the NSW Noise Policy for Industry at a frequency of once per annum. A noise assessment was conducted in November 2017, and is next due in Q4 2018.



#### 3 Water

#### 3.1 Groundwater

There are eighteen sampling locations for groundwater. GW01 (EPL37) to GW16 (EPL52) are piezometers installed at various locations around the mine site and are sampled quarterly. There are also two sampling locations for water pumped from underground mining, Shaft 7 (EPL53) and Kintore Pit (EPL54), which are sampled monthly. A map indicating these locations can be found on the Rasp Mine web site. Groundwater monitoring is scheduled for completion in May, June, September and January. No limits are applied in the EPL to the results from groundwater monitoring.

#### **Groundwater Monitoring Requirements**

EPA Identification Number	Frequency	Parameters to be analysed
Shaft 7 EPL53	Monthly	alkalinity (calcium carbonate (CaCO <sub>3</sub> )), cadmium (Cd), calcium (Ca),
Kintore Pit (U/G dewatering) EPL54	Monthly	chloride (Cl), electrical conductivity (EC), iron (Fe), lead Pb), magnesium (Mg), manganese (Mn), pH, sodium (Na), sulphate
Piezometers EPL37 (GW01) to EPL52 (GW16)	Quarterly	(SO4), total dissolved solids (TDS) and zinc (Zn)

#### Shaft 7 (EPL53) and Kintore Pit (EPL54) Results for July

Sample Point	рН	EC (μS/cm²)	TDS (mg/l)	Alkalinity (CaCO <sub>3</sub> ) (mg/l)	SO4 (mg/l)	CI (mg/I)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	Cd (mg/l)	Pb (mg/l)	Mn (mg/l)	Zn (mg/l)	Fe (mg/l)
Shaft 7 (EPL53)	6.16	11900	6550	10	5720	1390	503	273	1590	2.26	0.984	390	1250	0.42
Kintore Pit (EPL54)	6.2	11700	6380	10	5620	1370	492	250	1540	2.58	0.868	398	1440	3.12

#### Groundwater Bores (EPL37 - EPL52) Results for July

Piezometer sampling was not scheduled for July and will occur in September.

## 3.2 Surface Water Sample Record

There are seven sampling locations for surface water, these include surface water basins located on the mine lease to capture and retain rainfall and two locations up and down stream of an ephemeral creek located south of the mine lease boundary. A map indicating these locations can be found on the Rasp Mine web site. Sampling is undertaken in October (highest rainfall month as recorded by Bureau of Meteorology) and April.

#### **Surface Water Monitoring Requirements**

Description	Frequency	Parameters to be Analysed
Federation Way Culvert EPL29/S31-1	2 x per year , six months apart	
Ryan Street Dam EPL31/S49	2 x per year , six months apart	



Adjacent Olive Grove EPL32/S1A	2 x per year , six months apart	cadmium (Cd), chloride (Cl), electrical conductivity (EC), lead Pb), manganese
Adjacent Bowls Club EPL33 /S9-B2	2 x per year , six months apart	(Mn), pH, sodium (Na), sulphate (SO4), total dissolved solids (TDS) and zinc (Zn)
Horwood Dam EPL34/Horwood Dam	2 x per year , six months apart	total dissolved solids (103) and zinc (zin)
Upstream Bonanza St EPL35	2 x per year , six months apart	
Downstream Sydney Rd EPL36	2 x per year , six months apart	

#### **Surface Water Monitoring Results**

Surface water sampling was not scheduled for July and will occur in October.

## 4 Weather Data

The weather station continuously monitors the following parameters as per Point 55 of the Environmental Protection Licence.

The following parameters are required to be recorded each month as listed in the EPL 12559:-

#### Rasp Mine Weather Station (EPL55) Monitoring Requirements

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Temperature at 10 metres	AM-4	degrees Celsius	15 minutes	Continuous
Wind Direction at 10 metres	AM-4	degrees in a clockwise direction from True North	15 minutes	Continuous
Wind Speed at 10 metres	AM-4	metres per second	15 minutes	Continuous
Rainfall	AM-4	millimetres	1 hour	Continuous
Sigma theta	AM-2 & AM-4	degrees	15 minutes	Continuous

**Note:** The onsite weather station currently does not report Sigma theta.

#### Weather Data Summary for July

Date	Temperature @ 10m (°C)			Wind Speed @ 10m (m/s)		Predominant Wind  Direction @ 10m	
	Min	Max	Min	Max	Cardinal	Degree	Total
01-Jul-18	5.6	12.5	0.4	5.7	ESE	113	0.0
02-Jul-18	6.6	12.8	0.3	6.1	ENE	68	0.0
03-Jul-18	6.3	17.0	1.2	9.5	North	7	0.0
04-Jul-18	9.8	19.7	2.1	13.1	North	6	0.0
05-Jul-18	12.5	22.3	1.5	15.3	North	5	0.0
06-Jul-18	9.2	18.2	0.5	13.0	WSW	247	0.0
07-Jul-18	7.2	13.1	1.4	13.9	SW	225	0.0
08-Jul-18	6.5	14.8	1.3	10.5	SW	226	0.0



09-Jul-18	6.9	11.9	1.1	8.9	South	180	0.0
10-Jul-18	6.2	12.5	0.5	7.2	South	180	0.0
11-Jul-18	6.0	14.4	0.4	7.8	NNW	337	0.0
12-Jul-18	5.3	12.7	0.6	6.7	WSW	248	0.0
13-Jul-18	3.0	10.9	0.2	5.7	South	180	0.0
14-Jul-18	5.2	13.2	0.1	5.6	North	354	0.0
15-Jul-18	6.9	15.4	0.7	10.7	North	354	0.0
16-Jul-18	9.9	17.4	0.7	12.0	NNW	338	0.0
17-Jul-18	9.8	20.2	0.3	15.3	North	4	0.0
18-Jul-18	8.8	16.9	0.2	7.8	North	6	0.0
19-Jul-18	6.2	21.4	0.7	15.8	North	355	0.0
20-Jul-18	4.3	12.2	1.0	8.4	West	271	0.0
21-Jul-18	7.0	14.2	0.3	5.3	NW	312	0.0
22-Jul-18	6.3	15.2	1.3	10.9	North	6	0.0
23-Jul-18	11.6	19.8	0.8	17.4	North	4	0.0
24-Jul-18	10.5	18.6	0.4	13.6	NNW	334	0.0
25-Jul-18	10.3	18.8	0.2	6.3	West	273	0.0
26-Jul-18	11.6	19.2	0.4	8.5	North	5	0.0
27-Jul-18	12.3	19.0	0.3	11.7	East	90	0.0
28-Jul-18	9.0	19.9	0.4	9.4	NW	315	0.0
29-Jul-18	7.6	13.3	0.8	12.4	WSW	247	0.0
30-Jul-18	6.8	14.8	0.4	9.4	North	6	0.0
31-Jul-18	10.9	17.6	0.4	11.2	NNW	336	0.0



# 5. Data Log

Sample	Result Received
Hi Volume Samples	10-08-2018
TEOM	1-08-2018
Dust Deposition	21-08-2018
Vents & Bag House	NA
Water	NA
Blast vibration and overpressure	1-08-2018
Weather	1-08-2018
Date posted to web site	5-09-2018

# **5** Correction Log