

Rasp Mine
Monthly Environmental Monitoring Report
December 2017



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.

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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/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	25 µg/m ³

Short Term Criterion for Particulate Matter

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³

Long Term Criteria for Deposited Dust

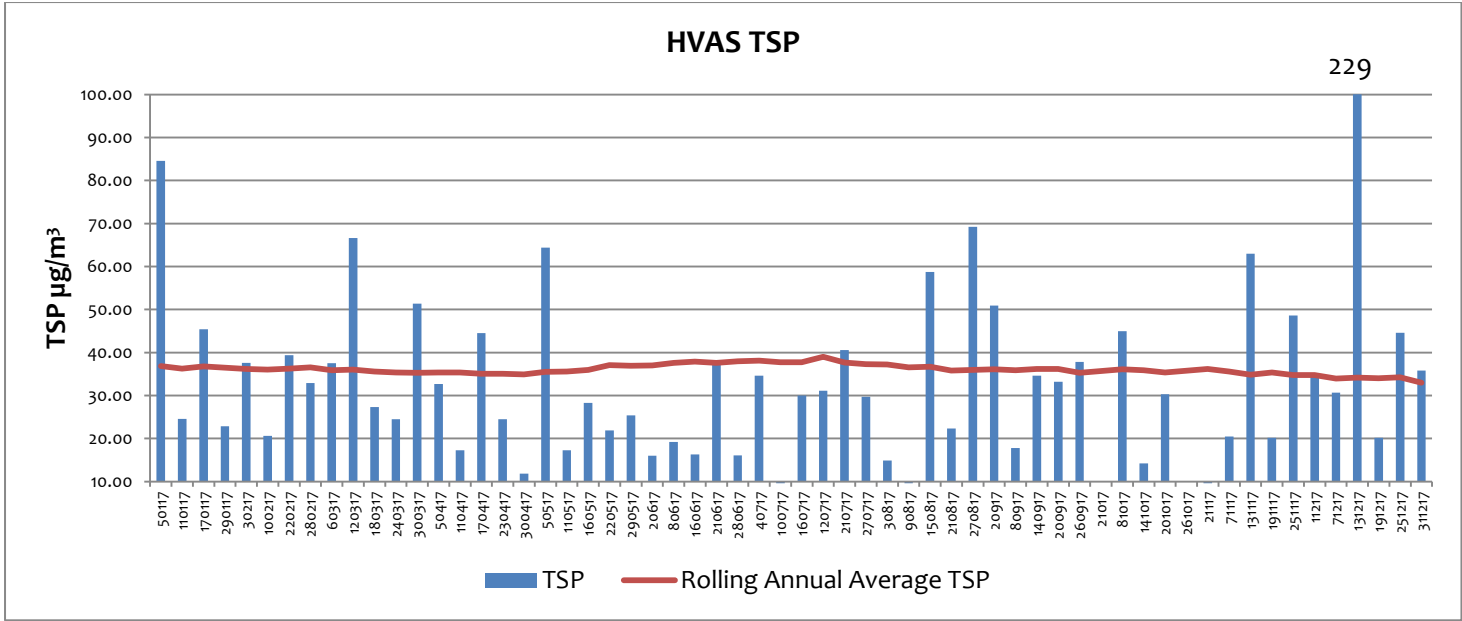
Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust Level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

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 (PM₁₀) and lead dust.

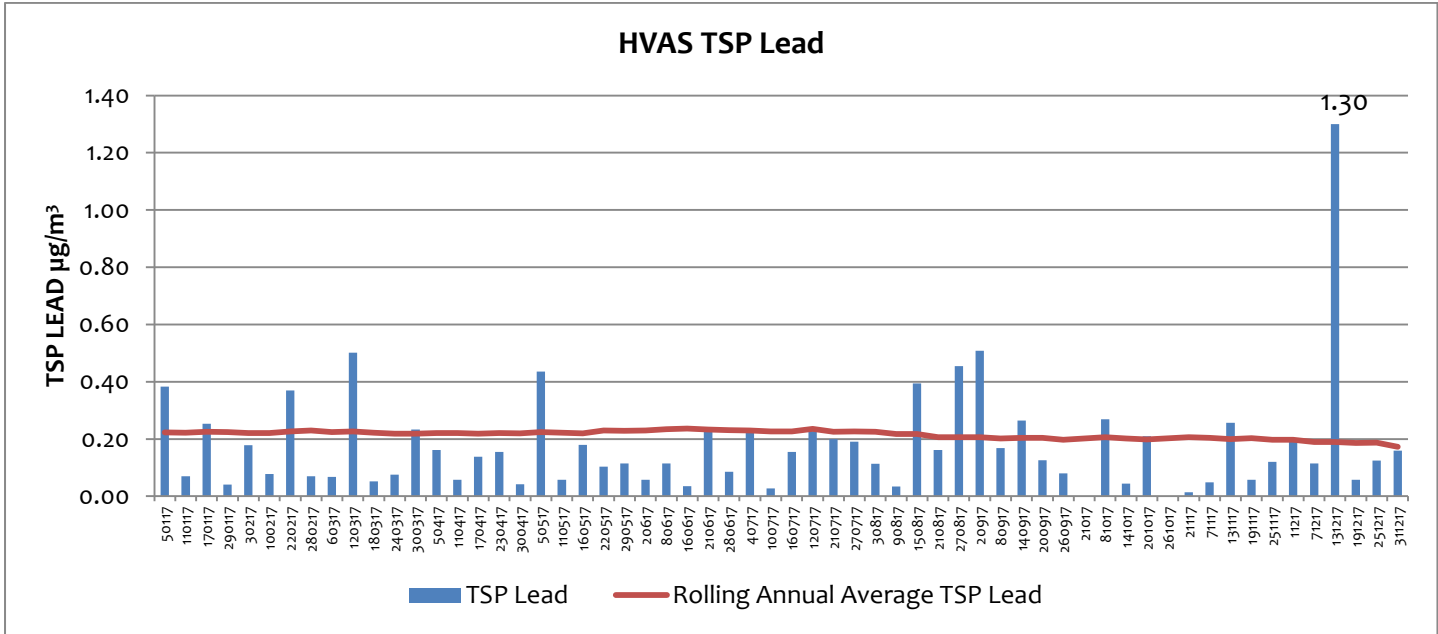
HVAS (EPL10) - SILVER TANK - ON Site Results for December

DATE	TSP (µg/m ³)	Lead (µg/m ³)
01-12-17	35.00	0.20
07-12-17	30.70	0.11
13-12-17	229.00	1.30
19-12-17	20.20	0.06
25-12-17	44.60	0.13
31-12-17	35.80	0.16



This monitoring unit is located on the Rasp Mine and criteria does not apply at this point, criteria apply to the closest residential location. The data indicates that the annual average TSP for December was $35 \mu\text{g}/\text{m}^3$ and was well below the TSP annual average criterion of $90 \mu\text{g}/\text{m}^3$ required for the nearest residential location.

Note on 13 December Broken Hill experienced high winds (49 km/h) with dry conditions (39.5°C), winds were predominantly from the north east.

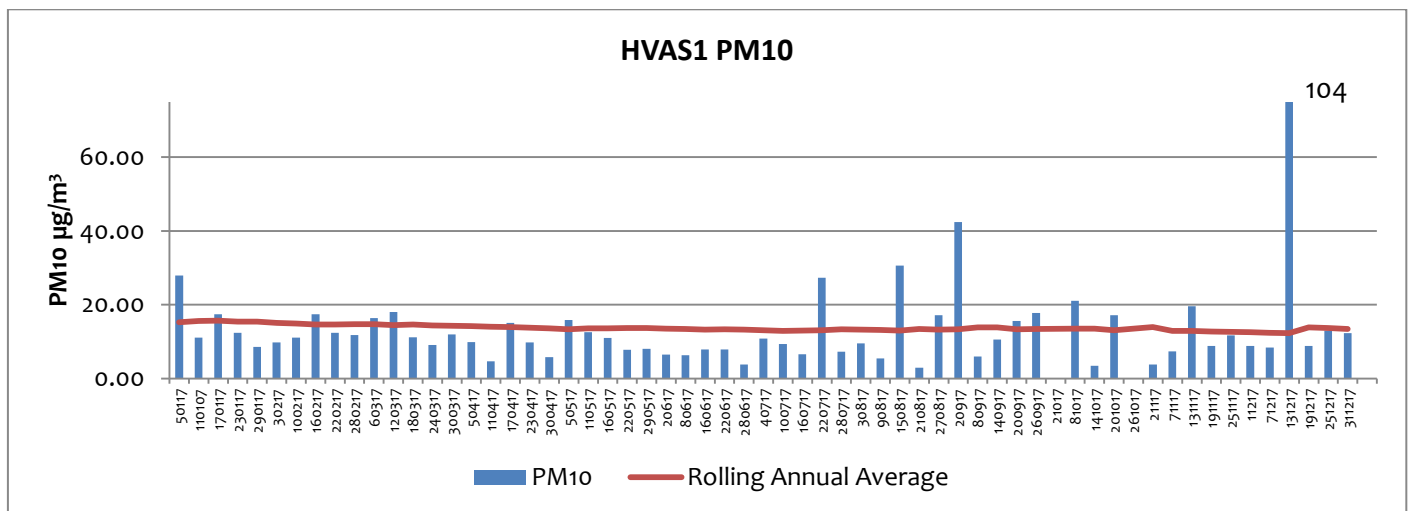


Guidelines for air quality are provided by the EPA- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, 2016. In regards to ambient lead dust the Rasp Mine annual average for December is below the EPA guideline of $0.50 \mu\text{g}/\text{m}^3$.

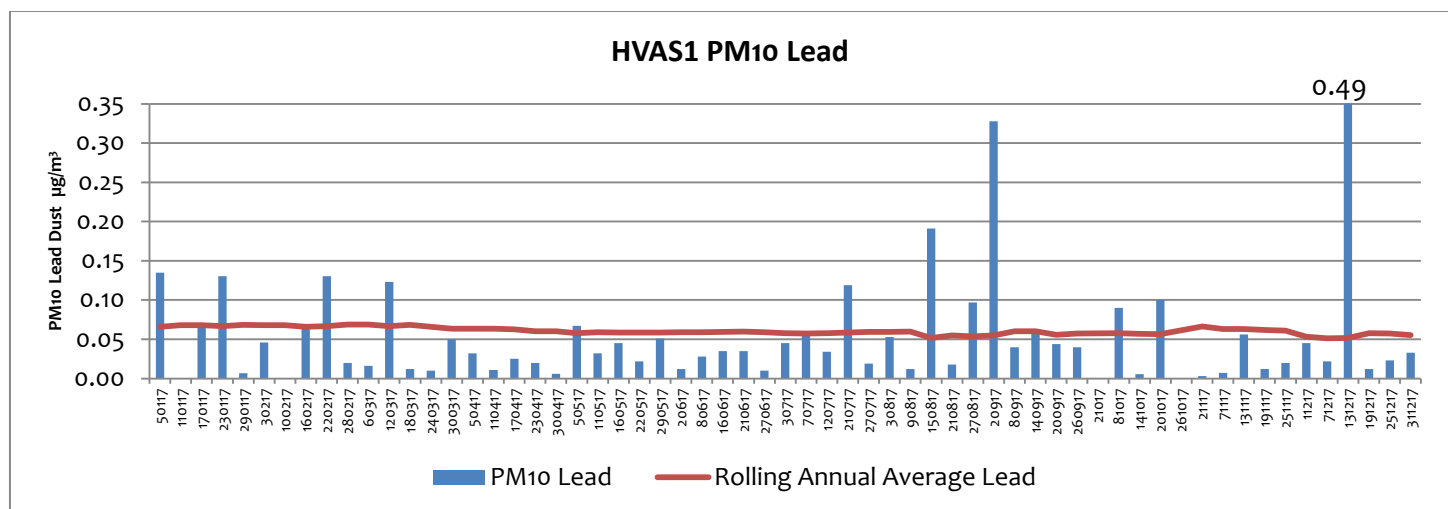


HVAS1 (EPL11) - SILVER TANK – ON Site Results for December

DATE	PM10 ($\mu\text{g}/\text{m}^3$)	PM10 Lead ($\mu\text{g}/\text{m}^3$)
01-12-17	8.80	0.05
07-12-17	8.40	0.02
13-12-17	104.00	0.49
19-12-17	8.80	0.01
25-12-17	13.00	0.02
31-12-17	12.30	0.03



This monitoring unit is located on the Rasp Mine mining lease and the criteria does not apply at this point, criteria apply to the closest residential location. The data indicates that the annual average PM₁₀ for December of 13 $\mu\text{g}/\text{m}^3$ is below the PM₁₀ annual average criterion 25 $\mu\text{g}/\text{m}^3$ required at the nearest residential location. Overall the trend for PM₁₀ at this location remains consistent with the previous 12 months.

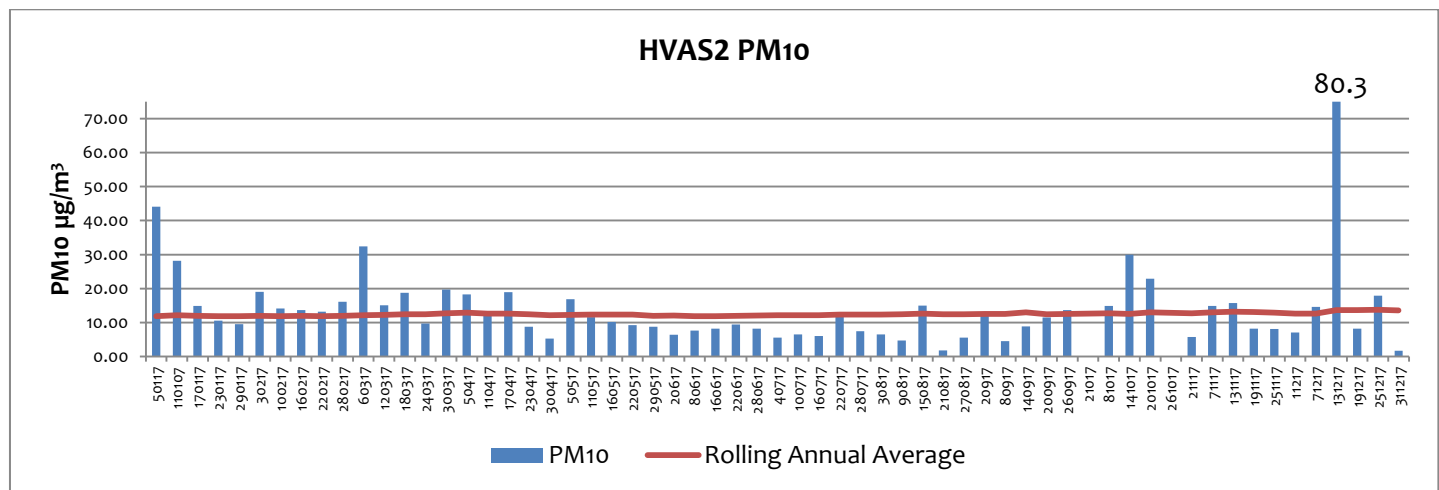


There is no guideline for assessing PM₁₀ Lead dust, however, the overall trend for lead dust at this location remains consistent with the previous 12 months.



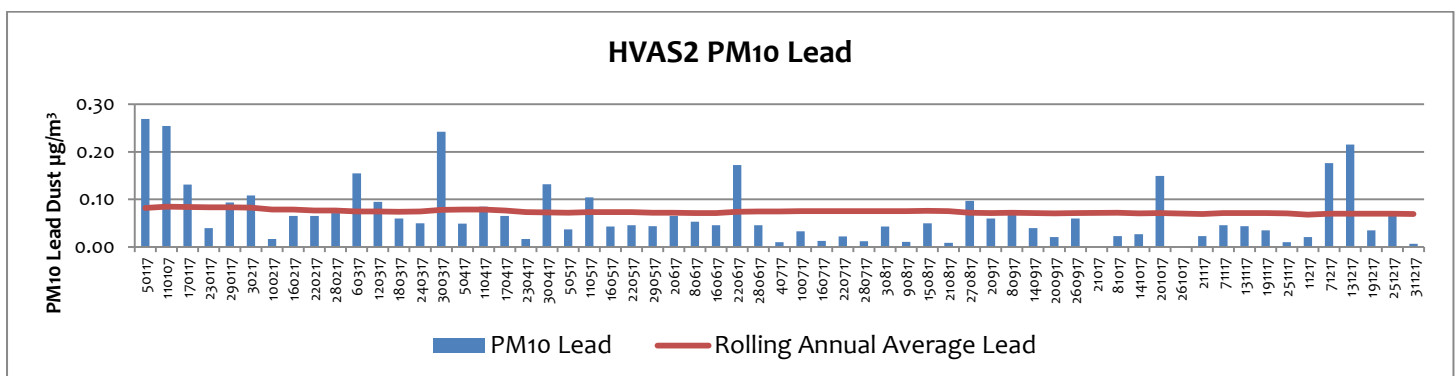
HVAS 2 (EPL12) - Blackwood Pit – On Site Results for December

DATE	PM10 ($\mu\text{g}/\text{m}^3$)	Lead ($\mu\text{g}/\text{m}^3$)
01-12-17	7.10	0.02
07-12-17	14.60	0.18
13-12-17	80.30	0.22
19-12-17	8.20	0.04
25-12-17	17.90	0.07
31-12-17	1.70	0.01



This monitoring unit is located on the Rasp Mine and criteria does not apply at this point, criteria apply to the closest residential location. The data indicates that the annual average PM₁₀ for December of 13 $\mu\text{g}/\text{m}^3$ is well below the PM₁₀ annual average criterion 25 $\mu\text{g}/\text{m}^3$ required at the nearest residential location.

Overall the trend for PM₁₀ at this location remains consistent with the previous 12 months.



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

Note: Wind speeds for day up to 49km an hour from NE to North created dust storms across monitors on 13th December for all HVAS monitors.



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 (PM₁₀).

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

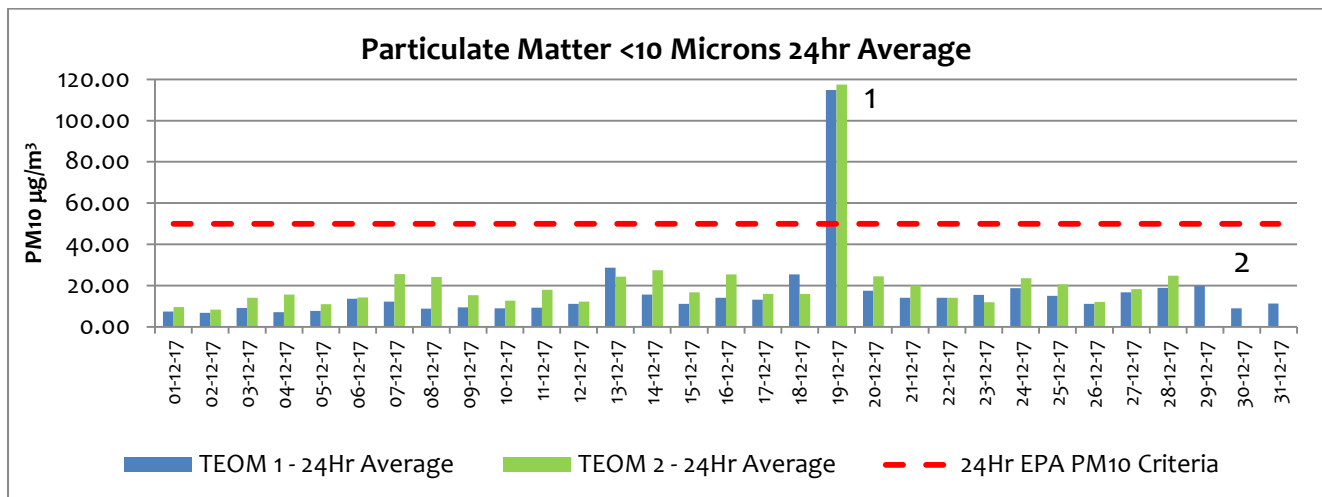
Particulate Matter <10 Microns 24Hr Average				
Date	TEOM 1 (µg/m ³)	Compliant with 50µg/m ³ 24hr average?	TEOM 2 (µg/m ³)	Compliant with 50µg/m ³ 24hr average?
01-12-17	7.51	Y	9.68	Y
02-12-17	6.84	Y	8.35	Y
03-12-17	9.12	Y	14.14	Y
04-12-17	7.22	Y	15.68	Y
05-12-17	7.75	Y	11.10	Y
06-12-17	13.72	Y	14.25	Y
07-12-17	12.27	Y	25.62	Y
08-12-17	8.93	Y	24.22	Y
09-12-17	9.54	Y	15.34	Y
10-12-17	8.95	Y	12.74	Y
11-12-17	9.25	Y	18.00	Y
12-12-17	11.19	Y	12.20	Y
13-12-17	28.79	Y	24.30	Y
14-12-17	15.73	Y	27.51	Y
15-12-17	11.11	Y	16.77	Y
16-12-17	14.19	Y	25.39	Y
17-12-17	13.21	Y	15.98	Y
18-12-17	25.47	Y	15.92	Y
19-12-17	114.76	N	117.43	N
20-12-17	17.53	Y	24.49	Y
21-12-17	14.17	Y	20.15	Y
22-12-17	14.19	Y	14.18	Y
23-12-17	15.49	Y	11.89	Y
24-12-17	18.73	Y	23.55	Y
25-12-17	15.09	Y	20.62	Y
26-12-17	11.23	Y	12.16	Y
27-12-17	16.84	Y	18.24	Y
28-12-17	18.98	Y	24.91	Y
29-12-17	19.90	Y	0.00	Y
30-12-17	9.02	Y	0.00	Y
31-12-17	11.34	Y	0.00	Y



The TEOM1 monitoring unit is located off-site from the Rasp Mine and the criteria as listed in the Project Approval 07_0018 applies at this point. There are two criterion listed for PM₁₀ - 24 hour average and an annual average. The highest 24-hour average recorded at TEOM1 was 114.76 µg/m³ on 19 December. This was the result of dust storms across Broken Hill with wind gusts of up to 76 km/h and winds predominantly from the north and north west. The Project Approval excludes extraordinary events such as dust storms and therefore the criteria does not apply. The PM₁₀ annual average at the end of December was 16.7 µg/m³ and is below the listed criteria of 25 µg/m³.

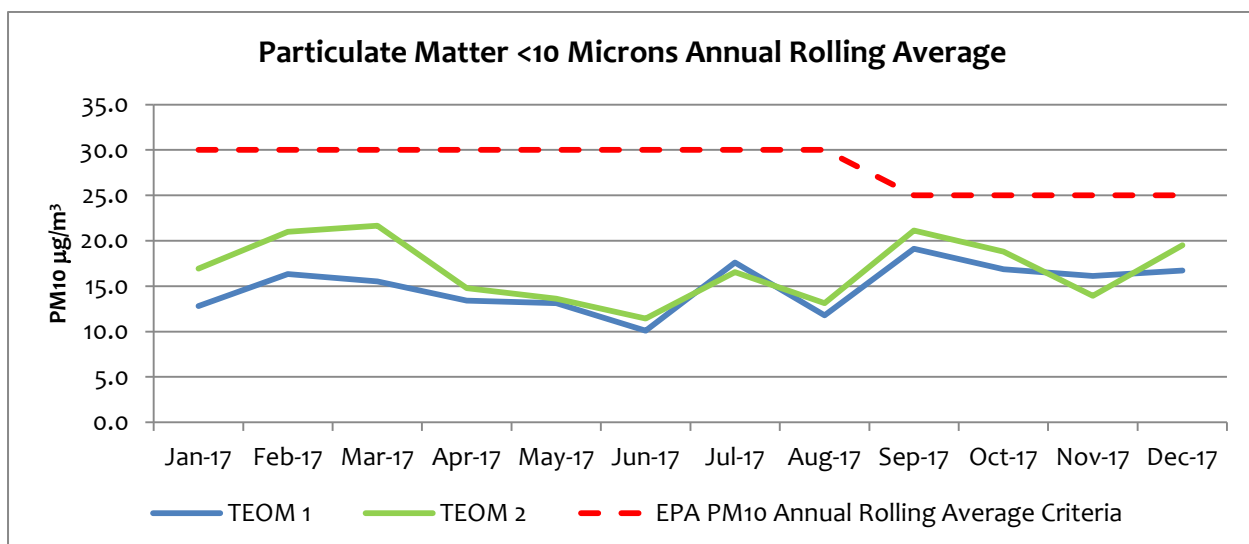
The TEOM2 monitoring unit is located on the Rasp Mine and criteria does not apply at this point, criteria apply to the closest residential location. The data indicates that the highest PM₁₀ 24 hour average of 117.43 µg/m³ on 19 December. This was the result of dust storms across Broken Hill with wind gusts of up to 76 km/h and winds predominantly from the north and north west. The Project Approval excludes extraordinary events such as dust storms and therefore the criteria does not apply. The annual average PM₁₀ for December of 19.5 µg/m³ is below the PM₁₀ annual average criterion of 25 µg/m³ required at the nearest residential location.

Rasp Mine is in compliance with all listed criteria.



Note 1: Wind speeds for day up to 76km an hour from NW to North created dust storms across monitors.

Note 2: Equipment malfunction for TEOM 2 resulted in no data recorded from 28 Dec to 31 Dec.



Note 1: Criteria change to 25µg/m³ in September as per PA MOD4.



The PM₁₀ annual average for December is below the Project Approval limit of 25 µg/m³. The Rasp Mine is in compliance with this criterion. Overall the trend for PM₁₀ at this location remains consistent with the previous 12 months.

1.3 Dust Deposition Sampling

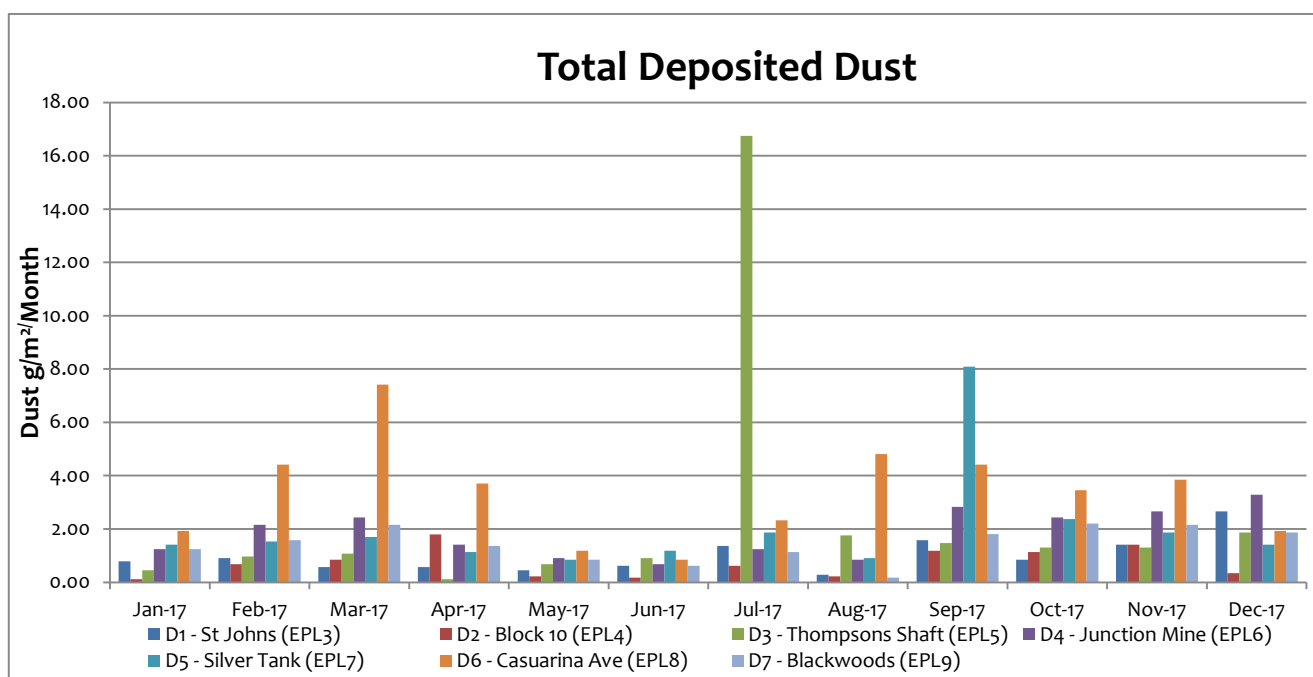
There are seven dust deposition gauges to measure ambient air quality at the Rasp Mine – D1 to D7. D1 and D6 are located off-site, D1 near the St Johns training facility north of the Rasp Mine and D6 in Casuarina Avenue south of the Rasp Mine. D2 to D5 and D7 are located on the mine lease in various 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 December

Total Deposited Dust (g/m ² /Month)							
Date	D1 (off site)	D2 (on site)	D3 (on site)	D4 (on site)	D5 (on site)	D6 (off site)	D7 (on site)
December 2017	2.66	0.34	1.87	3.28	1.41	1.92	1.87
Background (2010)	4.0	3.1	4.3	5.7	- ¹	5.8	N/A
Compliant?	Y	N/A	N/A	N/A	N/A	Y	N/A

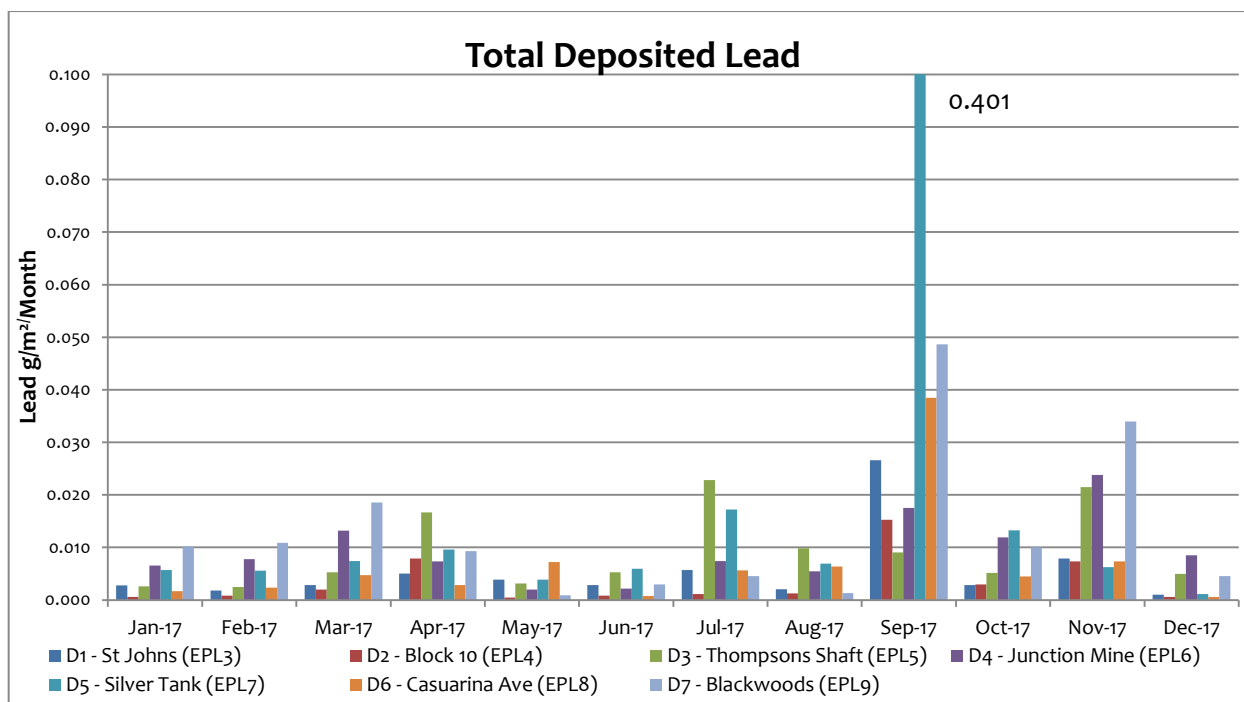
Note: “-1” = background not available

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



The Rasp Mine is in compliance with criteria. Elevated total dust recorded at the offsite monitor at Casuarina Avenue appears to have been caused by motor bikes accessing the vacant lot at the rear of the property

Total Deposited Lead (g/m ² /Month)							
Date	D1 (off Site)	D2 (on site)	D3 (on site)	D4 (on site)	D5 (on site)	D6 (off Site)	D7 (on site)
December 2017	0.001	0.001	0.005	0.008	0.001	0.001	0.005
Background (2010)	0.0034	0.005	0.005	0.006	-	0.004	-



There are no guidelines for deposited lead dust.

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 January, April, July and December.

The following criteria apply:

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

	Unit	Criteria
Nitrogen Oxides	mg/m ³	350
Volatile Organic Compounds	mg/m ³	40

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

	Unit	Criteria
Total Suspended particles	mg/m ³	20
Type 1 and Type 2	mg/m ³	1

Type 1 substance Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.



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.

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

	Unit	Primary Vent Shaft (EPL1)	Crusher Baghouse (EPL2)	Vent Shaft 6 (EPL 56)
Nitrogen Oxides	mg/m ³	5.15	NA	<2.05
Volatile Organic Compounds	mg/m ³	<0.486	NA	<0.425
Total Suspended particles	mg/m ³	2.11	10	0.604
Type 1 and Type 2	mg/m ³	0.009	0.385	0.069

The Rasp Mine is in compliance with all listed criteria.

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
Residence on privately owned land (7am-7pm)	115	5	5% of the total number of blasts over a 12-month period
(7am-7pm)	120	10	0%
(7pm-10pm)	105	-	-
(10pm-7am)	95	-	-
Public Infrastructure	-	100	0%

Blasting Criteria (Block 7)

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



(7pm-10pm)	105	-	-
(10pm-7am)	95	-	-
Broken Hill Bowling Club, Italo (Bocce) Club, Heritage Items within CML7	-	50	0%
Perilya Southern Operations	-	100	0%
Public Infrastructure	-	100	0%

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 December

Total Blasts:

- 0 production blasts occurred before 6.45 am or after 7.15 pm
- production blasts averaged 4.3 per week over the previous calendar year
- development blasts, averaged 34.2 per week over the previous calendar year

Western Mineralisation and Main Lodes (excluding Block 7):

- 2 Blast recorded a ppv of >5mm/s
- 0 Blasts recorded a ppv of >10mm/s
- 0 Blasts recorded a ppv >100mm/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
- % of all blasts over 5mm/sec = 0.04% calculated from 30 November 2016 until 30 December 2017;
- % of production blasts over 5mm/sec = 4.7% calculated from 30 November 2016 until 30 December 2017.

Block 7:

- 2 Blasts recorded a ppv of >3mm/s
- 0 Blasts recorded a ppv of >10mm/s
- 0 Blasts recorded a ppv of >50mm/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 115dBL (7am to 7pm)
- 0 Blasts recorded an over pressure level over or 120 dBL at any time
- % of all blasts over 3mm/sec = 3% calculated from 30 November 2016 until 30 December, 2017;
- % of production blasts over 3mm/sec = 3.6% calculated from 30 November 2016 until 30 December, 2017

Rasp Mine is in compliance with all listed criteria.

2.2 Noise

Noise monitoring is undertaken as per the NSW Industrial Noise Policy 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 installed piezometers 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), sampled monthly. A map indicating these locations can be found on the Rasp Mine web site. Groundwater monitoring is scheduled for completion in March, June, September and December.

Groundwater Monitoring Requirements

EPA Identification Number	Frequency	Parameters to be analysed
Shaft 7 EPL53	Monthly	alkalinity (calcium carbonate (CaCO ₃)), cadmium (Cd), calcium (Ca), chloride (Cl), electrical conductivity (EC), iron (Fe), lead Pb), magnesium (Mg), manganese (Mn), pH, sodium (Na), sulphate (SO ₄), total dissolved solids (TDS) and zinc (Zn)
Kintore Pit (U/G dewatering) EPL54	Monthly	
Piezometers EPL37 (GW01) to EPL52 (GW16)	Quarterly	

Shaft 7 (EPL53) and Kintore Pit (EPL54) Results for December

Sample Point	Alkalinity (CaCO ₃) (mg/l)	Cd (mg/l)	Ca (mg/l)	Cl (mg/l)	EC (µS/cm ²)	Fe (mg/l)	Pb (mg/l)	Mg (mg/l)	Mn (mg/l)	pH	Na (mg/l)	SO ₄ (mg/l)	TDS (mg/l)	Zn (mg/l)
Shaft 7 (EPL53)	3	2.43	510	1520	12000	<0.05	1.45	287	332	5.94	1590	6030	7430	1080
Kintore Pit (EPL54)	3	2.62	492	1360	11500	<0.05	2.64	252	296	5.78	1510	5940	8950	1180

Groundwater Bores (EPL37 - EPL52) Results for December

Sample Point	Alkalinity (CaCO ₃) (mg/l)	Cd (mg/l)	Ca (mg/l)	Cl (mg/l)	EC (µS/cm ²)	Fe (mg/l)	Pb (mg/l)	Mg (mg/l)	Mn (mg/l)	pH	Na (mg/l)	SO ₄ (mg/l)	TDS (mg/l)	Zn (mg/l)
GW01 (EPL37)	<1	0.165	264	1020	10200	<0.05	0.068	432	230	4.58	1520	5250	10100	175
GW02 (EPL38)	- Bore dry -													
GW03 (EPL39)	9	1.33	577	3040	14700	<0.05	2.92	375	326	5.9	2300	5110	13200	287
GW04 (EPL40)	233	0.168	610	2760	14500	<0.05	0.339	546	43.9	7.1	2420	5130	12800	22.5
GW05 (EPL41)	133	1.6	542	2800	16600	<0.05	1.14	704	292	6.53	2820	6700	16400	236
GW06 (EPL42)	42	0.866	545	2480	13400	<0.05	0.056	440	198	6.37	2140	5260	13300	129
GW07 (EPL43)	- Bore dry -													
GW08 (EPL44)	17	1.58	592	1910	11500	<0.05	0.43	284	439	6.17	1440	4700	12000	524
GW09	287	0.0378	735	1930	11400	<0.05	<0.001	580	0.033	7.5	1420	3920	9740	3.64



Sample Point	Alkalinity (CaCO ₃ mg/l)	Cd (mg/l)	Ca (mg/l)	Cl (mg/l)	EC (µS/cm ²)	Fe (mg/l)	Pb (mg/l)	Mg (mg/l)	Mn (mg/l)	pH	Na (mg/l)	SO ₄ (mg/l)	TDS (mg/l)	Zn (mg/l)
(EPL45)														
GW10 (EPL46)							- Bore dry -							
GW11 (EPL47)	60	0.080 7	302	425	4390	<0.05	0.124	131	570	7.01	570	2140	3740	32
GW12 (EPL48)							- Bore dry -							
GW13 (EPL49)							- Bore dry -							
GW14 (EPL50)							- Bore dry -							
GW15 (EPL51)							- Bore dry -							
GW16 (EPL52)							- Bore dry -							

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	cadmium (Cd), chloride (Cl), electrical conductivity (EC), lead Pb), manganese (Mn), pH, sodium (Na), sulphate (SO ₄), total dissolved solids (TDS) and zinc (Zn)
Ryan Street Dam EPL31/S49	2 x per year , six months apart	
Adjacent Olive Grove EPL32/S1A	2 x per year , six months apart	
Adjacent Bowls Club EPL33 /S9-B2	2 x per year , six months apart	
Horwood Dam EPL34/Horwood Dam	2 x per year , six months apart	
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 December.



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

Weather Data Summary for December

Date	Temperature @ 10m (°C)		Wind Speed @ 10m (m/s)		Predominant wind dir @ 10m (deg)		Rainfall
	Min	Max	Min	Max	Cardinal	Degree	
01-12-17	17	27.3	0.1	11.3	SSW	203	0.54
02-12-17	13	17.7	1.8	13.5	SW	225	0.02
03-12-17	9.8	17.4	1.1	11.2	SSW	203	0.00
04-12-17	10.1	19.4	1.3	12.7	SOUTH	180	0.00
05-12-17	11.7	22.3	0.7	8.5	SSW	203	0.00
06-12-17	14	27.4	0.1	9.7	WEST	270	0.00
07-12-17	15.6	24.3	0.8	14.1	SOUTH	180	0.00
08-12-17	10.6	20.7	1.2	12.3	SOUTH	180	0.00
09-12-17	12.3	24.9	0.8	9.2	SOUTH	180	0.00
10-12-17	16.6	28.6	0.2	8.4	SSE	158	0.00
11-12-17	17.7	31.8	0.8	9.3	SSE	158	0.00
12-12-17	22.2	35.8	0.3	6.6	SSE	158	0.00
13-12-17	25.5	39.5	0.4	13.7	NE	45	0.00
14-12-17	22.8	30.2	0.8	11	SOUTH	180	0.00
15-12-17	17.7	32.3	0.2	7.2	SOUTH	180	0.00
16-12-17	18.8	34	0.4	11.1	SOUTH	180	0.00
17-12-17	23.7	36	0.5	8.2	SSE	158	0.00
18-12-17	26.2	41.3	0.2	9.1	ESE	113	0.00
19-12-17	26.3	36.6	0.5	19.9	NORTH	360	0.01
20-12-17	19.5	27	1.1	14.7	SOUTH	180	0.00
21-12-17	15.2	28.1	0.6	9.9	SOUTH	180	0.00
22-12-17	19.1	32.9	0.1	6.9	EAST	90	0.00



23-12-17	24.6	36.7	0.5	10.9	NORTH	360	0.00
24-12-17	21	32.2	1.4	11.4	SOUTH	180	0.00
25-12-17	17.7	29	1.1	12.3	SSE	158	0.00
26-12-17	20.3	31.3	0.7	8.6	SSE	158	0.00
27-12-17	24.5	36.8	0.2	9.3	ESE	113	0.00
28-12-17	25.5	35.8	0.1	8.8	NE	45	0.01
29-12-17	23.1	32.8	0.8	11	SOUTH	180	0.02
30-12-17	19.9	28.7	0.5	10.1	SOUTH	180	0.00
31-12-17	17.3	23.5	0.5	8.5	SSE	158	0.00

5 Data Log

Sample	Result Received
Hi Volume Samples	19-01-2018
TEOM	01-01-2018
Dust Deposition	18-01-2018
Vents & Bag House	23-01-2018
Water	22-01-2018
Blast Vibration and overpressure	01-01-2018
Weather	01-01-2018
Date posted to web site	08-02-2018

6 Correction Log

There are no corrections to the previous reports.