



Peak Gold Mines
MONTHLY ENVIRONMENTAL MONITORING SUMMARY
REPORT

EPL 3596
Hillston Road, Cobar
NSW 2835

August 2019



Contents

1. INTENT	3
2. SCOPE	3
3. DEFINITIONS	3
4. MONITORING RESULTS	4
4.1. VIBRATION	4
4.2. AIR QUALITY	5
4.3. NOISE	7
4.4. WATER	9
4.5. HAULAGE MOVEMENTS	10
4.6. WEATHER	10



1. INTENT

This monthly environmental summary report is a requirement under section 66(6) of the NSW Protection of the Environment Operations Act 1997 (POEO Act), in which holders of an environment protection licence make their pollution monitoring data publicly available. This report is intended to keep the community, stakeholders, and regulators informed of Peak Gold Mine's (PGM's) environmental performance and to maintain a transparent and accountable reporting system.

2. SCOPE

This report covers all of PGMs environmental monitoring conditions covered for August 2019. These conditions, where applicable, are measured against PGMs Environmental Protection Licence (EPL), development consent conditions and Australian Standard to determine PGMs compliance. The conditions include;

- Blasting monitoring results;
- Air Quality Monitoring results;
- Noise Monitoring results;
- Surface Water Monitoring results; and
- Weather Conditions.

3. DEFINITIONS

mm/s – the peak of the vibration in millimetres per second

Insoluble Solids – the insoluble portion of the dust deposition

Total Lead – Including dissolved lead in the liquid portion and the lead particulates in the filter paper following laboratory analysis

g/m²/month – grams per square meter per month

dB (L) – decibel (linear maximum)

dB LAeq (15 minute) – Decibel (linear weighted average over 15 minutes)

CN Free – Free Cyanide (hydrogen cyanide and cyanide ions in solution)

CN WAD – Weak Acid Dissociable Cyanide (includes cyanide species liberated at moderate pH of 4.5)

TSS – Total Suspended Solids



4. MONITORING RESULTS

4.1. VIBRATION

The vibration monitoring results displayed in Table 4.1a represents all blast vibration events that were triggered at the New Occidental, Fort Bourke and/or Dellavale monitors (Figure 1).

As seen in Table 4.1a all blasting events for the month were below PGMs EPL limits. Vibration limits set by the NSW Environmental Protection Authority (EPA) can be viewed in Table 4.1b.

The compliance against the overall 12-month period will be reported in the EPL Annual Return and Annual Environmental Management Report (AEMR).

Table 4.1a New Occidental, Fort Bourke and Dellavale Vibration Results

Location	Date Sampled & Received	ID	New Occidental (mm/s)	Fort Bourke (mm/s)	Dellavale (mm/s)	Complies (Y/N)
New Cobar	06/08/19	58 NTH 470	No Trigger	1.412	1.594	Y
Peak	08/08/19	9560 STH 540	No Trigger	1.562	1.837	Y
Peak	08/08/19	9560 STH 540 Slash	No Trigger	No Trigger	No Trigger	Y
Peak	17/08/19	9560 STH 540 D019	No Trigger	No Trigger	No Trigger	Y
New Cobar	19/08/19	55NTH475	No Trigger	No Trigger	No Trigger	Y
New Cobar	25/08/19	55NTH475	No Trigger	1.736	1.234	Y
Peak	31/08/19	8730 FAR	No Trigger	No Trigger	No Trigger	Y

Table 4.1b PGM EPL Limits

Peak Particle Velocity (mm/s)	Allowable Exceedance
5.00	<5% of the total number of blasts in a 12 month period are to be below 5mm/s
10.00	NIL



Figure 1: Location of Vibration Monitors on PGM's Mining Leases.

4.2. AIR QUALITY

Fall out dust deposition bottles are currently used to monitor air quality. The bottles are positioned in the field (Figure 2) for a period of 30 ± 2 days. Monitoring is undertaken quarterly. The bottles are then sent to Australian Laboratory Services (ALS) for external analysis.

PGM has no set limits for air quality monitoring levels. However, takes on board the EPA's best practice limit of $4\text{g}/\text{m}^2/\text{time}$ (limit is applicable to 12 month averaging period). If a single monitoring result is over the EPA's best practice limit of $4\text{g}/\text{m}^2/\text{time}$, the cause is investigated and reported in the AEMR.



MONTHLY ENVIRONMENTAL MONITORING SUMMARY

Table 4.2a Air Quality Results

Site	Location	Date			Australian Standard Limit (g/m ² /month)	Insoluble Solids (g/m ² /month)	Total Lead (g/m ² /month)	Complies
		Sampled	Obtained	Published				
DM1	NW corner of tailings dam	26/07/19 – 26/08/19	06/09/19	13/09/19	4	0.5	0.00126	Y
DM2	SW corner of tailings dam	26/07/19 – 26/08/19	06/09/19	13/09/19	4	0.8	0.000387	Y
DM3	Carpark	26/07/19 – 26/08/19	06/09/19	13/09/19	4	2.7	0.0458	Y
DM4	NE corner of PGM magazine	26/07/19 – 26/08/19	06/09/19	13/09/19	4	1.1	0.0035	Y
Dellavale	1.3km ESE of New Cobar	26/07/19 – 26/08/19	06/09/19	13/09/19	4	1.5	0.000189	Y
Bimbimbie	1.2km SW of New Cobar	26/07/19 – 26/08/19	06/09/19	13/09/19	4	0.7	0.000114	Y

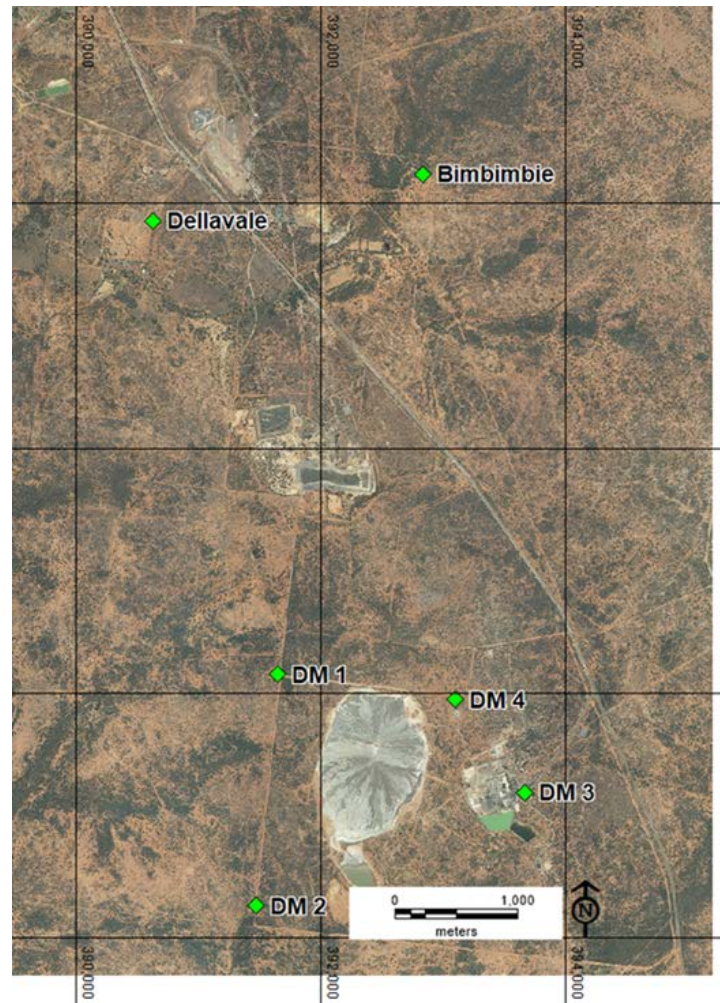


Figure 2: Location of dust gauges on PGM Mining Leases.

4.3. NOISE

A hand-held monitor is used by PGM employees to monitor noise levels at times set out by the EPL and development consent conditions. Noise monitoring is conducted at the closest resident (figure 3) and sporadically depending on operational requirements. PGMs closest monitoring point is located at the Dellavale boundary, approximately 400m closer to the mine noise than the residence. To determine the noise level (dB) experienced at the residence, sound intensity I and the inverse square law $1/r^2$ is calculated based on the residences distance from mine noise source.

Noise monitoring results and licenced noise limits set by the EPL and Development Consent Conditions are given in Table 4.3a respectively.



MONTHLY ENVIRONMENTAL MONITORING SUMMARY

Table 4.3a Attended Noise Monitoring Results

Location	Date Sampled & Obtained	Date Published	Time	LA 10 (dB) Limit	LA 10 (dB) Monitoring Result at Monitor Location	LA 10 (dB) Calculated Monitoring Result at Residence	Key Noise Source	Complies
Dellavale	02/08/2019	02/08/2019	9.30am	45	42.6	38.6	Non-mine Truck on highway, bird chirping	YES
Dellavale	16/08/2019	16/08/2019	2.30pm	45	41.7	37.7	Slight breeze toward end of monitoring	YES
Dellavale	17/08/2019	19/08/2019	12.30pm	45	30.3	26.3	No Triggers	YES

Table 4.3b Noise Monitoring

Time Band	Day	Noise Level (dB)
8:00am – 6:00pm	Mon – Fri	45
6:00pm – 10:00pm	Mon – Fri	40
10:00pm – 8:00am	Mon – Fri	35
8:00am – 1:00pm	Sat	45
1:00pm – 8:00am	Sat	35
12:00am – 12:00pm	Sun	35

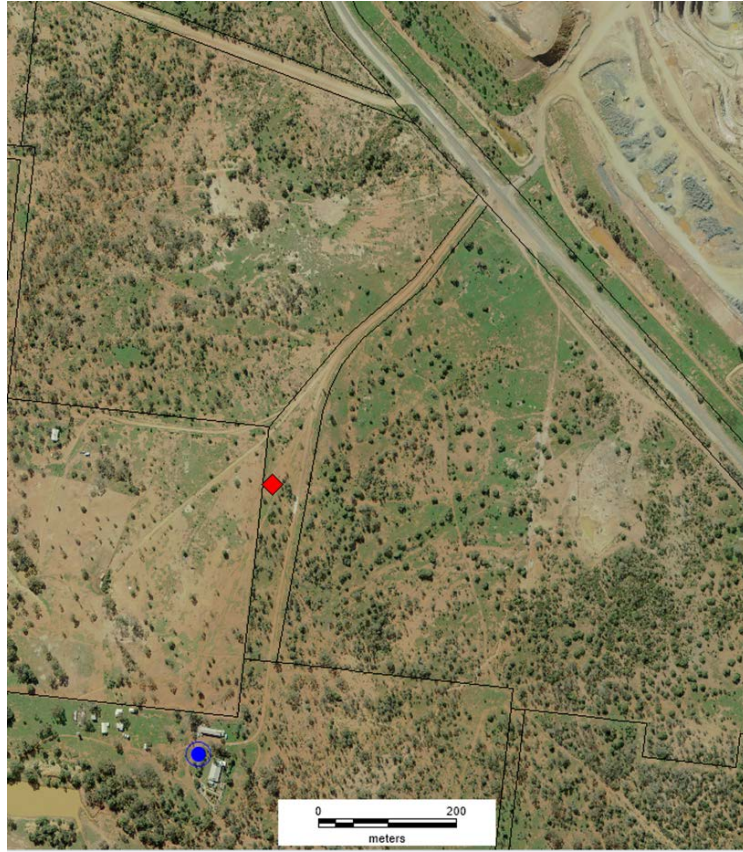


Figure 3: Location of the “Dellavale” properties house (blue circle) and noise monitoring location (red diamond).

4.4. WATER

Surface water monitoring involves collecting water samples from a number of locations around site and submitted to external laboratory for physical and chemical analysis, pH and electrical conductivity are obtained using a handheld monitor. Table 4.4 gives the results as per the PGM EPL requirements.

Table 4.4 Water Monitoring Data

Point	Sampled	Received	Published	Limit	WAD CN (mg/L)	CN Free (mg/L)	TSS (mg/L)	Oil & Grease	Complies
Recycled Water Dam End (Peak)	14/08/19	28/08/19	13/09/19	No Limit	<0.004	<0.004	37	*	Yes
Raw Water Tank (Peak)	14/08/19	28/08/19	13/09/19	No Limit	<0.004	<0.004	<5	*	Yes
Spain's Tank	14/08/19	28/08/19	13/09/19	No Limit	*	*	6	<5	Yes
Young Australia	14/08/19	28/08/19	13/09/19	No Limit	*	*	<5	<5	Yes

*No monitoring required.

4.5. HAULAGE MOVEMENTS

PGM is required to monitor the number of haulage movements undertaken from New Cobar to Peak site as per current consent conditions. A trucking movement includes the travel from New Cobar, to Peak site, return to New Cobar. In the month of August, 775 truck movements were permitted to be undertaken. In total, 462 truckloads were completed. Table 4.5 shows a summary of the trucking movements for the month.

Table 4.5 Haulage Summary

Date	Truck Movements
1/8/2019	16
2/8/2019	24
3/8/2019	23
4/8/2019	23
5/8/2019	27
6/8/2019	23
7/8/2019	12
8/8/2019	20
9/8/2019	6
10/8/2019	0
11/8/2019	0
12/8/2019	13
13/8/2019	24
14/8/2019	23
15/8/2019	25
16/8/2019	17
17/8/2019	0
18/8/2019	0
19/8/2019	0
20/8/2019	0
21/8/2019	0
22/8/2019	0
23/8/2019	0
24/8/2019	0
25/8/2019	25
26/8/2019	39
27/8/2019	25
28/8/2019	23
29/8/2019	26
30/8/2019	25
31/8/2019	23
Daily Average	14.9

4.6. WEATHER

The meteorology monitoring data has been acquired through PGM's weather station located 2km South of Cobar. Installed in May 2019, the weather station now has enough data for use in the monthly PGM reports.

The BOM website can be used as an alternate source for this monitoring data.

