Peak Gold Mines

MONTHLY ENVIRONMENTAL MONITORING SUMMARY

REPORT

EPL 3596

Hillston Road, Cobar

NSW 2835

March 2018

Contents

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 March 2018. 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 trigged 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	3/3/2018	45StpMainN645	0.521	1.702	1.503	Y
Peak	8/3/2018	8840StpMainN890	No Trigger	No Trigger	No Trigger	Y
New Cobar	12/3/2018	45StpMainN645	0.775	2.942	2.389	Y
Peak	16/3/2018	9400StpMainS560	No Trigger	No Trigger	No Trigger	Y
New Cobar	17/3/2018	45StpMainN645	0.398	1.058	1.366	Y
Peak	19/3/2018	9400StpMainS560	No Trigger	No Trigger	No Trigger	Y
New Cobar	23/3/2018	58StpMainN550	No Trigger	0.602	0.727	Y
New Cobar	24/3/2018	45StpMainN645	0.559	2.312	2.072	Y
Peak	31/3/2018	9400StpMainS560	0.419	0.145	0.288	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 EPAs best practice limit of 4g/m²/time (limit is applicable to 12 month averaging period). If a single monitoring result is over the EPAs best practice limit of 4g/m²/time, the cause is investigated and reported in the AEMR.

Dust monitoring results and licenced dust limits set by the EPL and Development Consent Conditions are given in Table 4.2a respectively.

Table 4.2a Dust Monitoring Results

Site	Location	Date Sampled	Date Obtained	Date Published	Australian Standard Limit (g/m2/month)	Insoluble Solids (g/m2/month)	Total Lead (g/m2/month)	Complies
DM1	NW corner of tailings dam	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	1.2	0.00004	Y
DM2	SW corner of tailings dam	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	0.8	0.00005	Y
DM3	Carpark	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	1.5	0.0002	Y
DM4	NE corner of PGM magazine	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	0.8	0.00004	Y
Dellavale	1.3km ESE of New Cobar	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	0.8	0.00002	Y
Bimbimbie	1.2km SW of New Cobar	1/3/2018 – 29/3/2018	19/4/2018	24/4/2018	4	1.7	0.00003	Y

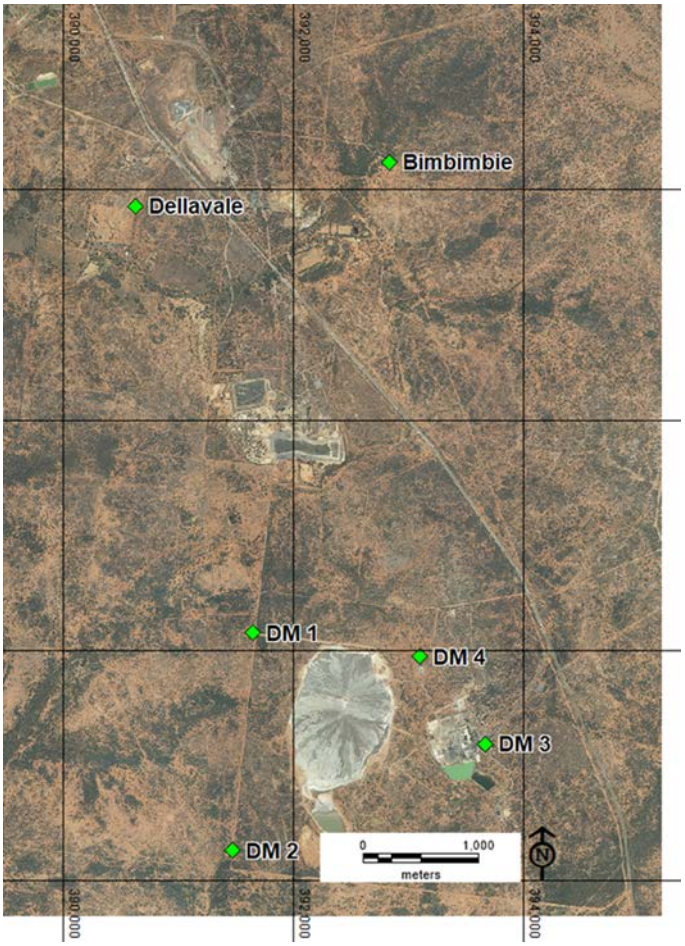

Figure 2: Location of dust gauges on PGM Mining Leases.

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.

Table 4.3a Attended Noise Monitoring Results

Location	Date		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
	Sampled & Obtained	Published						
Dellavale	19/3/2018	20/3/2018	2:00am	45	34.6	30.6	Birds, Wind	YES
Dellavale	29/3/2018	13/4/2018	2:40pm	45	35.9	31.9	Birds, Wind	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

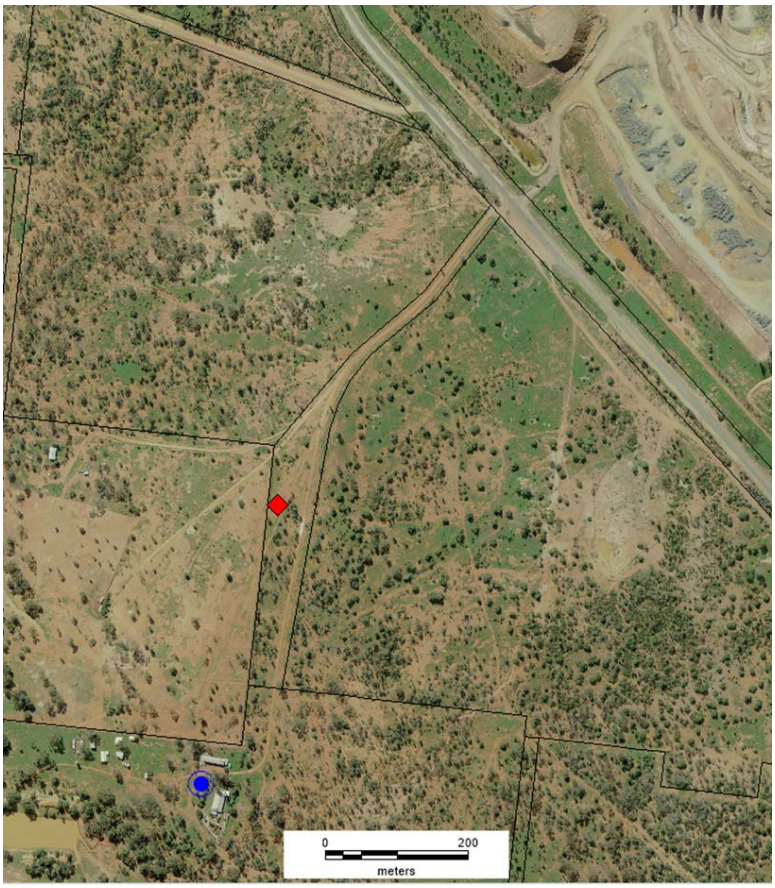

Figure 3: Location of the "Dellavale" properties house (blue circle) and noise monitoring location (red diamond).

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	Sample	Received	Published	Limit	WAD CN (mg/L)	CN Free (mg/L)	TSS (mg/L)	Oil & Grease	Complies
Recycled Water Dam End (Peak)	6/3/2018	16/3/2018	27/3/2018	No Limit	<0.004	<0.004	40	*	Yes
Raw Water Tank (Peak)	6/3/2018	16/3/2018	27/3/2018	No Limit	<0.004	<0.004	10	*	Yes
Spains Tank	6/3/2018	16/3/2018	27/3/2018	No Limit	*	*	<5	<5	Yes

*No monitoring required.

4.5. WEATHER

PGM meteorology monitoring data has been acquired through the Bureau of Meteorology (BOM) weather station located 2km North West of Cobar.

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