

PEAK GOLD MINES

MONTHLY ENVIRONMENTAL MONITORING SUMMARY

December 2016

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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 December 2016. 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 Monitoring Results

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. Full dataset for EPL licenced monitoring stations are located on [New Gold web page](#).

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	Blast ID	Development / Production	New Occidental (mm/s)	Fort Bourke (mm/s)	Dellavale (mm/s)	Complies (Y/N)
New Cobar	11/12/2016	9970StpEastS390	Production	No Trigger	Monitor Fail	3.85	Yes
New Cobar	13/12/2016	9970StpEastS390	Production	No Trigger	Monitor Fail	3.17	Yes
New Cobar	20/12/2016	9735StpMainS400	Production	No Trigger	Monitor Fail	1.38	Yes
New Cobar	21/12/2016	9735StpMainS400	Production	No Trigger	Monitor Fail	1.17	Yes

Table 4.1b PGMs EPL Limits for Vibration

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

4.2 Air Quality Monitoring Results

Fall out dust deposition bottles are currently used to monitor air quality. The bottles are positioned in the field 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 $4\text{g}/\text{m}^2/\text{time}$ (limit is applicable to 12 month averaging period). If a single monitoring result is over the EPAs best practice limit of $4\text{g}/\text{m}^2/\text{time}$, the cause is investigated and reported in the AEMR.

Air quality monitoring was undertaken from the 20th of December 2016 till the 19th of January 2017 and will be reported in Januarys Monthly Environmental Summary.

Full dataset for EPL licenced monitoring stations are located on [New Gold web page](#).

4.3 Attended Noise Monitoring Results

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 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.

Full dataset for EPL licenced monitoring stations are located on [New Gold web page](#).

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	1/12/16	1/12/16	7.15am	45	42.9	38.62	None mine cars, birds, mine work.	Yes
Dellavale	2/12/16	2/12/16	7.37am	45	42.8	38.52	Non-mine trucks on HWY, mine Haul Trucks.	Yes

Table 4.3a Attended Noise Monitoring Limits

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

4.4 Water Monitoring Results

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.

Full dataset for EPL licenced monitoring stations are located on [New Gold web page](#).

Table 4.4 Surface Water Monitoring Results

Monitoring Point	Date			Limit	CN WAD	CN Free	Oil & Grease	TSS	Complies
	Sampled	Received	Published		mg/L	mg/L	mg/L	mg/L	
Spains Tank	6/12/2016	22/12/2016	22/12/2016	No Limit			9	15	Yes
TSF Decant Dam	6/12/2016	22/12/2016	22/12/2016	No Limit	<0.004	<0.004			Yes

4.5 Weather Data Results

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.



