

TOMINGLEY GOLD PROJECT

**Monthly Environmental
Monitoring Report
November 2018**

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November 2018

Document History

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1. Introduction and Scope

This Monthly Environmental Monitoring Report has been prepared to collate environmental monitoring data undertaken for the Tomingley Gold Project during the month of November 2018.

This report also compares data collected to targets and provides commentary on environmental issues during the month.

2. Weather for November 2018

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. November 2018 wind rose

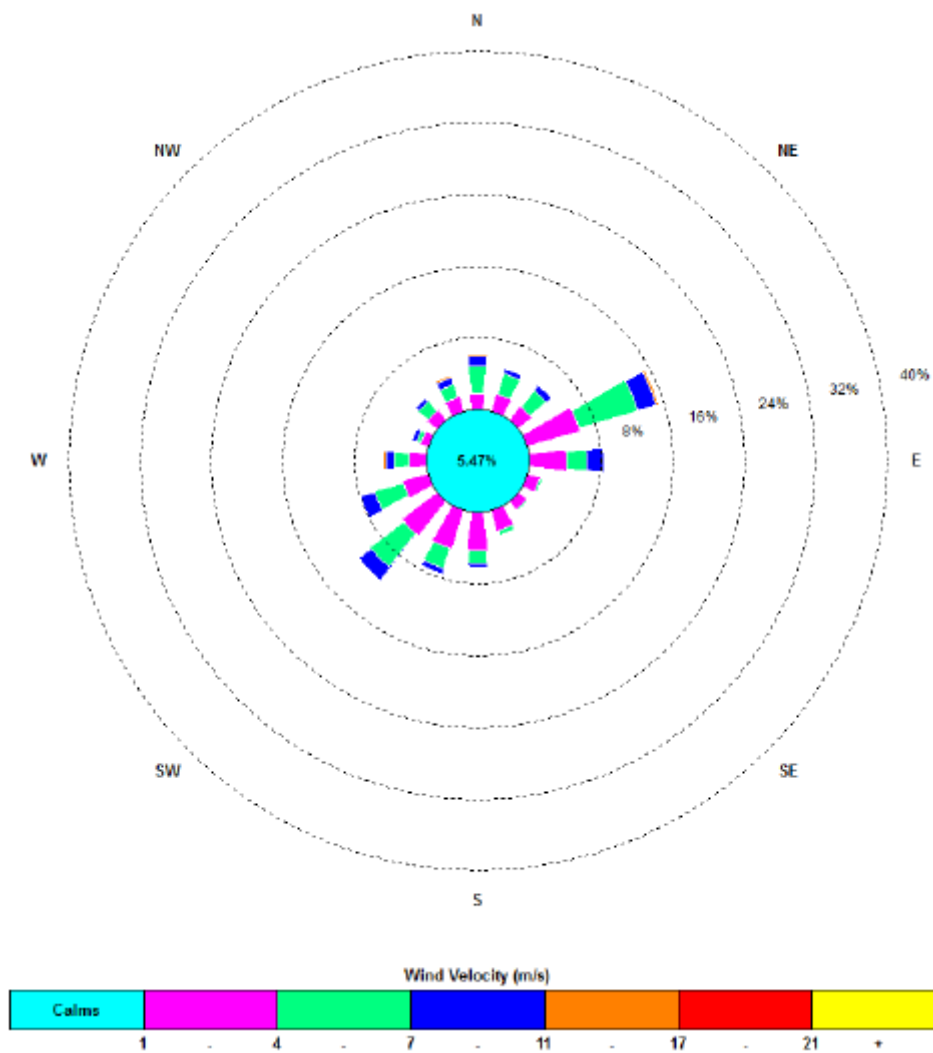


Figure 2. Rainfall November 2018

November 2018	Rainfall (mm)
November 2	5.6
November 7	16.6
November 8	0.4
November 14	0.6
November 20	3.4
November 21	20.2
November 28	44.0
Total Rainfall	90.8

3. Monitoring Locations

FIGURE 3 indicates the location of where monitoring is undertaken for the project. Any additional monitoring undertaken will be discussed within the body of this report.

Figure 3. TGO water and vegetation monitoring points

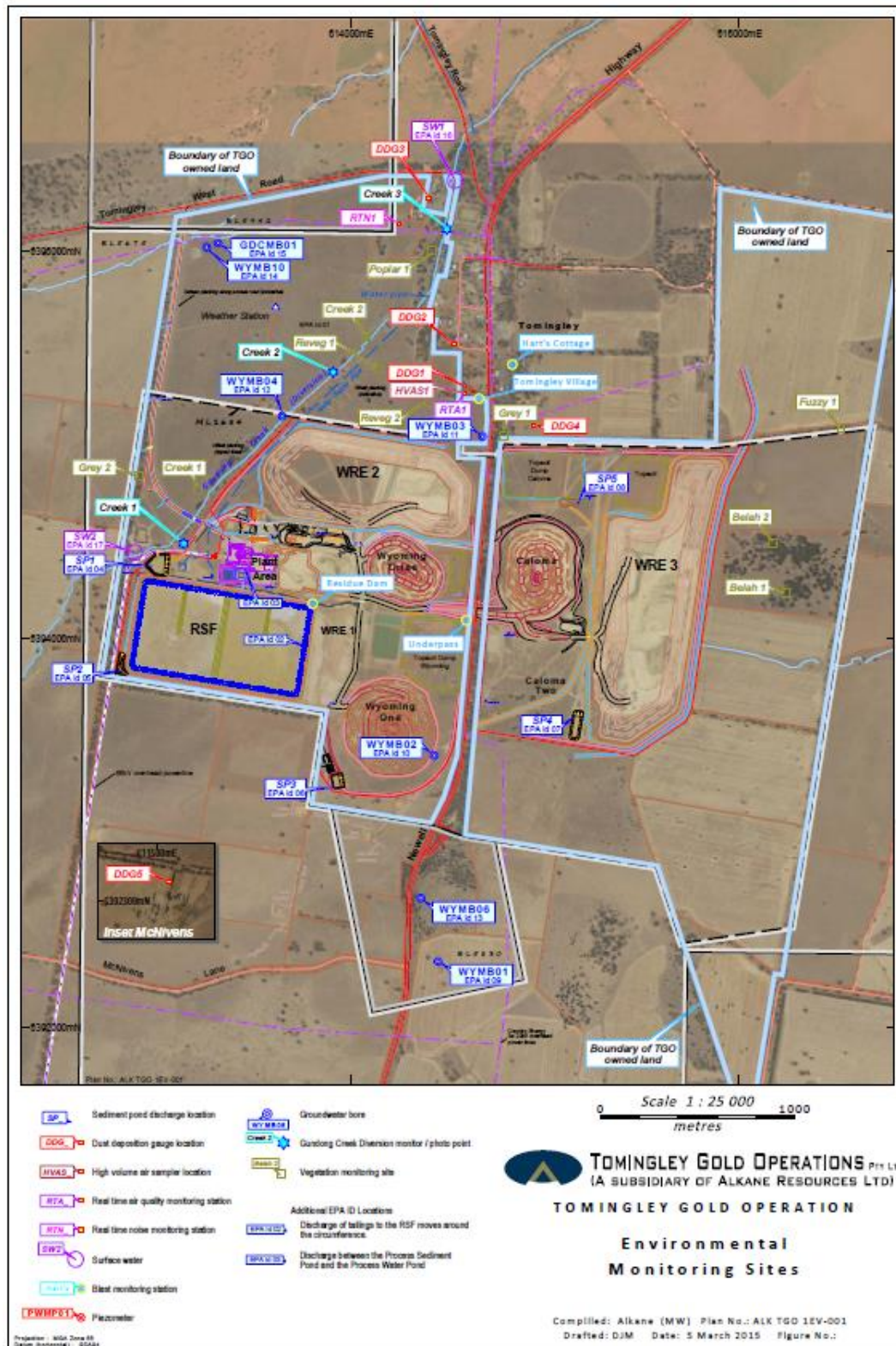
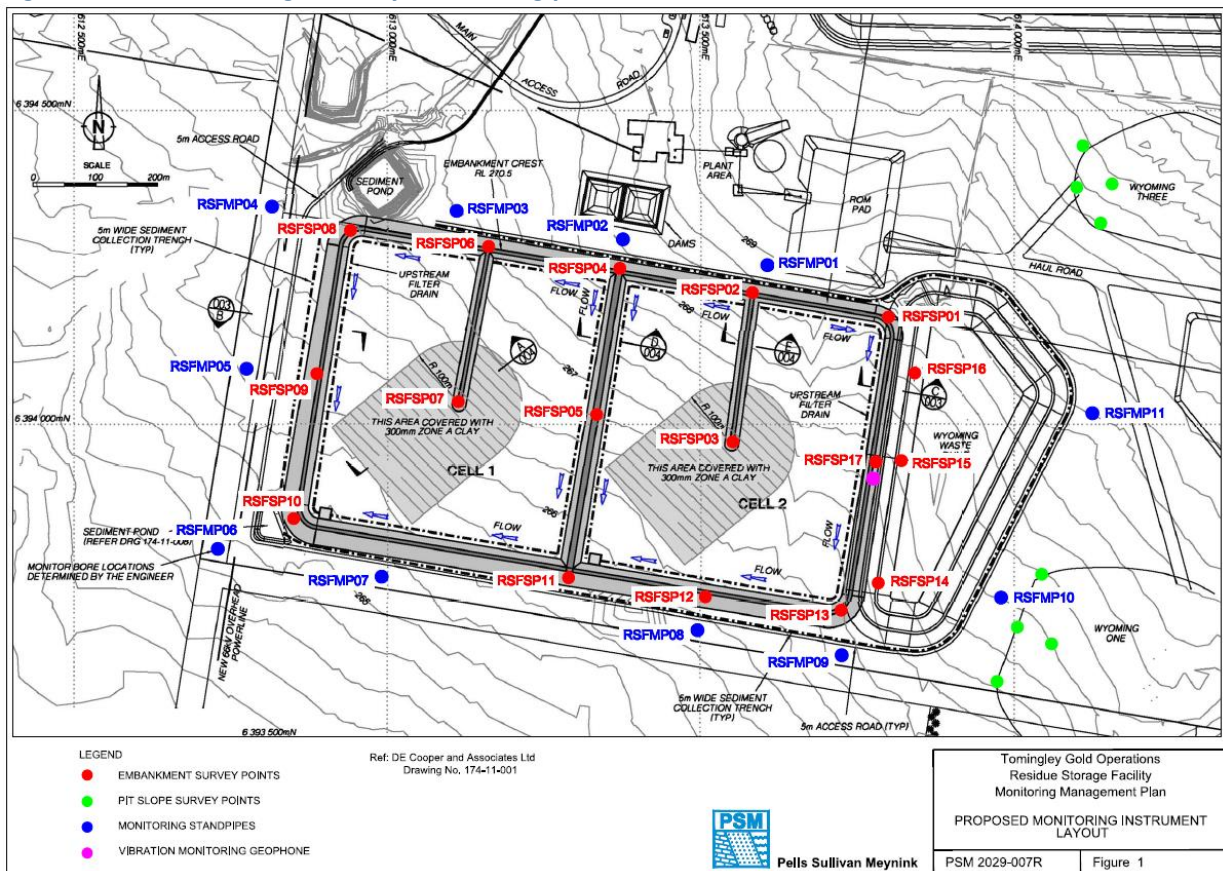


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

Figure 4. Residue Storage Facility monitoring points



4. Air Quality Monitoring

A. PM10 Monitoring

PM10 is measured via a Tapered Element Oscillating Microbalance (TEOM) located at the southern edge of the Tomingley Village. This machine transmits real-time data via the internet to a computer located on site.

The Performance Criteria for PM10 has been set at an Annual Average of 30ug/m³ and a 24-Hour Average of 50ug/m³.

The annual average at the end of November was 24.0ug/m³, well below the license limit.

A number of high levels recorded throughout the month were as a result of regional dust and dust storms due to ongoing drought conditions and not as a result of mine related activities.

Figure 5. TEOM Data November 2018

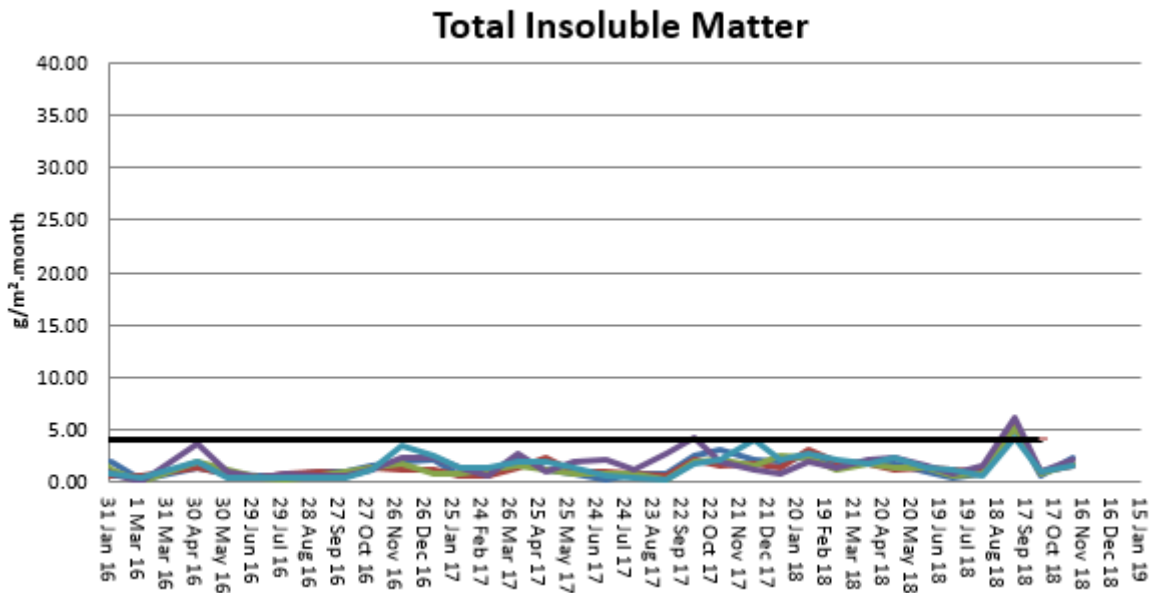
Date	24 Hr Averages	Running Average	Comment
	<i>(µg/m³)</i>		
1/11/2018	35.7	22.9	
2/11/2018	113.6	23.1	1 hour average data used
3/11/2018	19.2	23.1	1 hour average data used
4/11/2018	21.7	23.1	
5/11/2018	25.7	23.1	
6/11/2018	21.7	23.1	
7/11/2018	7.8	23.1	
8/11/2018	7.7	23.0	
9/11/2018	11.8	23.0	
10/11/2018	13.5	23.0	
11/11/2018	19.1	23.1	
12/11/2018	21.1	23.1	
13/11/2018	29.9	23.1	
14/11/2018	20.8	23.1	
15/11/2018	13.9	23.1	
16/11/2018	11.5	23.1	Recalc using 1hr average data. 2hrs high negatives excluded
17/11/2018	23.9	23.1	Recalc using 1hr average data. 2hrs high negatives excluded
18/11/2018	No data	23.2	Insufficient data for 24 hour averaging purposes
19/11/2018	21.0	23.2	
20/11/2018	46.6	23.3	
21/11/2018	23.1	23.3	
22/11/2018	174.9	23.7	
23/11/2018	71.6	23.9	
24/11/2018	24.6	23.9	
25/11/2018	28.4	24.0	
26/11/2018	24.9	24.0	
27/11/2018	23.8	24.0	
28/11/2018	10.0	24.0	
29/11/2018	8.7	24.0	
30/11/2018	10.3	24.0	
Average	30.6		
	24 Hour Criteria Exceedance		

Note: For comparison purposes, highlighted results indicate levels above the EPA and NEPM 24-hour maximum criteria for PM₁₀.

B. Depositional Dust

Depositional Dust monitoring undertaken during this month returned the results indicated in the table below. The performance criteria for deposited dust is averaged over 12 months with a maximum total average of 4g/m²/month.

Figure 6. Dust Deposition Results 2016 - 2018

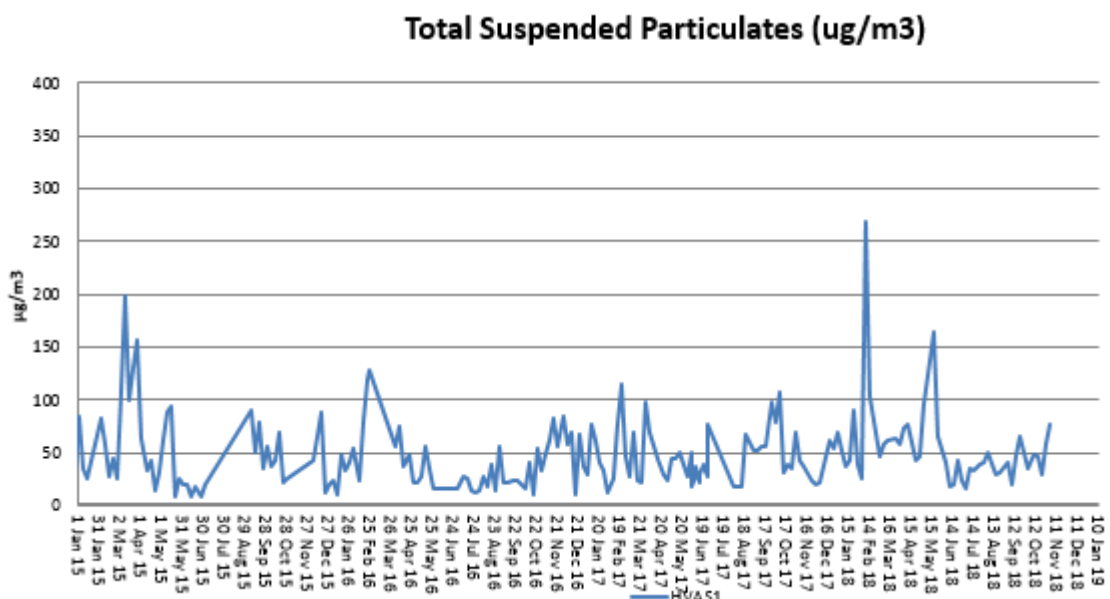


C. High Volume Air Sampler - Total Suspended Particulates

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Figure 7 below provides the results.

The performance criteria for TSP is averaged over 12 months

Figure 7. Hi-Volume Air Sampler Data 2015 - 2018



5. Noise Monitoring

A. Real-Time Noise Monitoring

Real-time noise monitoring data showed no exceedances during the month of November. Full report provided separately on webpage.

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during November and as such no samples were taken.

B. Sedimentation Ponds

No discharge was experienced from any of the sediment ponds during the month.

7. Groundwater Monitoring

Groundwater was undertaken during September in line with license requirements.

Results from this round of monitoring fell within expected limits.

A further round of monitoring will be undertaken in December.

8. Blast Monitoring

Blasts are carried out in all open cut pits and vibration and decibels are monitored from several locations. Below are the vibration results recorded from the monitors at Hart's Cottage and Tomingley Village.

Figure 8. Blast Monitoring

EventKey	Date/Time	Max R (mm/s)	Location
91622	3/11/2018 12:57	0.09	Harts Cottage
91622	3/11/2018 12:57	0.1	Tomingley Village
91908	15/11/2018 13:55	0.09	Harts Cottage
91908	15/11/2018 13:55	0.1	Tomingley Village

9. Residue Storage Facility

Residue from the processing plant is discharged into the Residue Storage Facility or RSF. The Environmental Protection Licences dictates that the Weak Acid Dissociable (WAD) Cyanide found in this residue must be less than 20 milligrams per litre for 90% of the time and less than 30 milligrams per litre for 100% of the time.

WAD cyanide discharge levels are shown below with the maximum reading well below the 100th percentile limit of 30ppm.

- Monthly average: 2.67 ppm
- Daily maximum: 7.12 ppm on 10th November
- Daily minimum: 0.53 ppm on 27th November
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during November.