TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)
ABN 53 149 040 371

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

December 2018

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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 December 2018.

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

2. Weather for December 2018

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. December 2018 wind rose

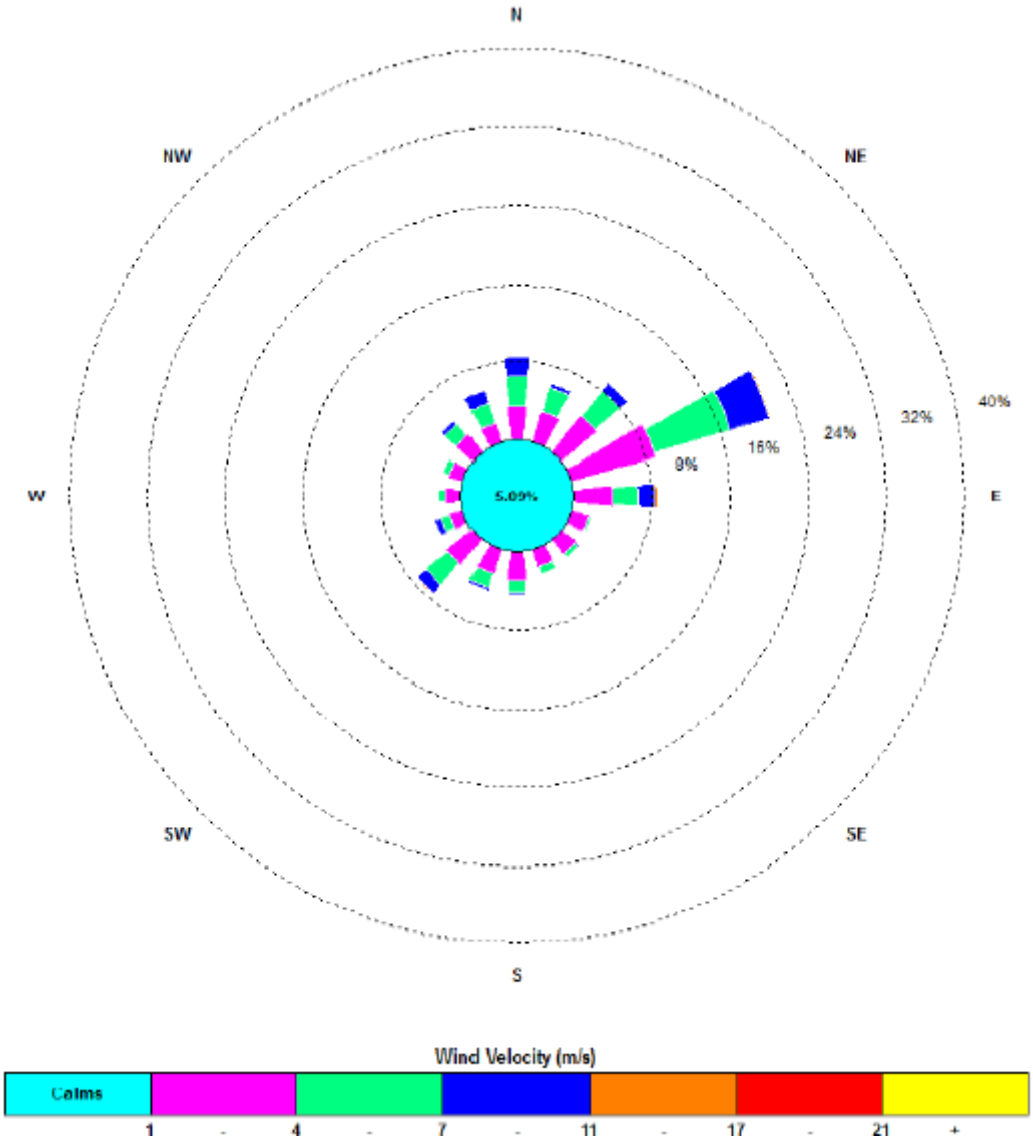


Figure 2. Rainfall December 2018

December 2018	Rainfall (mm)
December 11	4.8
December 12	5.8
December 13	13.8
December 14	2.4
December 19	18
December 20	0.2
December 31	0.2
Total Rainfall	45.2

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

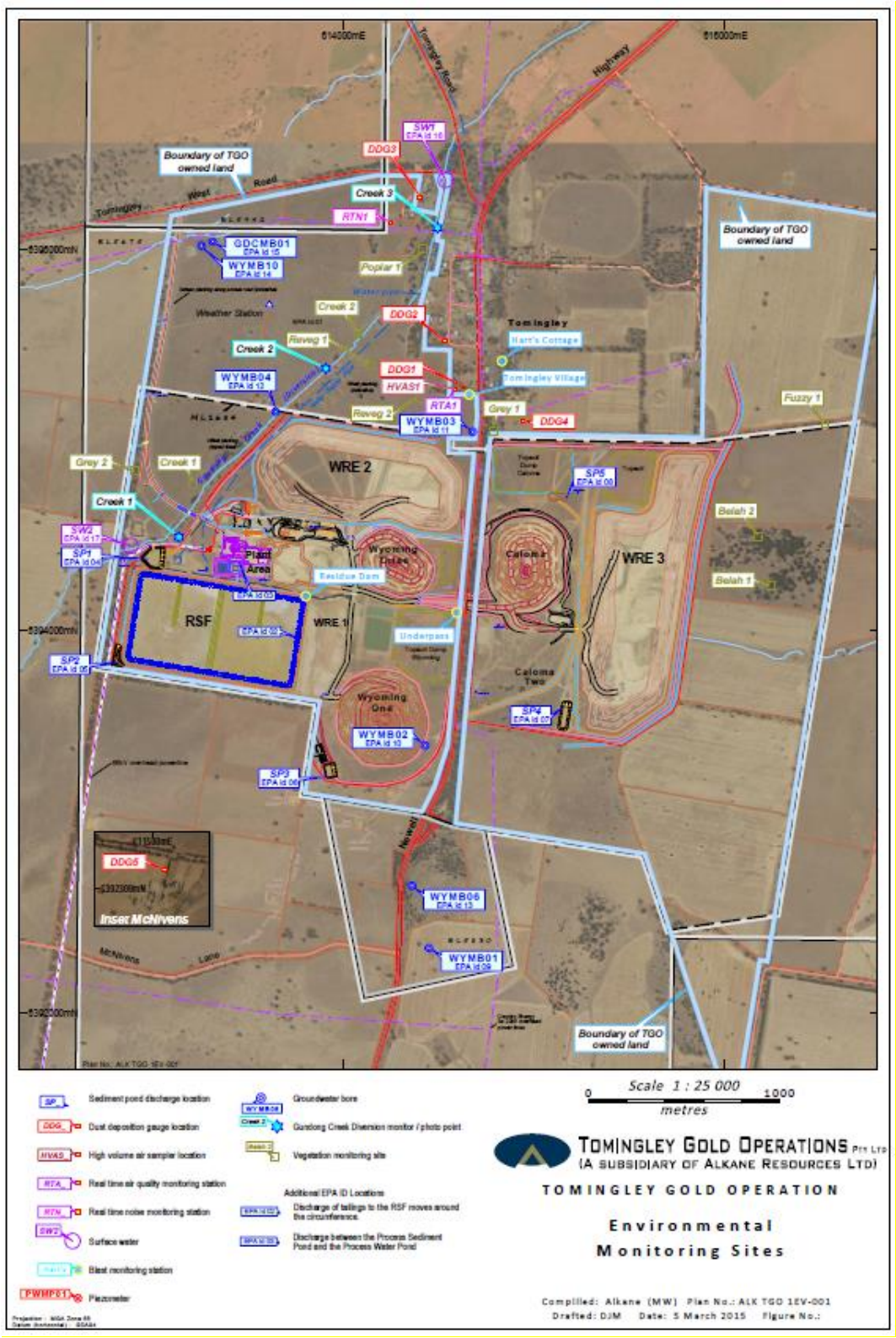
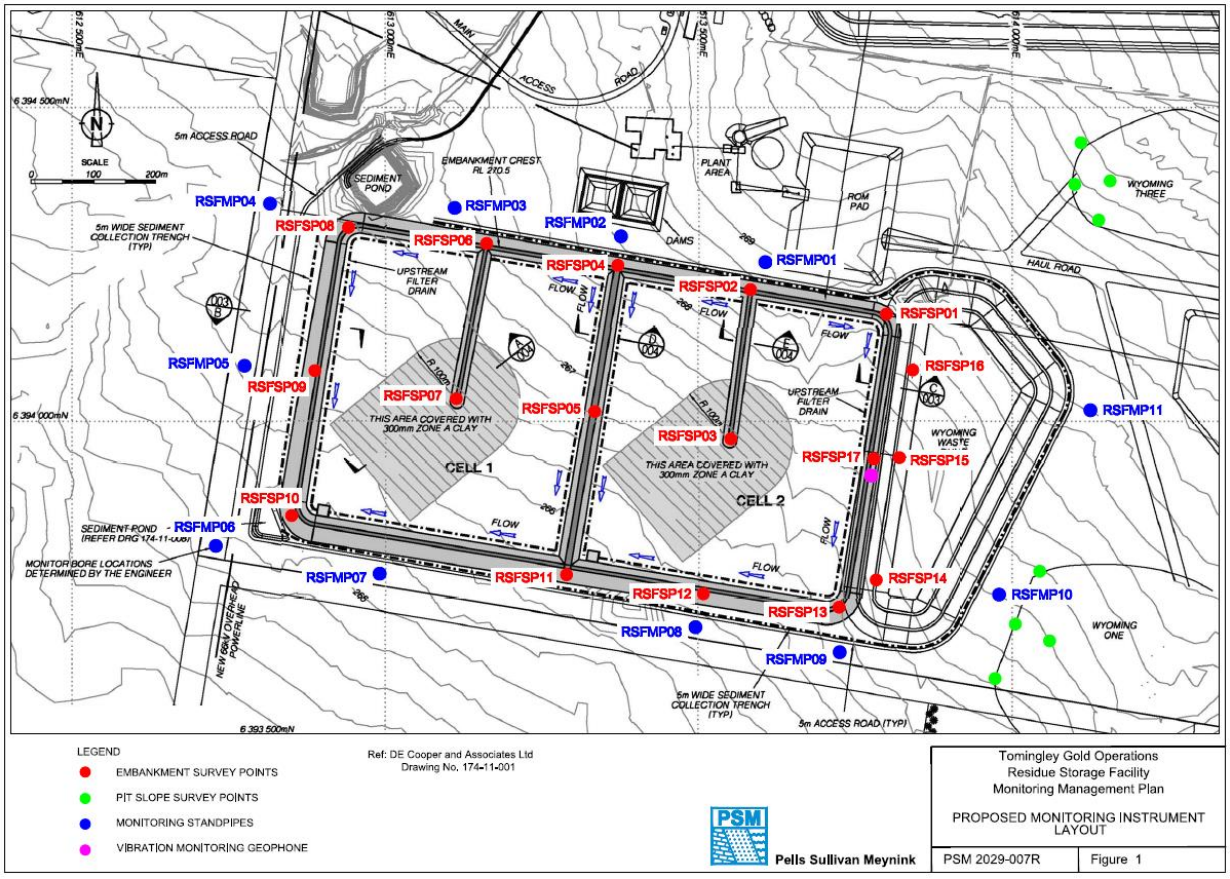


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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/m^3 and a 24-Hour Average of 50ug/m^3.

The annual average at the end of December was 26.1ug/m^3, 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 December 2018

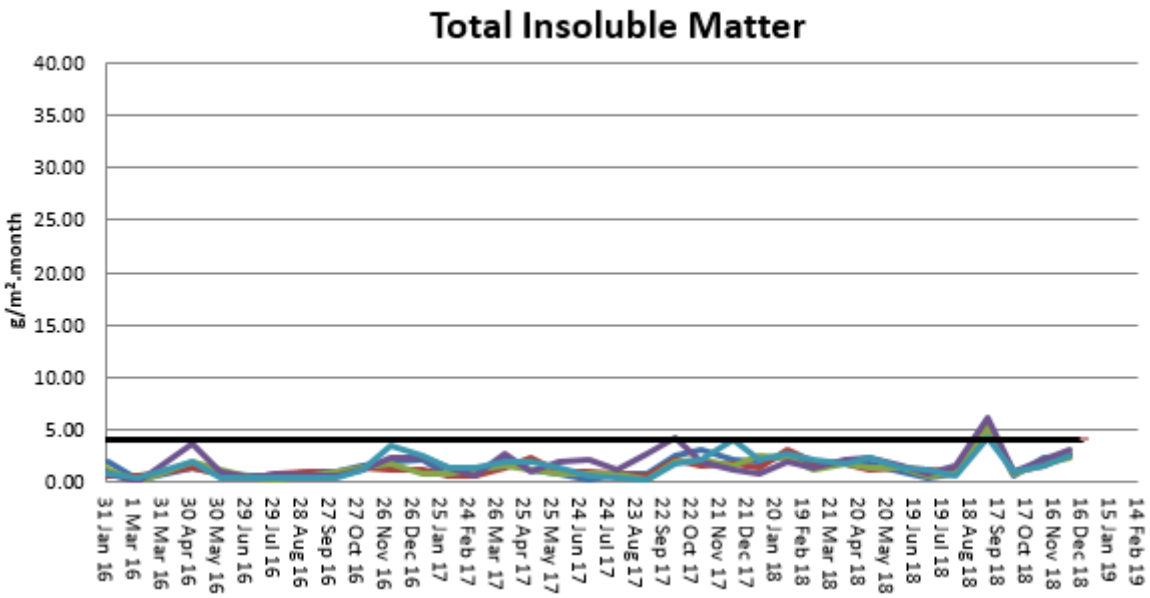
Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/12/2018	13.2	24.0	Recalc using 1hr average data. 1hr high negatives excluded
2/12/2018	71.1	24.2	
3/12/2018	50.5	24.3	
4/12/2018	24.9	24.3	
5/12/2018	36.9	24.4	
6/12/2018	22.2	24.4	
7/12/2018	19.4	24.4	
8/12/2018	28.6	24.4	
9/12/2018	25.3	24.4	
10/12/2018	39.7	24.5	
11/12/2018	11.9	24.5	
12/12/2018	18.0	24.5	Recalc using 1hr average data. 1hr high negatives excluded
13/12/2018	16.8	24.5	
14/12/2018	91.2	24.6	Recalc using 1hr average data. 1hr high negatives excluded
15/12/2018	116.0	24.9	
16/12/2018	65.3	25.0	
17/12/2018	23.0	25.0	
18/12/2018	27.3	25.0	
19/12/2018	38.9	25.0	Recalc using 1hr average data. 1hr high negatives excluded
20/12/2018	78.2	25.1	
21/12/2018	51.0	25.2	Recalc using 1hr average data. 2hrs high negatives excluded
22/12/2018	34.6	25.2	
23/12/2018	11.7	25.2	
24/12/2018	17.0	25.2	
25/12/2018	22.8	25.1	
26/12/2018	26.1	25.1	
27/12/2018	28.2	25.2	
28/12/2018	44.9	25.3	
29/12/2018	62.0	25.4	
30/12/2018	76.6	25.5	Recalc using 1hr average data. 1hr high negatives excluded
31/12/2018	211.4	26.1	
Average	**45.3**		
	24 Hour Criteria Exceedance		

Note: For comparison purposes, highlighted results indicate levels above the EPA and NEPM 24-hour maximum criteria for PM_{10}.

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

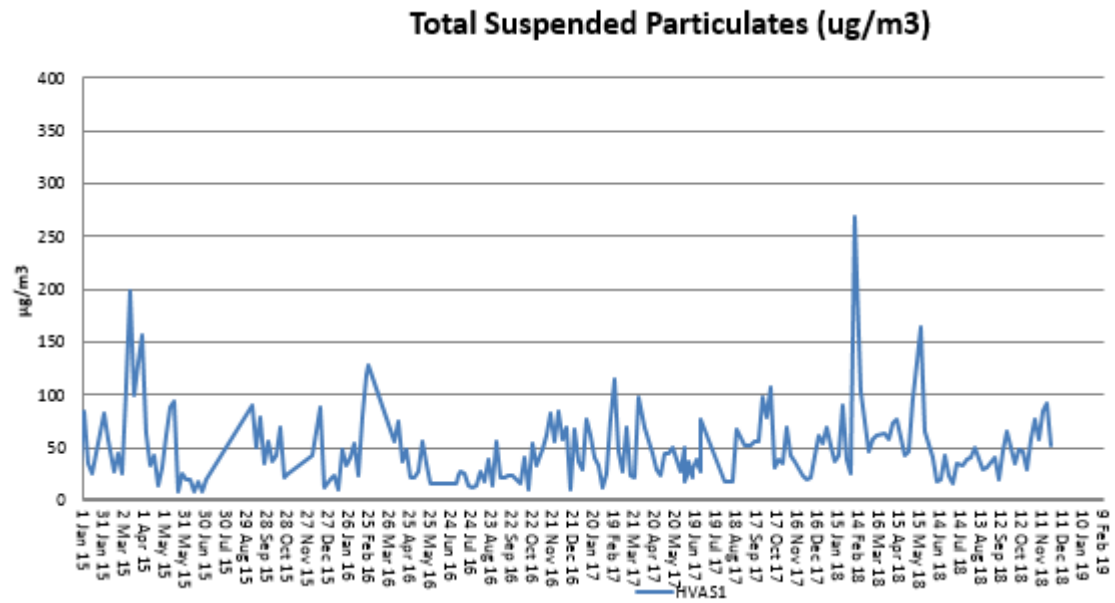


C. High Volume Air Sampler - Total Suspended Particulates

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 December. Full report provided separately on webpage.

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during December 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 December in line with license requirements.

Results from this round of monitoring fell within expected limits.

A further round of monitoring will be undertaken in March.

8. Blast Monitoring

Blasts are carried out in all open cut pits and vibration and decibels are monitored from several locations. There were no blasts during December.

Figure 8. Blast Monitoring

Nill.

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: 3.59 ppm
- Daily maximum: 6.95 ppm on 14th December
- Daily minimum: 2.54 ppm on 16th December
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during December.