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

January 2019

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Document History

DATE	VERSION	REASON FOR CHANGE	AUTHOR
	Rev 1	Submitted for Information	CH

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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 January 2019.

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

2. Weather for January 2019

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. January 2019 wind rose

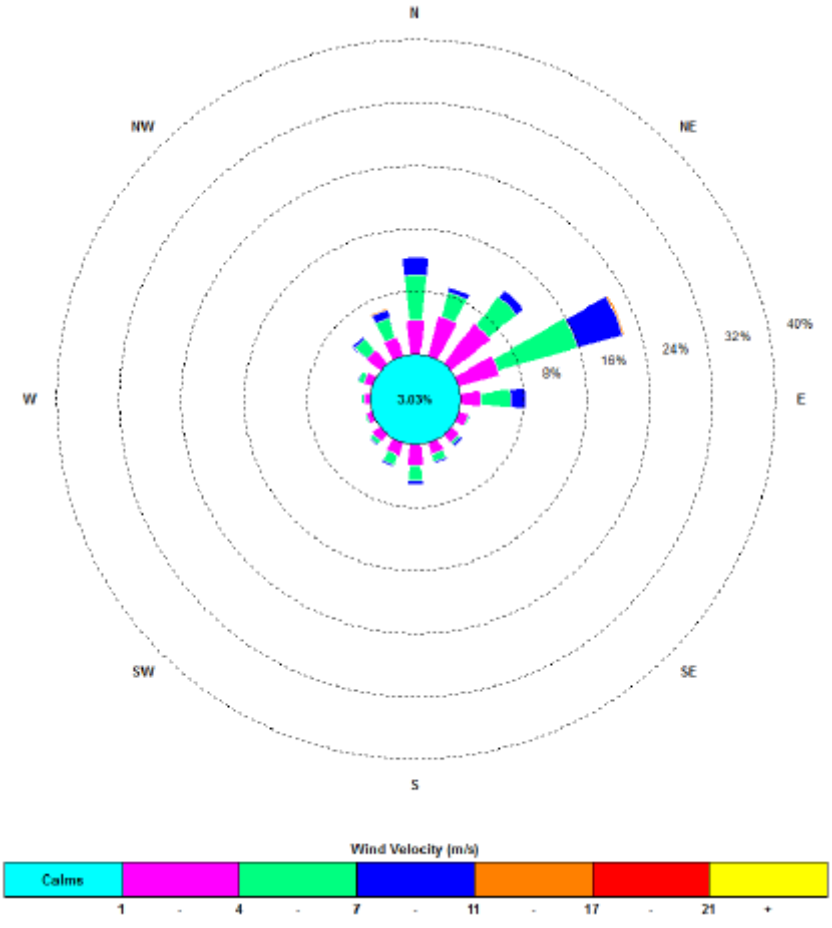


Figure 2. Rainfall January 2019

January 2019	Rainfall (mm)
January 1	0.2
January 3	4.6
January 5	5.8
January 7	1.6
January 8	43.4
January 9	0.2
January 10	3.0
January 20	15.2
January 21	1.6
January 23	29.6
Total Rainfall	105.2

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

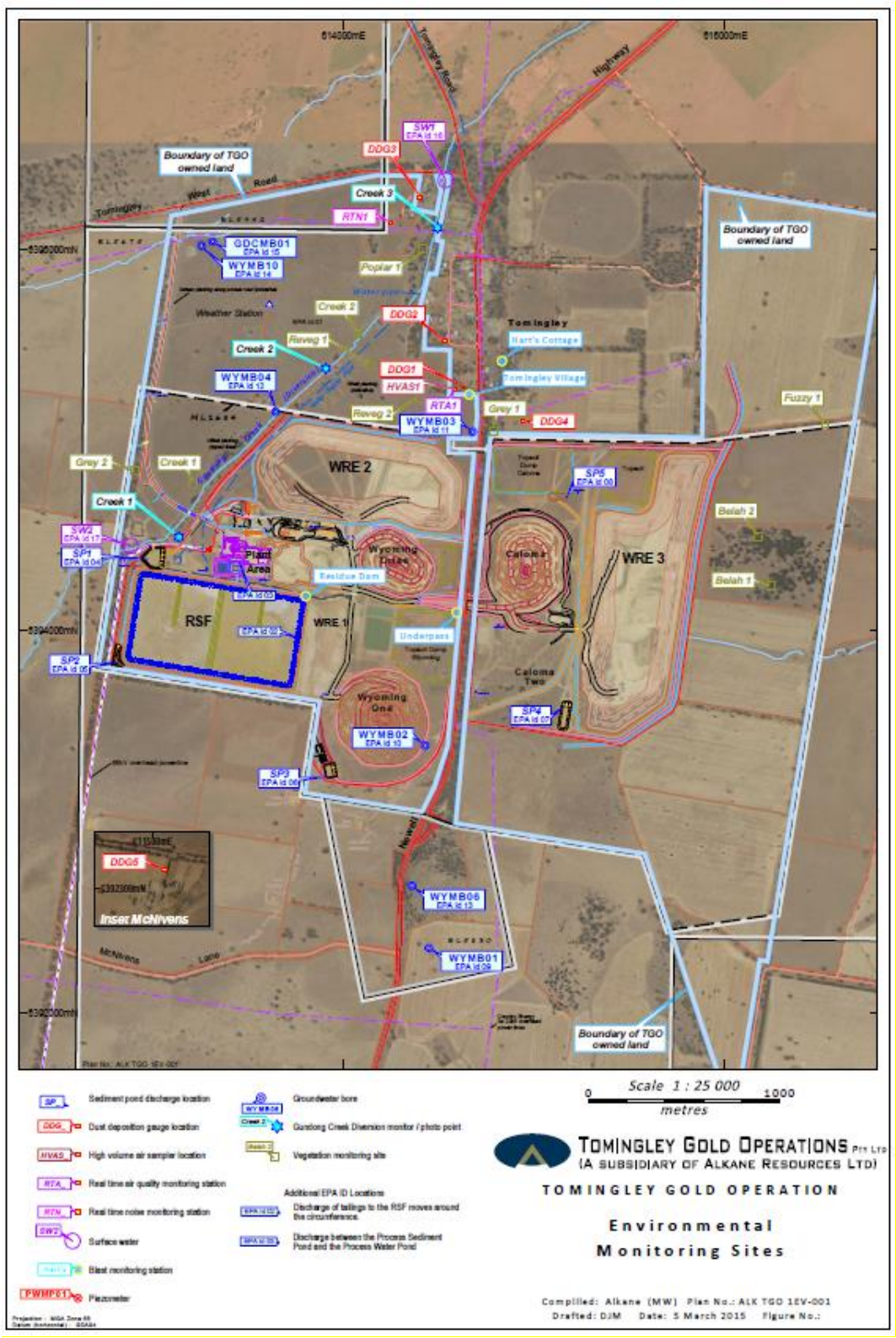
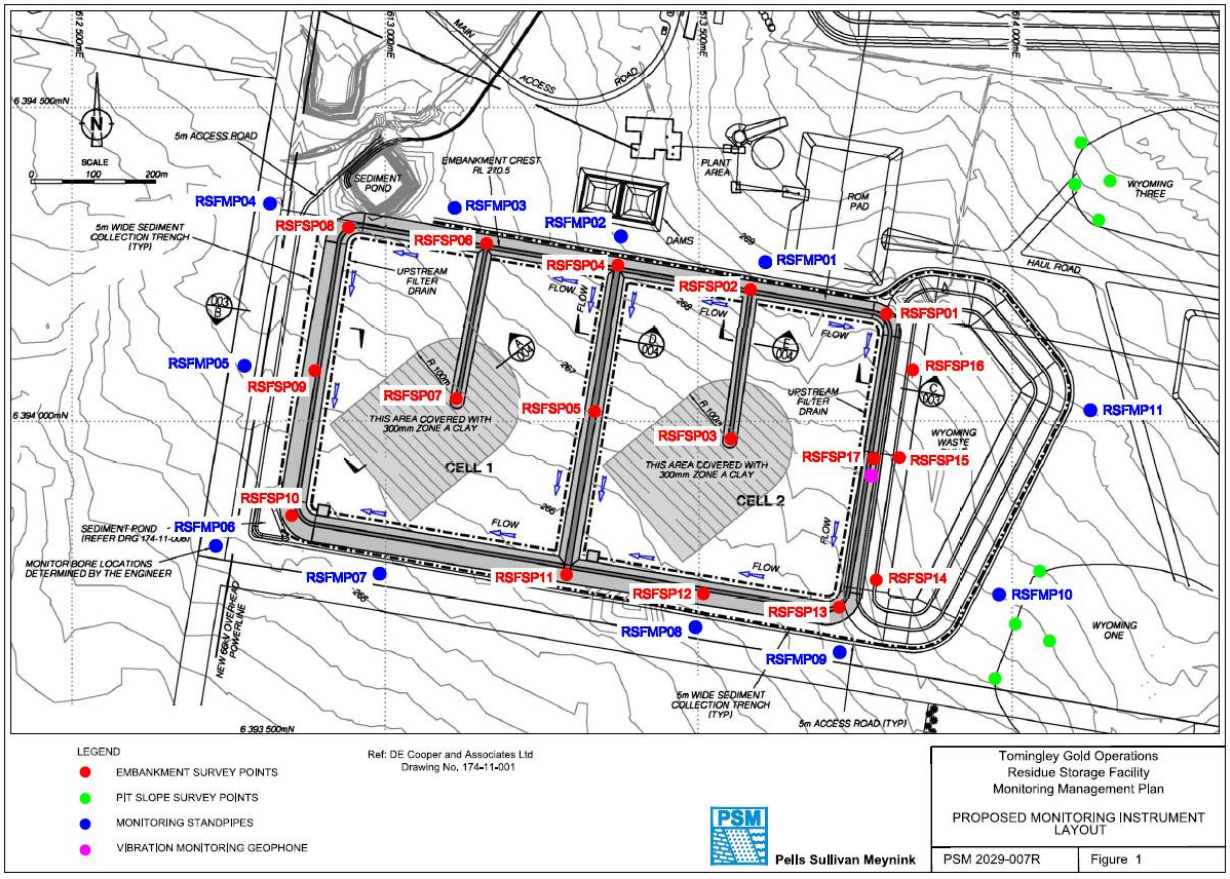


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 27.6ug/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. The image below shows an example of the severity of these storms. Photo taken from TGO processing plant on 31 December 2018.

Figure 5. TEOM Data January 2019

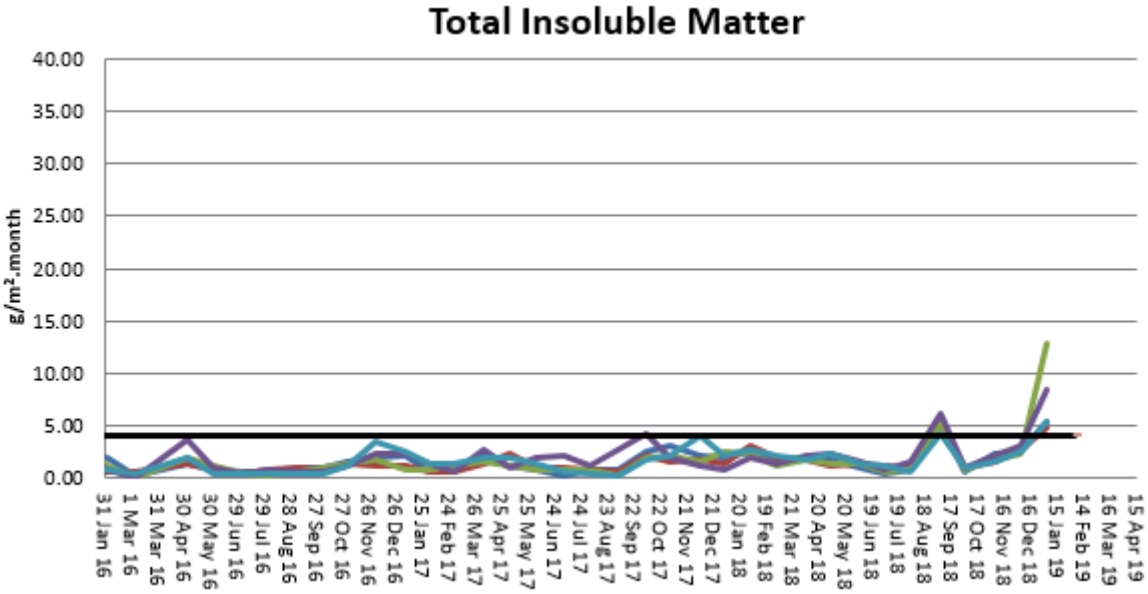
Date	24 Hr Averages (µg/m3)	Running Average (µg/m3)	Comment
1/01/2019	66.1	26.2	
2/01/2019	48.6	26.2	
3/01/2019	33.0	26.2	Recalc using 1hr average data. 1hr of high negatives excluded
4/01/2019	26.0	26.2	
5/01/2019	102.9	26.5	
6/01/2019	32.7	26.5	Recalc using 1hr average data. 1hr of high negatives excluded
7/01/2019	19.5	26.4	
8/01/2019	24.5	26.5	Recalc using 1hr average data. 7hrs high negatives and machine outage excluded
9/01/2019	22.3	26.5	Recalc using 1hr average data. 1hr of high negatives excluded
10/01/2019	26.7	26.5	
11/01/2019	58.0	26.6	Recalc using 1hr average data. 3.9hrs high negatives and machine outage excluded
12/01/2019	31.4	26.7	Recalc using 1hr average data. 1hr of high negatives excluded
13/01/2019	33.4	26.7	Recalc using 1hr average data. 1hr of high negatives excluded
14/01/2019	30.4	26.7	Recalc using 1hr average data. 1hr of high negatives excluded
15/01/2019	46.1	26.8	Recalc using 1hr average data. 1hr of high negatives excluded
16/01/2019	114.7	27.1	
17/01/2019	60.5	27.2	
18/01/2019	72.5	27.3	Recalc using 1hr average data. 1hr machine outage excluded
19/01/2019	70.1	27.4	Recalc using 1hr average data. 4hrs machine outage excluded
20/01/2019	35.2	27.5	Recalc using 1hr average data. 4.3hrs high negatives and machine outage excluded
21/01/2019	No Data	27.5	Insufficient data for 24 hour averaging purposes
22/01/2019	27.0	27.5	
23/01/2019	No Data	27.4	Insufficient data for 24 hour averaging purposes
24/01/2019	18.6	27.4	
25/01/2019	35.2	27.4	
26/01/2019	32.4	27.5	
27/01/2019	36.8	27.5	
28/01/2019	40.2	27.5	
29/01/2019	47.5	27.6	
30/01/2019	40.2	27.6	
31/01/2019	39.9	27.6	
Average	**43.9**		
	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

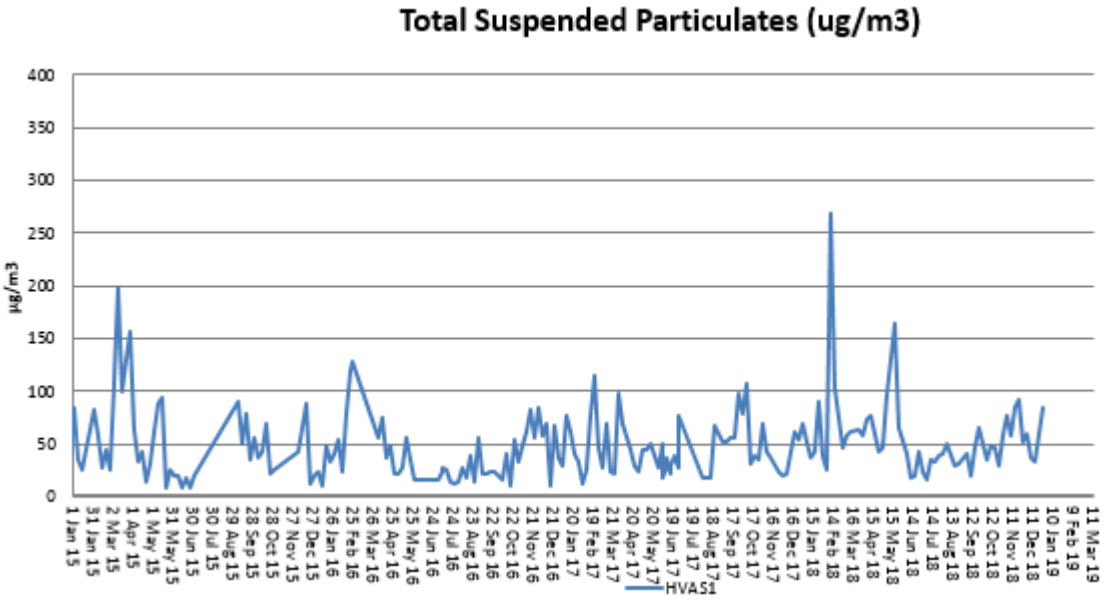


C. High Volume Air Sampler - Total Suspended Particulates

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 January. Full report provided separately on webpage.

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during January 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

Quarterly groundwater monitoring 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

Blasting is no longer carried out in the TGO open cut pits and vibration and decibels are monitored from several locations. Underground blasting commenced during January however the blasts recorded vibrations below the trigger for the site monitoring equipment.

In future blasts that trigger the monitoring equipment will be recorded.

Figure 8. Blast Monitoring

Nil.

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 below the 100th percentile limit of 30ppm.

- Monthly average: 4.21ppm
- Daily maximum: 29.69 ppm on 19th January
- Daily minimum: 0.80 ppm on 24th January
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during January.