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

March 2019

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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 March 2019.

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

2. Weather for March 2019

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. March 2019 wind rose

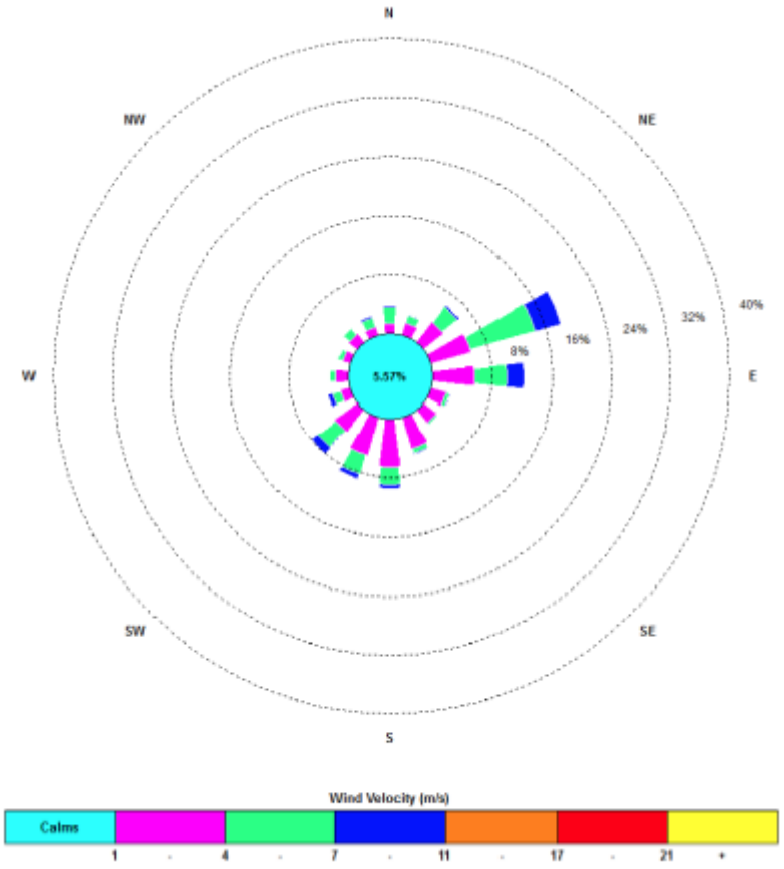


Figure 2. Rainfall March 2019

March 2019	Rainfall (mm)
March 6	0.2
March 16	0.2
March 17	0.2

March 22	4.8
March 23	0.2
March 25	16
March 26	0.4
March 29	13.6
March 30	3.8
Total Rainfall	39.4

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

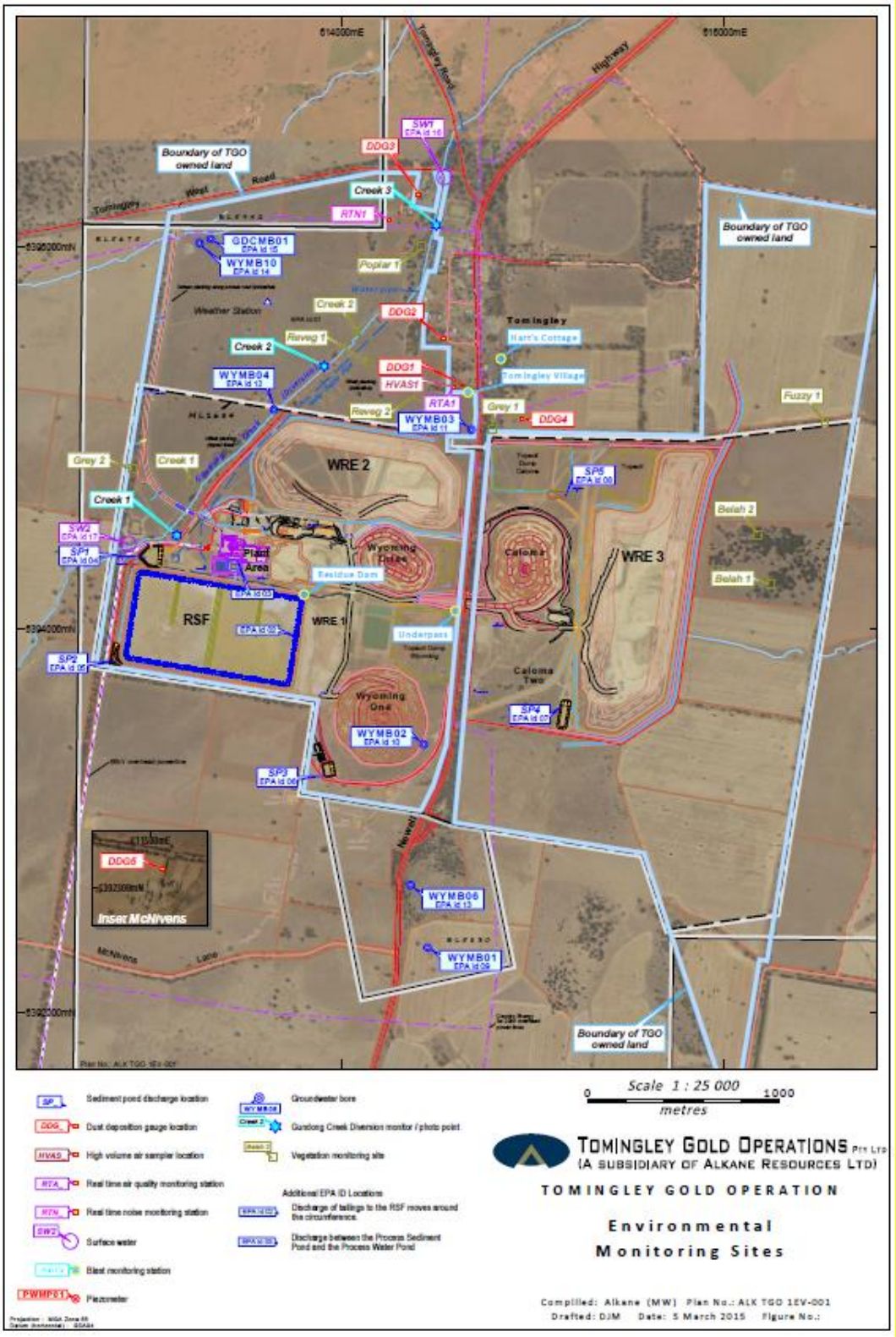
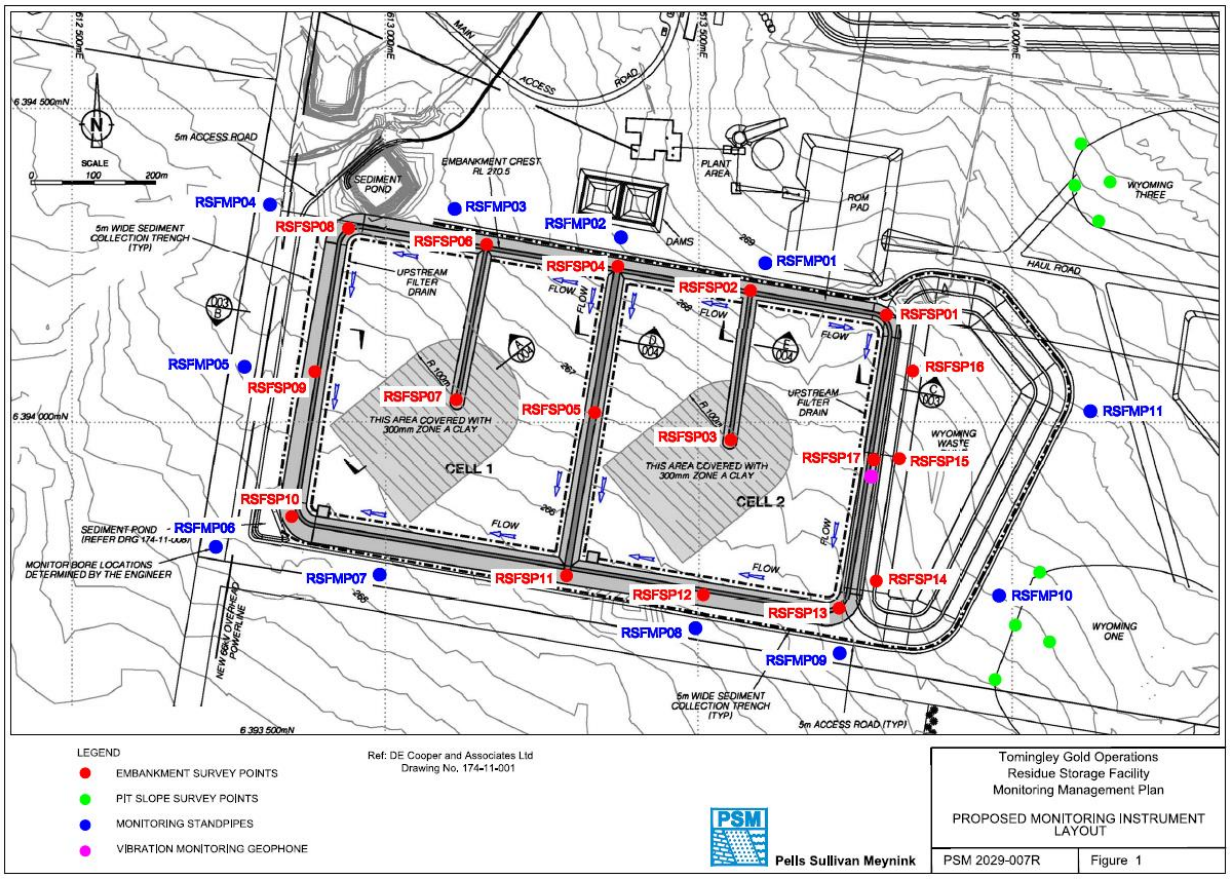


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 current annual average of all PM10 data at the end of March was 30.1ug/m^3, slightly above the Approval limit.

A number of high levels recorded throughout the month were as a result of localised agricultural activity or regional dust and dust storms due to ongoing drought conditions and were not generated by the project.

Figure 5. TEOM Data March 2019

Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/03/2019	19.1	29.0	
2/03/2019	17.2	28.9	
3/03/2019	20.5	28.9	
4/03/2019	30.1	28.9	
5/03/2019	64.7	29.0	
6/03/2019	56.0	29.2	
7/03/2019	44.0	29.2	
8/03/2019	46.8	29.3	
9/03/2019	50.0	29.2	
10/03/2019	61.8	29.4	
11/03/2019	65.2	29.5	
12/03/2019	63.2	29.6	
13/03/2019	50.8	29.7	
14/03/2019	55.3	29.8	
15/03/2019	51.5	29.9	
16/03/2019	45.1	30.0	
17/03/2019	11.9	30.0	
18/03/2019	31.8	30.0	
19/03/2019	17.4	30.0	
20/03/2019	20.6	30.0	Recalc using 1hr average data. 2hrs machine outage excluded
21/03/2019	20.6	29.9	
22/03/2019	14.3	29.9	Recalc using 1hr average data. 5hrs machine outage excluded
23/03/2019	23.5	29.9	
24/03/2019	45.1	30.0	
25/03/2019	11.2	29.9	
26/03/2019	24.4	29.9	
27/03/2019	20.4	29.9	
28/03/2019	18.8	29.9	
29/03/2019	20.6	29.8	
30/03/2019	77.9	30.0	
31/03/2019	43.4	30.1	
Average	**36.9**		
	24 Hour Criteria Exceedance		

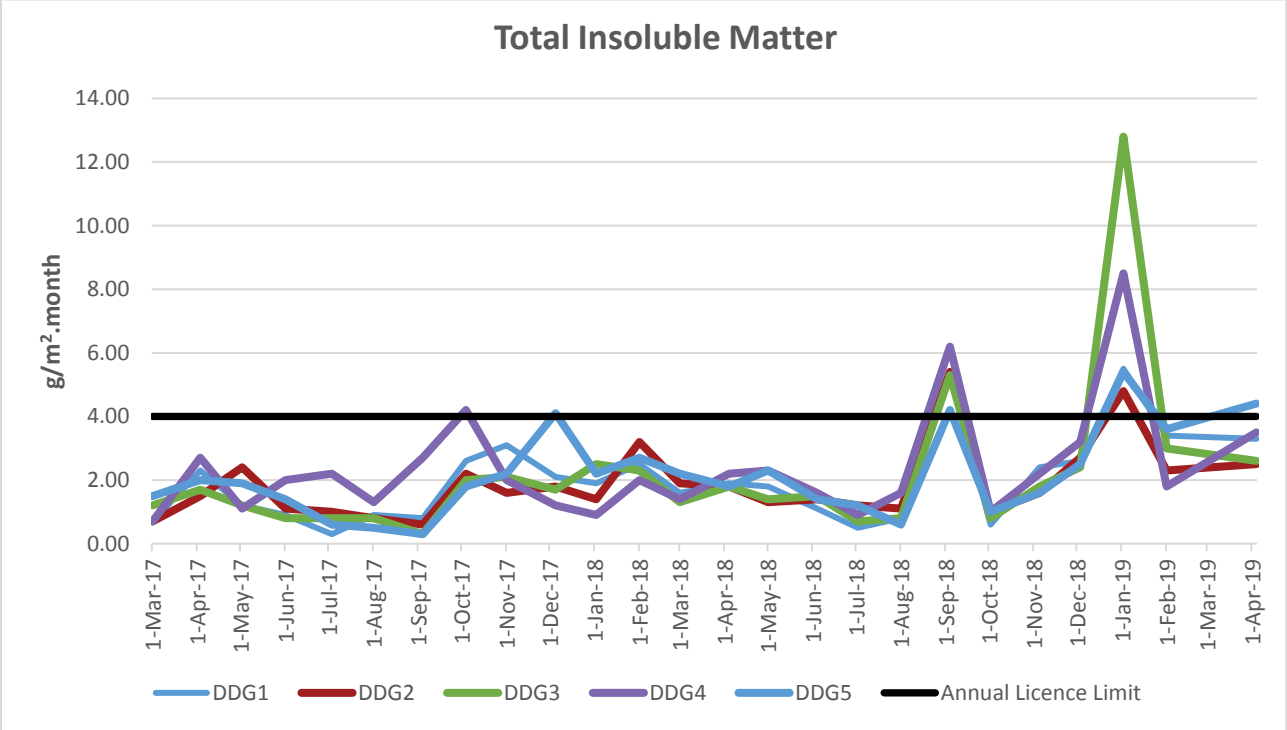
Note: For comparison purposes, highlighted results indicate levels above the EPA and NEPM 24-hour maximum criteria for PM_{10}.

Note: For comparison purposes, highlighted results indicate levels above the EPA and NEPM 24hr maximum criteria and not the site Approval, as number of high levels recorded throughout the month were as a result of localised agricultural activity or regional dust and dust storms due to ongoing drought conditions and were not generated by the project.

B. Depositional Dust

Depositional Dust monitoring undertaken during this month returned the results indicated in the table below. The above average January results coincided with the increase of regional dust and dust storms due to ongoing drought conditions and were not generated by the project. 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 2017 - 2019

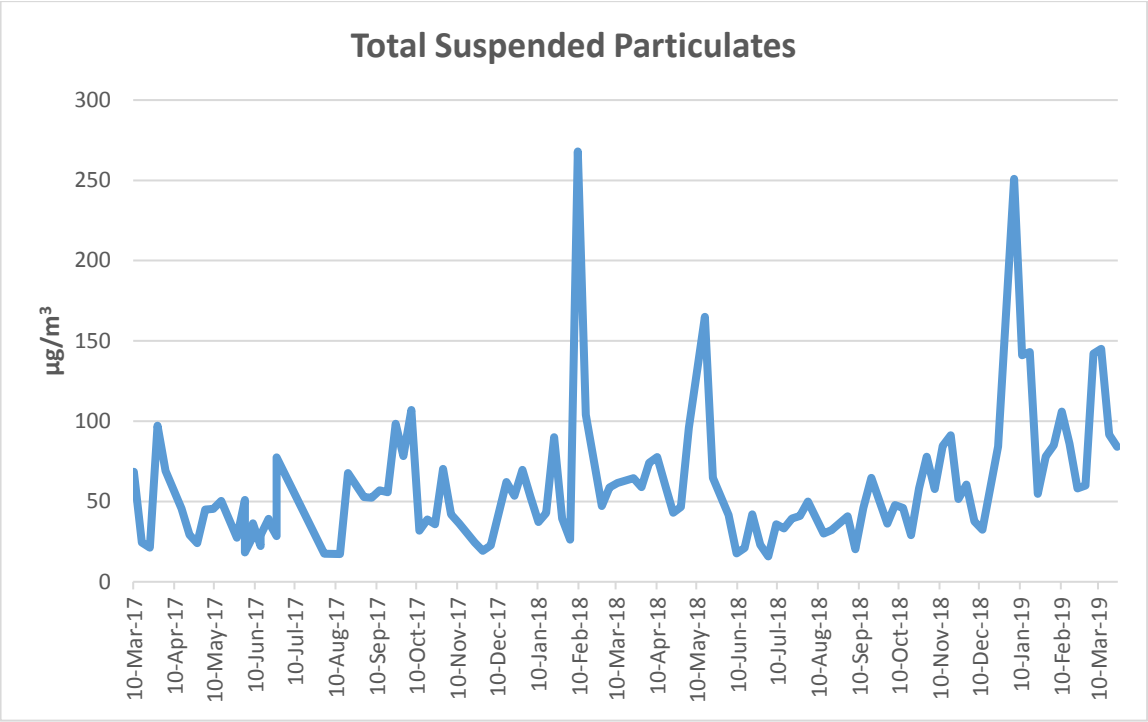


C. High Volume Air Sampler - Total Suspended Particulates

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Figure 7 below provides the results. The above average January results coincided with the increase of regional dust and dust storms due to ongoing drought conditions and were not generated by the project.

The performance criteria for TSP is averaged over 12 months.

Figure 7. Hi-Volume Air Sampler Data 2017 - 2019



5. Noise Monitoring

A. Real-Time Noise Monitoring

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

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during March 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 March in line with licence requirements.

Results from the monitoring fell within expected limits.

A further round of monitoring will be undertaken in June.

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.

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: 1.71ppm
- Daily maximum: 4.28 ppm on 31st March
- Daily minimum: 0.37ppm on 10th March
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during March.