



TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)

Tomingley Gold Project

Monthly Environmental Monitoring Report – November 2015



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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 2015.

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

2. WEATHER FOR NOVEMBER 2015

2.1 WEATHER STATION DATA

TGO weather data is presented below.

Figure 1 November 2015 Wind rose

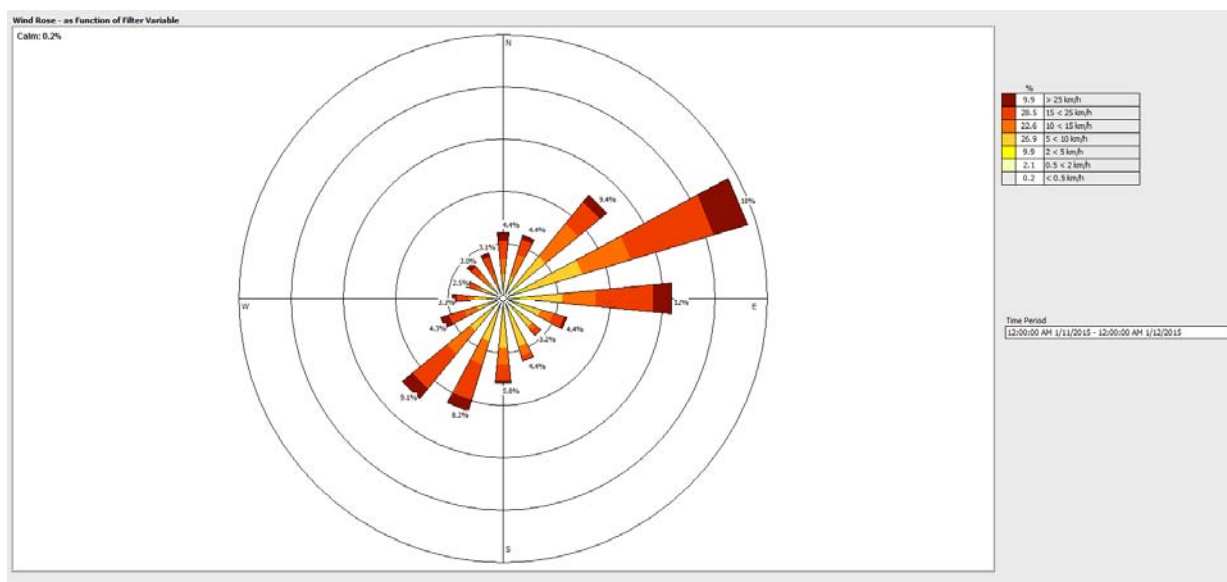


Figure 2 Rainfall November 2015

November 2015	Rainfall (mm)
01.11.2015	24.4
02.11.2015	2
04.11.2015	3.2
05.11.2015	46
06.11.2015	2
12.11.2015	9.8
13.11.2015	31.6
14.11.2015	0.2
Total	119

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

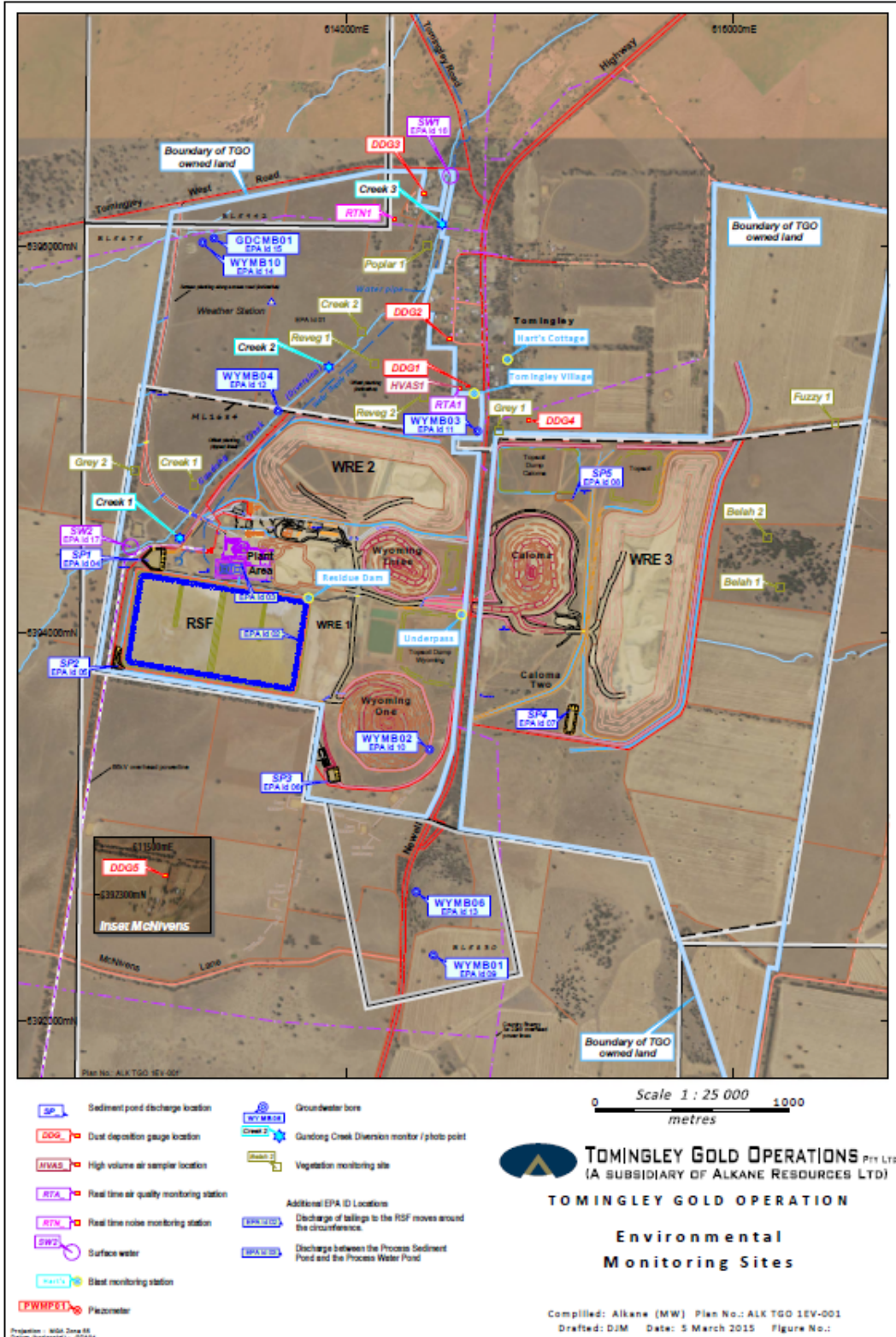
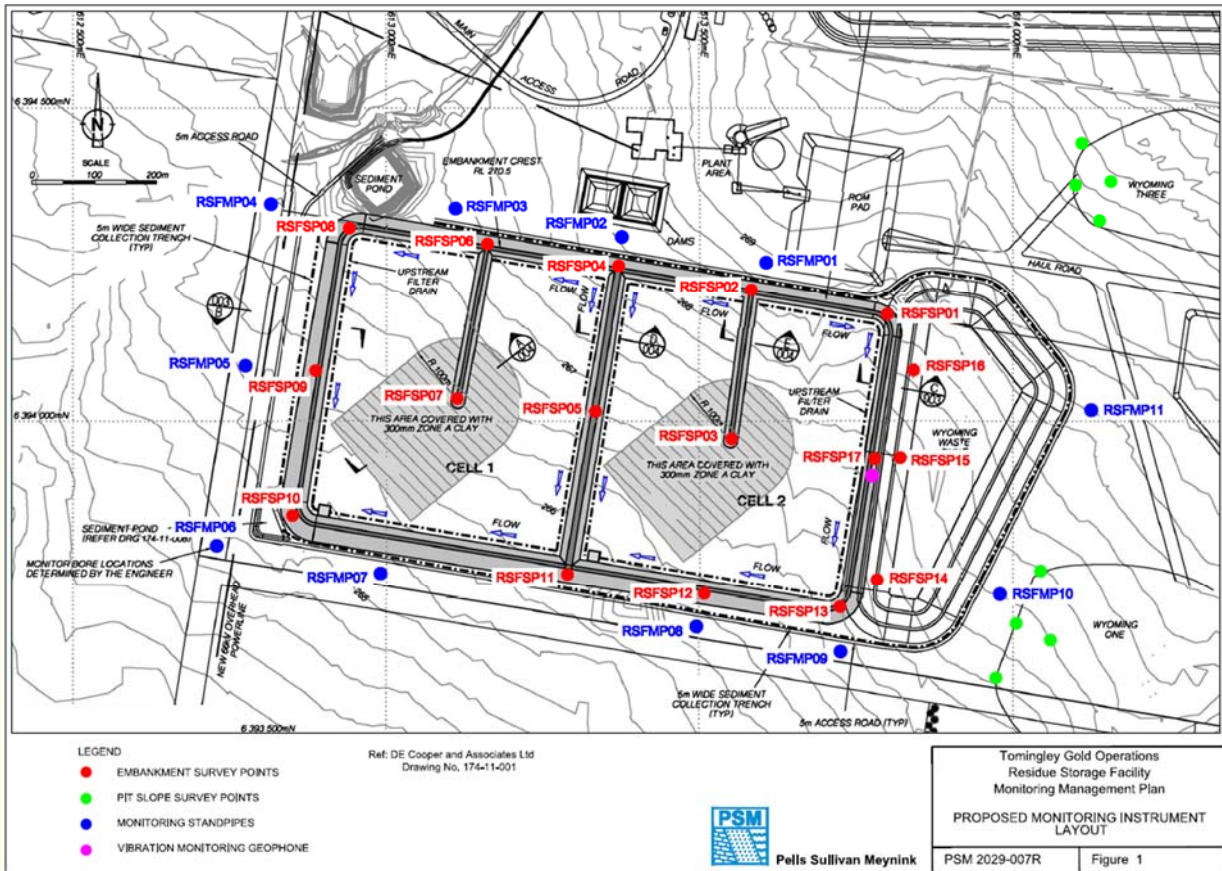


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

Figure 4 Residue Storage Facility monitoring points



4. AIR QUALITY MONITORING

4.1 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 24 Hour Average was exceeded on two occasions this month, one of which was as a result of mine activity and one of which was resulting from hot and windy conditions creating high levels of regional dust.

Figure 5 TEOM Data November 2015

Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/11/2015	12.3	21.0	
2/11/2015	11.5	20.9	
3/11/2015	21.5	20.9	
4/11/2015	7.0	20.8	
5/11/2015	7.6	20.7	
6/11/2015	9.7	20.6	
7/11/2015	14.1	20.5	
8/11/2015	12.4	20.5	
9/11/2015	8.8	20.4	
10/11/2015	18.2	20.3	
11/11/2015	17.7	20.2	
12/11/2015	16.9	20.1	
13/11/2015	9.9	20.1	1 hr avg data used
14/11/2015	7.9	20.0	
15/11/2015	6.4	19.8	
16/11/2015	7.7	19.8	
17/11/2015	12.8	19.8	
18/11/2015	22.9	19.7	
19/11/2015	28.1	19.7	
20/11/2015	24.3	19.7	
21/11/2015	52.1	19.7	
22/11/2015	22.6	19.7	
23/11/2015	48.2	19.7	
24/11/2015	37.1	19.7	
25/11/2015	25.4	19.7	
26/11/2015	65.1	19.8	
27/11/2015	36.7	19.8	
28/11/2015	44.5	19.8	
29/11/2015	37.2	19.9	
30/11/2015	31.8	19.9	
Average	22.6		
	24 Hour criteria exceedance		

4.2 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.

Figure 6 Dust Deposition Results October 2015

Location	Date Monitored	Insoluble solids (g/m ² /month)	Maximum increase in deposited dust level
DDG1	1/10/2015–03/11/2015	2.6	The greatest increase in deposited dust level was recorded at DDG1; an increase of 1.9 g/m ² /month. This increase is due <ul style="list-style-type: none"> Seasonal variation, onset of warm dry weather
DDG2	01/10/2015–02/11/2015	1.4	
DDG3	01/10/2015–03/11/2015	1.6	
DDG4	01/10/2015–03/11/2015	1.4	
DDG5	01/10/2015–02/11/2015	1.8	

4.3 HIGH VOLUME AIR SAMPLER - TOTAL SUSPENDED PARTICULATES

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Table 4 below provides the results.

The performance criteria for TSP is averaged over 12 months

Figure 7 Hi-Volume Air Sampler Data October 2015

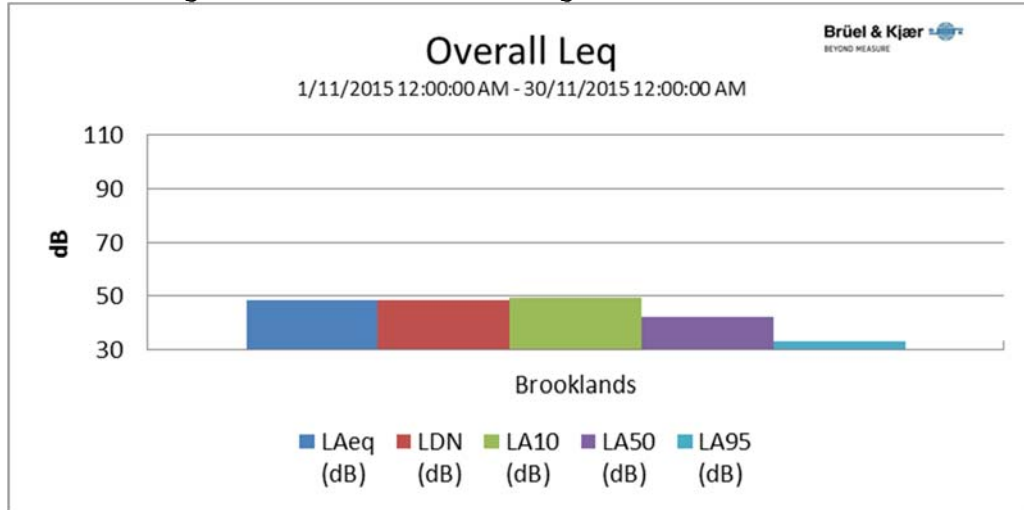
Location	Sheet ID	Sample Date	Results (TSP µg/m ³)	Performance Criteria (Annual Average)
HVAS1	9168735	05-Oct-15	37	90 µg/m ³ .
HVAS1	9168736	11-Oct-15	43.2	
HVAS1	9168737	17-Oct-15	69.6	
HVAS1	9168738	23-Oct-15	21.3	
HVAS1	9168739	29-Oct-15	25.5	

5. NOISE MONITORING

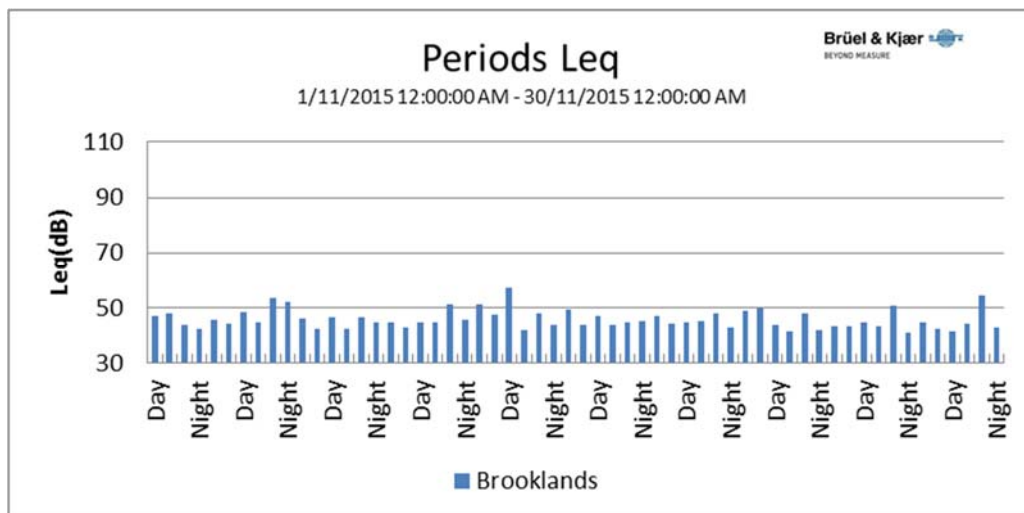
5.1 REAL-TIME NOISE MONITORING

See real-time noise monitoring data presented below.

Figure 8 TGO Noise Monitoring 1/11/2015 - 30/11/2015



Location	Start Time	End Time	Activity	LDN (dB)	L _{Aeq} (dB)	L _{AF} (dB)	L _{AMin} (dB)	L _{A10} (dB)	L _{A50} (dB)
Brooklands	1/11 12:00:00 AM	30/11 12:00:00 AM	100%	48.1	48.1	50.2	22.6	49.2	42.0



6. SURFACE WATER MONITORING

6.1 GUNDONG CREEK

Gundong Creek flowed for less than a one week period around the 17th November following significant rain events.

6.2 SEDIMENTATION PONDS

No discharge and associated water testing occurred this month.

7. GROUNDWATER MONITORING

Ground water monitoring occurs quarterly with the next round of sampling being undertaken during early 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 Harts Cottage and Tomingley Village.

Figure 10 Blast Monitoring

EventKey	Event	Date/Time	Max R (mm/s)	Location
66086	TMG08M	30/11/2015 12:56	0.38	Harts Cottage
66063	TMG08L	28/11/2015 12:58	0.32	Harts Cottage
65989	TMG08K	25/11/2015 12:58	0.11	Harts Cottage
65926	TMG08J	23/11/2015 12:56	0.25	Harts Cottage
65892	TMG08I	21/11/2015 12:55	0.17	Harts Cottage
65832	TMG08H	19/11/2015 12:27	0.38	Harts Cottage
65687	TMG08F	14/11/2015 14:18	0.65	Harts Cottage
65657	TMG08E	13/11/2015 10:57	0.24	Harts Cottage
65608	TMG08D	11/11/2015 11:03	0.23	Harts Cottage
65528	TMG08C	7/11/2015 12:56	0.18	Harts Cottage
65436	TMG08B	5/11/2015 14:32	0.69	Harts Cottage
65276	TMG08A	2/11/2015 10:58	0.15	Harts Cottage
66086	TMG08M	30/11/2015 12:56	0.61	Tomingley Village
66063	TMG08L	28/11/2015 12:58	0.44	Tomingley Village
65989	TMG08K	25/11/2015 12:58	0.15	Tomingley Village
65926	TMG08J	23/11/2015 12:56	0.23	Tomingley Village
65892	TMG08I	21/11/2015 12:55	0.27	Tomingley Village
65832	TMG08H	19/11/2015 12:27	0.41	Tomingley Village
65687	TMG08F	14/11/2015 14:18	0.83	Tomingley Village
65657	TMG08E	13/11/2015 10:57	0.21	Tomingley Village
65608	TMG08D	11/11/2015 11:03	0.34	Tomingley Village
65528	TMG08C	7/11/2015 12:56	0.19	Tomingley Village
65436	TMG08B	5/11/2015 14:32	1.02	Tomingley Village
65276	TMG08A	2/11/2015 10:58	0.14	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.

The WAD results for November 2015 are:

- Monthly average: 2.59 ppm
- Daily maximum: 8.66 ppm on 2nd Nov.
- Daily minimum: 0.70 ppm on 20th Nov.
- Number of exceedances: zero

10. BIODIVERSITY MONITORING

- Fauna deaths:
 - There were no fauna deaths in the RSF for the month.
- Native fauna sightings:
 - On site fauna sightings for September included:
 - 24th November, snake sighted in long grass west of Caloma Pit.
 - 11th November, 2 Bearded Dragons on water pipeline NW of RSF
 - 2nd November, a number of Grey Crowned Babblers *Pomatostomus temporalis* were seen in the tree corridor to the south of the RSF
- Vertebrate pests:
 - Foxes and hares are seen occasionally.