

13 January 2019

Julie Thomas
Environmental Superintendent
Muswellbrook Coal Company Ltd

Dear Julie,

Ambient Air Monitoring - Muscle Creek Rd - December 2019

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was appointed by Muswellbrook Coal Company Ltd (MCC) to provide static real time atmospheric monitoring for Hydrogen Sulfide (H₂S) and Sulfur Dioxide (SO₂) at one location on Muscle Creek Road, Muswellbrook.

Monitoring is conducted using a GrayWolf Advanced Sense II Probe with Hydrogen Sulfide and Sulfur Dioxide sensors capable of reading in the parts per billion range. Data is recorded as 5 minute average concentrations on an Advanced Sense hand held unit with live data then transmitted to an online account at regular intervals where it can be viewed and downloaded for further analysis by MCC and AECOM staff.

Meteorology data is obtained from the onsite MCC weather station, located approximately 6km to the northwest of the monitoring location. Wind data will be analysed each month with the aim of identifying any trends or relationships between the wind data and monitoring results. Results are reported on a monthly basis with this report presenting results for the period 1 December to 31 December 2019.

2.0 Site Location

The monitoring location on Muscle Creek Rd was chosen due to it being downwind of the mine site during the prevailing north westerly winds. Siting was performed in accordance with AS 3580.1.1 2016.



Figure 1 Muscle Creek Rd Monitoring Location

3.0 Assessment Criteria

The gaseous ambient air quality criteria in **Table 1** and **Table 2** are reproduced from the MCC Development Consent (DA 205/2002, Condition 28).

Table 1 H₂S Assessment Criteria

Analyte Averaging Period	Criteria	Unit
H ₂ S 1 Hour Average	500	ppb
H ₂ S 24 Hour Average	100	ppb

Table 2 SO₂ Assessment Criteria

Analyte Averaging Period	Criteria	Unit
SO ₂ 1 Hour Average	200	ppb
SO ₂ 24 Hour Average	80	ppb

4.0 Methodology

Monitoring is performed by a GrayWolf Advanced Sense II Probe fitted with H₂S and SO₂ sensors. The unit is enclosed in a weatherproof case with the sensor at a height of approximately 1.8m above the ground. While the sensor is designed as a passive sampler, a small fan has been installed to generate airflow past the sensor ensuring adequate air movement to provide a representative atmosphere for gas analysis.

The GrayWolf monitor measures gasses in parts per million (ppm) with the following limits of detection (LOD).

- H₂S: 0.01 ppm; and
- SO₂: 0.01 ppm.

Readings are logged in parts per million (ppm) and are converted to parts per billion (ppb) for reporting purposes, with the LOD's being 10 ppb for both H₂S and SO₂. For the calculation of 1hr and 24hr averages, where the instrument returns a zero reading, half the instrument LOD value is used (5 ppb).

5.0 Results

A summary of the H₂S and SO₂ results for December 2019 is presented in **Table 3**. **Table 4** provides a summary of 24hr (midnight to midnight) averages along with maximum 1hr averages for each day. Data is shown graphically against the relevant criteria in **Figure 2** and **Figure 3** with 1 hour data attached in **Tables 5** and **6**. It should be noted that the plots present 1 hour rolling averages calculated from raw data.

Table 3 Gaseous Monitoring Results – December 2019

Parameter	Units	Hydrogen Sulfide (H ₂ S)	Sulfur Dioxide (SO ₂)
Maximum 1 Hour Average	ppb	7.9	156.7
Maximum 24 Hour Average	ppb	5.3	21.2
Number of Exceedances – 1 Hour	-	0	0
Number of Exceedances – 24 Hour	-	0	0

There were no exceedances of the applicable criteria for either H₂S or SO₂ for the December 2019 monitoring period. The data capture rates for December 2019 were 61.83% for both H₂S and SO₂.

Table 4 24hr Averages (Midnight to Midnight) and Maximum 1hr Averages – December 2019

Date	Hydrogen Sulfide (H ₂ S) (ppb)		Sulfur Dioxide (SO ₂) (ppb)	
	24hr Average	Maximum 1hr Average	24hr Average	Maximum 1hr Average
1/12/2019	5*	5*	5.1	7.1
2/12/2019	5*	5*	5.3	8.3
3/12/2019	5*	5*	5*	5*
4/12/2019	5*	5*	5*	5*
5/12/2019	5*	5*	5	5.8
6/12/2019	5*	5*	5.1	6.3
7/12/2019	5.3	7.9	21.2	157
8/12/2019	5*	5*	5.4	11.3
9/12/2019	5*	5*	8.7	27.5
10/12/2019	5.1	7.9	15.3	115
11/12/2019	5*	5*	5*	5*
12/12/2019	No Data	No Data	No Data	No Data
13/12/2019	No Data	No Data	No Data	No Data
14/12/2019	No Data	No Data	No Data	No Data
15/12/2019	No Data	No Data	No Data	No Data
16/12/2019	Insufficient Data	5*	Insufficient Data	5*
17/12/2019	5*	5*	5*	5*
18/12/2019	5*	5*	6.5	19.1
19/12/2019	Insufficient Data	5*	Insufficient Data	8.3
20/12/2019	Insufficient Data	5*	Insufficient Data	10.0
21/12/2019	5.1	6.7	17.1	106
22/12/2019	5*	5*	5.6	18.3
23/12/2019	5*	5*	5*	5*
24/12/2019	5*	5*	5*	5*
25/12/2019	5*	5*	5*	5*
26/12/2019	Insufficient Data	5*	Insufficient Data	5*
27/12/2019	No Data	No Data	No Data	No Data
28/12/2019	No Data	No Data	No Data	No Data
29/12/2019	No Data	No Data	No Data	No Data
30/12/2019	No Data	No Data	No Data	No Data
31/12/2019	No Data	No Data	No Data	No Data
Criteria	100	500	80	200
Capture Rate	61.83%		61.83%	

* All raw data returned less than the instrument limit of detection. Half of the LOD value reported. Refer **Section 4.0**.

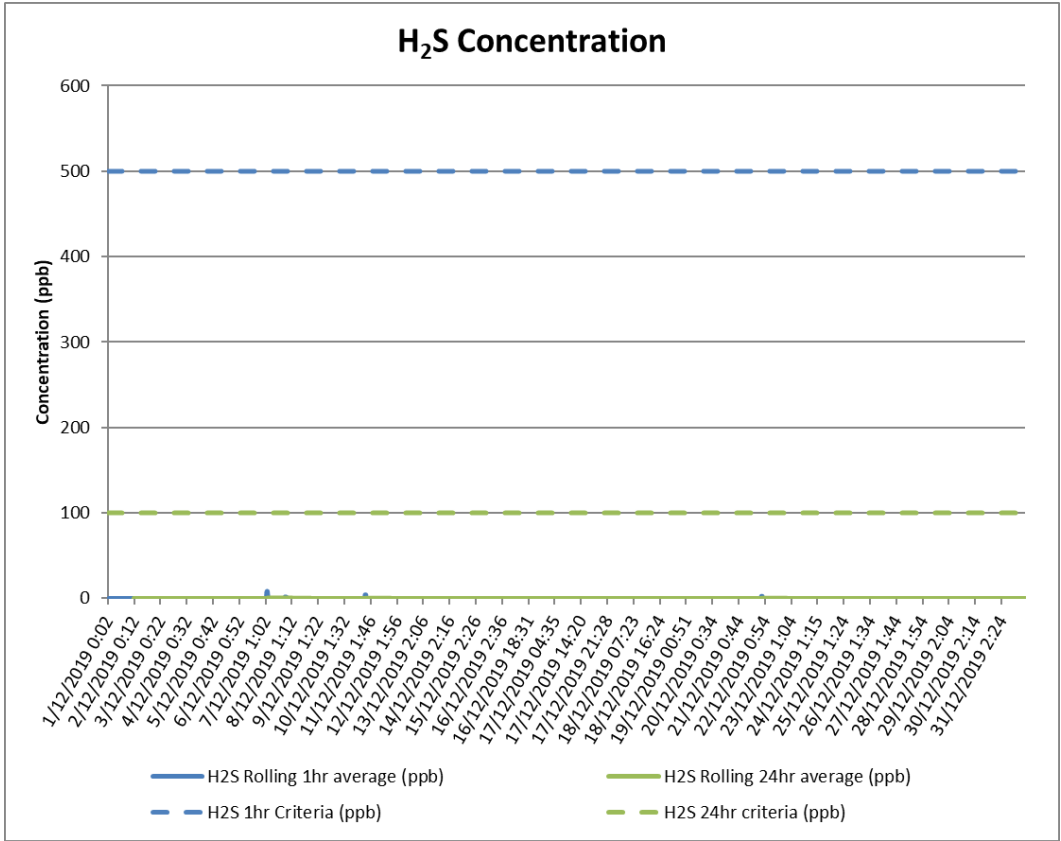


Figure 2 H₂S Concentrations – December 2019

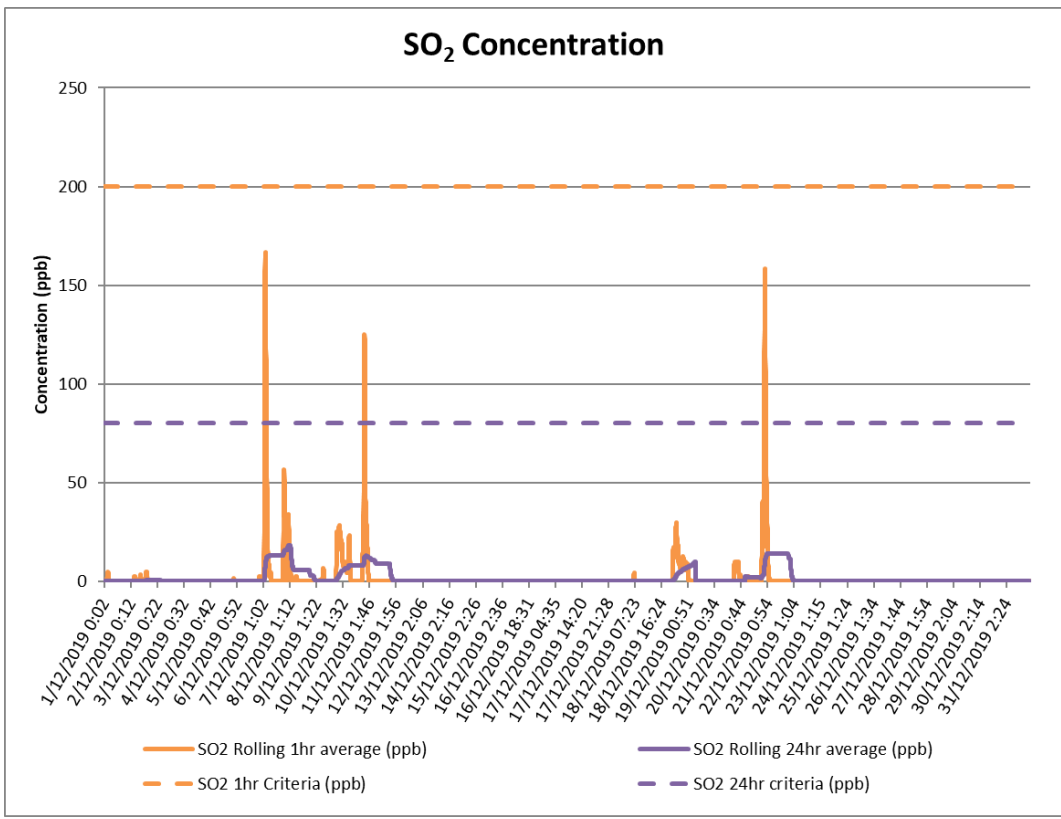


Figure 3 SO₂ Concentrations – December 2019

5.1 Meteorology

Meteorology data sourced from MCC's onsite meteorology station for December indicated winds were predominately from the South East quadrant as well as having a minor North West component. The average wind speed for the month was 2.6 m/s.

When winds are from the South East, the monitoring location is generally up wind of the mine site. A wind rose for this monitoring period can be found attached as **Figure 4**.

6.0 Conclusion

AECOM commenced ambient air quality monitoring on Muscle Creek Rd on 26 July 2017. Monitoring results for the period 1 to 31 December 2019 returned no exceedances of either the 1hr or 24hr criteria for H₂S or SO₂.

Both gases recorded data capture rates of 61.83% after the unit failed on a number of occasions throughout December resulting in no data being captured for extended periods until onsite repairs could be made. Significant periods of unit downtime included 12 to 15 December and 26 to 31 December.

On each site visit the Advanced Sense unit had ceased reading and logging data with the online connection to "GrayWolf Live" lost. The reason for these failures is unknown. A software update was installed on the device on 16 December in the hope of resolving these issues however, the Advanced Sense unit failed again soon afterwards.

The unit was removed from site on 6 January 2020 to be returned to GrayWolf for repairs. In the interim a substitute unit is being supplied to AECOM by GrayWolf until the Advanced Sense unit can be repaired. The substitute unit is expected to arrive during January 2020 and be installed on site on receipt.

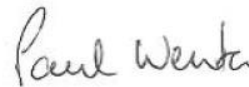
Wind data obtained from the MCC meteorology station indicates that winds for this period were predominantly from the South East quadrant placing the monitoring location generally upwind of the mine during December 2019.

Yours faithfully,



James Enright
Scientist – Compliance Services
james.enright@aecom.com

Direct Dial: +T +61 2 4911 4900
Direct Fax: +F +61 2 4911 4999



Paul Wenta
Principal Scientist - Air Quality
paul.wenta@aecom.com

Mobile: +61 438 670 281
Direct Dial: +61 2 4911 4855
Direct Fax: +61 2 4911 4999

encl: Hourly Monitoring Data, Wind Rose

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

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Table 5 H₂S 1hr Data (ppb) – December 2019

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
1/12/2019	0	5	2/12/2019	0	5	3/12/2019	0	5	4/12/2019	0	5	5/12/2019	0	5
1/12/2019	1	5	2/12/2019	1	5	3/12/2019	1	5	4/12/2019	1	5	5/12/2019	1	5
1/12/2019	2	5	2/12/2019	2	5	3/12/2019	2	5	4/12/2019	2	5	5/12/2019	2	5
1/12/2019	3	5	2/12/2019	3	5	3/12/2019	3	5	4/12/2019	3	5	5/12/2019	3	5
1/12/2019	4	5	2/12/2019	4	5	3/12/2019	4	5	4/12/2019	4	5	5/12/2019	4	5
1/12/2019	5	5	2/12/2019	5	5	3/12/2019	5	5	4/12/2019	5	5	5/12/2019	5	5
1/12/2019	6	5	2/12/2019	6	5	3/12/2019	6	5	4/12/2019	6	5	5/12/2019	6	5
1/12/2019	7	5	2/12/2019	7	5	3/12/2019	7	5	4/12/2019	7	5	5/12/2019	7	5
1/12/2019	8	5	2/12/2019	8	5	3/12/2019	8	5	4/12/2019	8	5	5/12/2019	8	5
1/12/2019	9	5	2/12/2019	9	5	3/12/2019	9	5	4/12/2019	9	5	5/12/2019	9	5
1/12/2019	10	5	2/12/2019	10	5	3/12/2019	10	5	4/12/2019	10	5	5/12/2019	10	5
1/12/2019	11	5	2/12/2019	11	5	3/12/2019	11	5	4/12/2019	11	5	5/12/2019	11	5
1/12/2019	12	5	2/12/2019	12	5	3/12/2019	12	5	4/12/2019	12	5	5/12/2019	12	5
1/12/2019	13	5	2/12/2019	13	5	3/12/2019	13	5	4/12/2019	13	5	5/12/2019	13	5
1/12/2019	14	5	2/12/2019	14	5	3/12/2019	14	5	4/12/2019	14	5	5/12/2019	14	5
1/12/2019	15	5	2/12/2019	15	5	3/12/2019	15	5	4/12/2019	15	5	5/12/2019	15	5
1/12/2019	16	5	2/12/2019	16	5	3/12/2019	16	5	4/12/2019	16	5	5/12/2019	16	5
1/12/2019	17	5	2/12/2019	17	5	3/12/2019	17	5	4/12/2019	17	5	5/12/2019	17	5
1/12/2019	18	5	2/12/2019	18	5	3/12/2019	18	5	4/12/2019	18	5	5/12/2019	18	5
1/12/2019	19	5	2/12/2019	19	5	3/12/2019	19	5	4/12/2019	19	5	5/12/2019	19	5
1/12/2019	20	5	2/12/2019	20	5	3/12/2019	20	5	4/12/2019	20	5	5/12/2019	20	5
1/12/2019	21	5	2/12/2019	21	5	3/12/2019	21	5	4/12/2019	21	5	5/12/2019	21	5
1/12/2019	22	5	2/12/2019	22	5	3/12/2019	22	5	4/12/2019	22	5	5/12/2019	22	5
1/12/2019	23	5	2/12/2019	23	5	3/12/2019	23	5	4/12/2019	23	5	5/12/2019	23	5
Maximum		5*			5*			5*			5*			5*

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
6/12/2019	0	5	7/12/2019	0	5	8/12/2019	0	5	9/12/2019	0	5	10/12/2019	0	5
6/12/2019	1	5	7/12/2019	1	7.9	8/12/2019	1	5	9/12/2019	1	5	10/12/2019	1	5
6/12/2019	2	5	7/12/2019	2	7.9	8/12/2019	2	5	9/12/2019	2	5	10/12/2019	2	5
6/12/2019	3	5	7/12/2019	3	5	8/12/2019	3	5	9/12/2019	3	5	10/12/2019	3	5
6/12/2019	4	5	7/12/2019	4	5	8/12/2019	4	5	9/12/2019	4	5	10/12/2019	4	5
6/12/2019	5	5	7/12/2019	5	5	8/12/2019	5	5	9/12/2019	5	5	10/12/2019	5	5
6/12/2019	6	5	7/12/2019	6	5	8/12/2019	6	5	9/12/2019	6	5	10/12/2019	6	5
6/12/2019	7	5	7/12/2019	7	5	8/12/2019	7	5	9/12/2019	7	5	10/12/2019	7	5
6/12/2019	8	5	7/12/2019	8	5	8/12/2019	8	5	9/12/2019	8	5	10/12/2019	8	5
6/12/2019	9	5	7/12/2019	9	5	8/12/2019	9	5	9/12/2019	9	5	10/12/2019	9	5
6/12/2019	10	5	7/12/2019	10	5	8/12/2019	10	5	9/12/2019	10	5	10/12/2019	10	5
6/12/2019	11	5	7/12/2019	11	5	8/12/2019	11	5	9/12/2019	11	5	10/12/2019	11	5
6/12/2019	12	5	7/12/2019	12	5	8/12/2019	12	5	9/12/2019	12	5	10/12/2019	12	5
6/12/2019	13	5	7/12/2019	13	5	8/12/2019	13	5	9/12/2019	13	5	10/12/2019	13	5
6/12/2019	14	5	7/12/2019	14	5	8/12/2019	14	5	9/12/2019	14	5	10/12/2019	14	5
6/12/2019	15	5	7/12/2019	15	5	8/12/2019	15	5	9/12/2019	15	5	10/12/2019	15	5
6/12/2019	16	5	7/12/2019	16	5	8/12/2019	16	5	9/12/2019	16	5	10/12/2019	16	5
6/12/2019	17	5	7/12/2019	17	5	8/12/2019	17	5	9/12/2019	17	5	10/12/2019	17	5
6/12/2019	18	5	7/12/2019	18	5	8/12/2019	18	5	9/12/2019	18	5	10/12/2019	18	5
6/12/2019	19	5	7/12/2019	19	6.3	8/12/2019	19	5	9/12/2019	19	5	10/12/2019	19	5
6/12/2019	20	5	7/12/2019	20	5	8/12/2019	20	5	9/12/2019	20	5	10/12/2019	20	7.9
6/12/2019	21	5	7/12/2019	21	5	8/12/2019	21	5	9/12/2019	21	5	10/12/2019	21	5
6/12/2019	22	5	7/12/2019	22	5	8/12/2019	22	5	9/12/2019	22	5	10/12/2019	22	5
6/12/2019	23	5	7/12/2019	23	5	8/12/2019	23	5	9/12/2019	23	5	10/12/2019	23	5
Maximum		5*			7.9			5*			5*			7.9

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
11/12/2019	0	5	12/12/2019	0	No Data	13/12/2019	0	No Data	14/12/2019	0	No Data	15/12/2019	0	No Data
11/12/2019	1	5	12/12/2019	1	No Data	13/12/2019	1	No Data	14/12/2019	1	No Data	15/12/2019	1	No Data
11/12/2019	2	5	12/12/2019	2	No Data	13/12/2019	2	No Data	14/12/2019	2	No Data	15/12/2019	2	No Data
11/12/2019	3	5	12/12/2019	3	No Data	13/12/2019	3	No Data	14/12/2019	3	No Data	15/12/2019	3	No Data
11/12/2019	4	5	12/12/2019	4	No Data	13/12/2019	4	No Data	14/12/2019	4	No Data	15/12/2019	4	No Data
11/12/2019	5	5	12/12/2019	5	No Data	13/12/2019	5	No Data	14/12/2019	5	No Data	15/12/2019	5	No Data
11/12/2019	6	5	12/12/2019	6	No Data	13/12/2019	6	No Data	14/12/2019	6	No Data	15/12/2019	6	No Data
11/12/2019	7	5	12/12/2019	7	No Data	13/12/2019	7	No Data	14/12/2019	7	No Data	15/12/2019	7	No Data
11/12/2019	8	5	12/12/2019	8	No Data	13/12/2019	8	No Data	14/12/2019	8	No Data	15/12/2019	8	No Data
11/12/2019	9	5	12/12/2019	9	No Data	13/12/2019	9	No Data	14/12/2019	9	No Data	15/12/2019	9	No Data
11/12/2019	10	5	12/12/2019	10	No Data	13/12/2019	10	No Data	14/12/2019	10	No Data	15/12/2019	10	No Data
11/12/2019	11	5	12/12/2019	11	No Data	13/12/2019	11	No Data	14/12/2019	11	No Data	15/12/2019	11	No Data
11/12/2019	12	5	12/12/2019	12	No Data	13/12/2019	12	No Data	14/12/2019	12	No Data	15/12/2019	12	No Data
11/12/2019	13	5	12/12/2019	13	No Data	13/12/2019	13	No Data	14/12/2019	13	No Data	15/12/2019	13	No Data
11/12/2019	14	5	12/12/2019	14	No Data	13/12/2019	14	No Data	14/12/2019	14	No Data	15/12/2019	14	No Data
11/12/2019	15	5	12/12/2019	15	No Data	13/12/2019	15	No Data	14/12/2019	15	No Data	15/12/2019	15	No Data
11/12/2019	16	5	12/12/2019	16	No Data	13/12/2019	16	No Data	14/12/2019	16	No Data	15/12/2019	16	No Data
11/12/2019	17	5	12/12/2019	17	No Data	13/12/2019	17	No Data	14/12/2019	17	No Data	15/12/2019	17	No Data
11/12/2019	18	5	12/12/2019	18	No Data	13/12/2019	18	No Data	14/12/2019	18	No Data	15/12/2019	18	No Data
11/12/2019	19	No Data	12/12/2019	19	No Data	13/12/2019	19	No Data	14/12/2019	19	No Data	15/12/2019	19	No Data
11/12/2019	20	No Data	12/12/2019	20	No Data	13/12/2019	20	No Data	14/12/2019	20	No Data	15/12/2019	20	No Data
11/12/2019	21	No Data	12/12/2019	21	No Data	13/12/2019	21	No Data	14/12/2019	21	No Data	15/12/2019	21	No Data
11/12/2019	22	No Data	12/12/2019	22	No Data	13/12/2019	22	No Data	14/12/2019	22	No Data	15/12/2019	22	No Data
11/12/2019	23	No Data	12/12/2019	23	No Data	13/12/2019	23	No Data	14/12/2019	23	No Data	15/12/2019	23	No Data
Maximum		5*			No Data			No Data			No Data			No Data

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
16/12/2019	0	No Data	17/12/2019	0	5	18/12/2019	0	5	19/12/2019	0	5	20/12/2019	0	No Data
16/12/2019	1	No Data	17/12/2019	1	5	18/12/2019	1	5	19/12/2019	1	No Data	20/12/2019	1	No Data
16/12/2019	2	No Data	17/12/2019	2	5	18/12/2019	2	5	19/12/2019	2	No Data	20/12/2019	2	No Data
16/12/2019	3	No Data	17/12/2019	3	5	18/12/2019	3	5	19/12/2019	3	No Data	20/12/2019	3	No Data
16/12/2019	4	No Data	17/12/2019	4	5	18/12/2019	4	5	19/12/2019	4	No Data	20/12/2019	4	No Data
16/12/2019	5	No Data	17/12/2019	5	5	18/12/2019	5	5	19/12/2019	5	No Data	20/12/2019	5	No Data
16/12/2019	6	No Data	17/12/2019	6	5	18/12/2019	6	5	19/12/2019	6	No Data	20/12/2019	6	No Data
16/12/2019	7	No Data	17/12/2019	7	5	18/12/2019	7	5	19/12/2019	7	No Data	20/12/2019	7	No Data
16/12/2019	8	No Data	17/12/2019	8	5	18/12/2019	8	5	19/12/2019	8	No Data	20/12/2019	8	No Data
16/12/2019	9	No Data	17/12/2019	9	5	18/12/2019	9	5	19/12/2019	9	No Data	20/12/2019	9	No Data
16/12/2019	10	No Data	17/12/2019	10	5	18/12/2019	10	5	19/12/2019	10	No Data	20/12/2019	10	No Data
16/12/2019	11	No Data	17/12/2019	11	5	18/12/2019	11	5	19/12/2019	11	No Data	20/12/2019	11	5
16/12/2019	12	No Data	17/12/2019	12	5	18/12/2019	12	5	19/12/2019	12	No Data	20/12/2019	12	5
16/12/2019	13	5	17/12/2019	13	5	18/12/2019	13	5	19/12/2019	13	No Data	20/12/2019	13	5
16/12/2019	14	5	17/12/2019	14	5	18/12/2019	14	5	19/12/2019	14	No Data	20/12/2019	14	5
16/12/2019	15	5	17/12/2019	15	5	18/12/2019	15	5	19/12/2019	15	No Data	20/12/2019	15	5
16/12/2019	16	5	17/12/2019	16	5	18/12/2019	16	5	19/12/2019	16	No Data	20/12/2019	16	5
16/12/2019	17	5	17/12/2019	17	5	18/12/2019	17	5	19/12/2019	17	No Data	20/12/2019	17	5
16/12/2019	18	5	17/12/2019	18	5	18/12/2019	18	5	19/12/2019	18	No Data	20/12/2019	18	5
16/12/2019	19	5	17/12/2019	19	5	18/12/2019	19	5	19/12/2019	19	No Data	20/12/2019	19	5
16/12/2019	20	5	17/12/2019	20	5	18/12/2019	20	5	19/12/2019	20	No Data	20/12/2019	20	5
16/12/2019	21	5	17/12/2019	21	5	18/12/2019	21	5	19/12/2019	21	No Data	20/12/2019	21	5
16/12/2019	22	5	17/12/2019	22	5	18/12/2019	22	5	19/12/2019	22	No Data	20/12/2019	22	5
16/12/2019	23	5	17/12/2019	23	5	18/12/2019	23	5	19/12/2019	23	No Data	20/12/2019	23	5
Maximum		5*			5*			5*			5*			5*

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
21/12/2019	0	5	22/12/2019	0	5	23/12/2019	0	5	24/12/2019	0	5	25/12/2019	0	5
21/12/2019	1	5	22/12/2019	1	5	23/12/2019	1	5	24/12/2019	1	5	25/12/2019	1	5
21/12/2019	2	5	22/12/2019	2	5	23/12/2019	2	5	24/12/2019	2	5	25/12/2019	2	5
21/12/2019	3	5	22/12/2019	3	5	23/12/2019	3	5	24/12/2019	3	5	25/12/2019	3	5
21/12/2019	4	5	22/12/2019	4	5	23/12/2019	4	5	24/12/2019	4	5	25/12/2019	4	5
21/12/2019	5	5	22/12/2019	5	5	23/12/2019	5	5	24/12/2019	5	5	25/12/2019	5	5
21/12/2019	6	5	22/12/2019	6	5	23/12/2019	6	5	24/12/2019	6	5	25/12/2019	6	5
21/12/2019	7	5	22/12/2019	7	5	23/12/2019	7	5	24/12/2019	7	5	25/12/2019	7	5
21/12/2019	8	5	22/12/2019	8	5	23/12/2019	8	5	24/12/2019	8	5	25/12/2019	8	5
21/12/2019	9	5	22/12/2019	9	5	23/12/2019	9	5	24/12/2019	9	5	25/12/2019	9	5
21/12/2019	10	5	22/12/2019	10	5	23/12/2019	10	5	24/12/2019	10	5	25/12/2019	10	5
21/12/2019	11	5	22/12/2019	11	5	23/12/2019	11	5	24/12/2019	11	5	25/12/2019	11	5
21/12/2019	12	5	22/12/2019	12	5	23/12/2019	12	5	24/12/2019	12	5	25/12/2019	12	5
21/12/2019	13	5	22/12/2019	13	5	23/12/2019	13	5	24/12/2019	13	5	25/12/2019	13	5
21/12/2019	14	5	22/12/2019	14	5	23/12/2019	14	5	24/12/2019	14	5	25/12/2019	14	5
21/12/2019	15	5	22/12/2019	15	5	23/12/2019	15	5	24/12/2019	15	5	25/12/2019	15	5
21/12/2019	16	5	22/12/2019	16	5	23/12/2019	16	5	24/12/2019	16	5	25/12/2019	16	5
21/12/2019	17	5	22/12/2019	17	5	23/12/2019	17	5	24/12/2019	17	5	25/12/2019	17	5
21/12/2019	18	5	22/12/2019	18	5	23/12/2019	18	5	24/12/2019	18	5	25/12/2019	18	5
21/12/2019	19	5	22/12/2019	19	5	23/12/2019	19	5	24/12/2019	19	5	25/12/2019	19	5
21/12/2019	20	5	22/12/2019	20	5	23/12/2019	20	5	24/12/2019	20	5	25/12/2019	20	5
21/12/2019	21	6.7	22/12/2019	21	5	23/12/2019	21	5	24/12/2019	21	5	25/12/2019	21	5
21/12/2019	22	5	22/12/2019	22	5	23/12/2019	22	5	24/12/2019	22	5	25/12/2019	22	5
21/12/2019	23	5	22/12/2019	23	5	23/12/2019	23	5	24/12/2019	23	5	25/12/2019	23	5
Maximum		6.7			5*			5*			5*			5*

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
26/12/2019	0	5	27/12/2019	0	No Data	28/12/2019	0	No Data	29/12/2019	0	No Data	30/12/2019	0	No Data
26/12/2019	1	5	27/12/2019	1	No Data	28/12/2019	1	No Data	29/12/2019	1	No Data	30/12/2019	1	No Data
26/12/2019	2	5	27/12/2019	2	No Data	28/12/2019	2	No Data	29/12/2019	2	No Data	30/12/2019	2	No Data
26/12/2019	3	5	27/12/2019	3	No Data	28/12/2019	3	No Data	29/12/2019	3	No Data	30/12/2019	3	No Data
26/12/2019	4	5	27/12/2019	4	No Data	28/12/2019	4	No Data	29/12/2019	4	No Data	30/12/2019	4	No Data
26/12/2019	5	5	27/12/2019	5	No Data	28/12/2019	5	No Data	29/12/2019	5	No Data	30/12/2019	5	No Data
26/12/2019	6	5	27/12/2019	6	No Data	28/12/2019	6	No Data	29/12/2019	6	No Data	30/12/2019	6	No Data
26/12/2019	7	5	27/12/2019	7	No Data	28/12/2019	7	No Data	29/12/2019	7	No Data	30/12/2019	7	No Data
26/12/2019	8	No Data	27/12/2019	8	No Data	28/12/2019	8	No Data	29/12/2019	8	No Data	30/12/2019	8	No Data
26/12/2019	9	No Data	27/12/2019	9	No Data	28/12/2019	9	No Data	29/12/2019	9	No Data	30/12/2019	9	No Data
26/12/2019	10	No Data	27/12/2019	10	No Data	28/12/2019	10	No Data	29/12/2019	10	No Data	30/12/2019	10	No Data
26/12/2019	11	No Data	27/12/2019	11	No Data	28/12/2019	11	No Data	29/12/2019	11	No Data	30/12/2019	11	No Data
26/12/2019	12	No Data	27/12/2019	12	No Data	28/12/2019	12	No Data	29/12/2019	12	No Data	30/12/2019	12	No Data
26/12/2019	13	No Data	27/12/2019	13	No Data	28/12/2019	13	No Data	29/12/2019	13	No Data	30/12/2019	13	No Data
26/12/2019	14	No Data	27/12/2019	14	No Data	28/12/2019	14	No Data	29/12/2019	14	No Data	30/12/2019	14	No Data
26/12/2019	15	No Data	27/12/2019	15	No Data	28/12/2019	15	No Data	29/12/2019	15	No Data	30/12/2019	15	No Data
26/12/2019	16	No Data	27/12/2019	16	No Data	28/12/2019	16	No Data	29/12/2019	16	No Data	30/12/2019	16	No Data
26/12/2019	17	No Data	27/12/2019	17	No Data	28/12/2019	17	No Data	29/12/2019	17	No Data	30/12/2019	17	No Data
26/12/2019	18	No Data	27/12/2019	18	No Data	28/12/2019	18	No Data	29/12/2019	18	No Data	30/12/2019	18	No Data
26/12/2019	19	No Data	27/12/2019	19	No Data	28/12/2019	19	No Data	29/12/2019	19	No Data	30/12/2019	19	No Data
26/12/2019	20	No Data	27/12/2019	20	No Data	28/12/2019	20	No Data	29/12/2019	20	No Data	30/12/2019	20	No Data
26/12/2019	21	No Data	27/12/2019	21	No Data	28/12/2019	21	No Data	29/12/2019	21	No Data	30/12/2019	21	No Data
26/12/2019	22	No Data	27/12/2019	22	No Data	28/12/2019	22	No Data	29/12/2019	22	No Data	30/12/2019	22	No Data
26/12/2019	23	No Data	27/12/2019	23	No Data	28/12/2019	23	No Data	29/12/2019	23	No Data	30/12/2019	23	No Data
Maximum		5*			No Data			No Data			No Data			No Data

Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average	Date	Hour	H ₂ S 1hr Average
31/12/2019	0	No Data												
31/12/2019	1	No Data												
31/12/2019	2	No Data												
31/12/2019	3	No Data												
31/12/2019	4	No Data												
31/12/2019	5	No Data												
31/12/2019	6	No Data												
31/12/2019	7	No Data												
31/12/2019	8	No Data												
31/12/2019	9	No Data												
31/12/2019	10	No Data												
31/12/2019	11	No Data												
31/12/2019	12	No Data												
31/12/2019	13	No Data												
31/12/2019	14	No Data												
31/12/2019	15	No Data												
31/12/2019	16	No Data												
31/12/2019	17	No Data												
31/12/2019	18	No Data												
31/12/2019	19	No Data												
31/12/2019	20	No Data												
31/12/2019	21	No Data												
31/12/2019	22	No Data												
31/12/2019	23	No Data												
Maximum		No Data												

Table 6 SO₂ 1hr Data (ppb) – December 2019

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
1/12/2019	0	5	2/12/2019	0	5	3/12/2019	0	5	4/12/2019	0	5	5/12/2019	0	5
1/12/2019	1	5	2/12/2019	1	5	3/12/2019	1	5	4/12/2019	1	5	5/12/2019	1	5
1/12/2019	2	7.1	2/12/2019	2	5	3/12/2019	2	5	4/12/2019	2	5	5/12/2019	2	5
1/12/2019	3	5.4	2/12/2019	3	6.3	3/12/2019	3	5	4/12/2019	3	5	5/12/2019	3	5
1/12/2019	4	5	2/12/2019	4	5	3/12/2019	4	5	4/12/2019	4	5	5/12/2019	4	5
1/12/2019	5	5	2/12/2019	5	5	3/12/2019	5	5	4/12/2019	5	5	5/12/2019	5	5
1/12/2019	6	5	2/12/2019	6	5	3/12/2019	6	5	4/12/2019	6	5	5/12/2019	6	5
1/12/2019	7	5	2/12/2019	7	5	3/12/2019	7	5	4/12/2019	7	5	5/12/2019	7	5
1/12/2019	8	5	2/12/2019	8	6.7	3/12/2019	8	5	4/12/2019	8	5	5/12/2019	8	5
1/12/2019	9	5	2/12/2019	9	5	3/12/2019	9	5	4/12/2019	9	5	5/12/2019	9	5
1/12/2019	10	5	2/12/2019	10	5	3/12/2019	10	5	4/12/2019	10	5	5/12/2019	10	5
1/12/2019	11	5	2/12/2019	11	5	3/12/2019	11	5	4/12/2019	11	5	5/12/2019	11	5
1/12/2019	12	5	2/12/2019	12	5	3/12/2019	12	5	4/12/2019	12	5	5/12/2019	12	5
1/12/2019	13	5	2/12/2019	13	5	3/12/2019	13	5	4/12/2019	13	5	5/12/2019	13	5
1/12/2019	14	5	2/12/2019	14	8.3	3/12/2019	14	5	4/12/2019	14	5	5/12/2019	14	5
1/12/2019	15	5	2/12/2019	15	5	3/12/2019	15	5	4/12/2019	15	5	5/12/2019	15	5
1/12/2019	16	5	2/12/2019	16	5	3/12/2019	16	5	4/12/2019	16	5	5/12/2019	16	5
1/12/2019	17	5	2/12/2019	17	5	3/12/2019	17	5	4/12/2019	17	5	5/12/2019	17	5
1/12/2019	18	5	2/12/2019	18	5	3/12/2019	18	5	4/12/2019	18	5	5/12/2019	18	5
1/12/2019	19	5	2/12/2019	19	5	3/12/2019	19	5	4/12/2019	19	5	5/12/2019	19	5
1/12/2019	20	5	2/12/2019	20	5	3/12/2019	20	5	4/12/2019	20	5	5/12/2019	20	5
1/12/2019	21	5	2/12/2019	21	5	3/12/2019	21	5	4/12/2019	21	5	5/12/2019	21	5.8
1/12/2019	22	5	2/12/2019	22	5	3/12/2019	22	5	4/12/2019	22	5	5/12/2019	22	5
1/12/2019	23	5	2/12/2019	23	5	3/12/2019	23	5	4/12/2019	23	5	5/12/2019	23	5
Maximum		7.1			8.3			5*			5*			5.8

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
6/12/2019	0	5	7/12/2019	0	5	8/12/2019	0	11.3	9/12/2019	0	5	10/12/2019	0	12.9
6/12/2019	1	5	7/12/2019	1	56.7	8/12/2019	1	6.3	9/12/2019	1	5	10/12/2019	1	10.0
6/12/2019	2	5	7/12/2019	2	156.7	8/12/2019	2	5	9/12/2019	2	5	10/12/2019	2	10.0
6/12/2019	3	5	7/12/2019	3	71.7	8/12/2019	3	5.4	9/12/2019	3	5	10/12/2019	3	8.8
6/12/2019	4	5	7/12/2019	4	17.1	8/12/2019	4	5	9/12/2019	4	5.4	10/12/2019	4	7.9
6/12/2019	5	5	7/12/2019	5	9.2	8/12/2019	5	5.8	9/12/2019	5	5	10/12/2019	5	8.8
6/12/2019	6	5	7/12/2019	6	7.1	8/12/2019	6	6.3	9/12/2019	6	6.3	10/12/2019	6	21.7
6/12/2019	7	5	7/12/2019	7	5.8	8/12/2019	7	5	9/12/2019	7	7.1	10/12/2019	7	10.4
6/12/2019	8	5	7/12/2019	8	5	8/12/2019	8	5	9/12/2019	8	5	10/12/2019	8	5
6/12/2019	9	5	7/12/2019	9	5	8/12/2019	9	5	9/12/2019	9	5	10/12/2019	9	5
6/12/2019	10	5	7/12/2019	10	5	8/12/2019	10	5	9/12/2019	10	5	10/12/2019	10	5
6/12/2019	11	5	7/12/2019	11	5	8/12/2019	11	5	9/12/2019	11	5	10/12/2019	11	5
6/12/2019	12	5	7/12/2019	12	5	8/12/2019	12	5	9/12/2019	12	5	10/12/2019	12	5
6/12/2019	13	5	7/12/2019	13	5	8/12/2019	13	5	9/12/2019	13	5	10/12/2019	13	5
6/12/2019	14	5	7/12/2019	14	5	8/12/2019	14	5	9/12/2019	14	5	10/12/2019	14	5
6/12/2019	15	5	7/12/2019	15	5	8/12/2019	15	5	9/12/2019	15	5	10/12/2019	15	5
6/12/2019	16	5	7/12/2019	16	5	8/12/2019	16	5	9/12/2019	16	5	10/12/2019	16	5
6/12/2019	17	5	7/12/2019	17	5	8/12/2019	17	5	9/12/2019	17	5	10/12/2019	17	5
6/12/2019	18	5	7/12/2019	18	5	8/12/2019	18	5	9/12/2019	18	5	10/12/2019	18	5.8
6/12/2019	19	5	7/12/2019	19	56.7	8/12/2019	19	5	9/12/2019	19	22.5	10/12/2019	19	15.8
6/12/2019	20	5	7/12/2019	20	12.9	8/12/2019	20	5	9/12/2019	20	16.7	10/12/2019	20	114.6
6/12/2019	21	6.3	7/12/2019	21	5	8/12/2019	21	5	9/12/2019	21	27.5	10/12/2019	21	45.8
6/12/2019	22	5	7/12/2019	22	17.9	8/12/2019	22	5	9/12/2019	22	24.2	10/12/2019	22	28.3
6/12/2019	23	5	7/12/2019	23	32.5	8/12/2019	23	5	9/12/2019	23	20.0	10/12/2019	23	15.4
Maximum		6.3			156.7			11.3			27.5			114.6

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
11/12/2019	0	5	12/12/2019	0	No Data	13/12/2019	0	No Data	14/12/2019	0	No Data	15/12/2019	0	No Data
11/12/2019	1	5	12/12/2019	1	No Data	13/12/2019	1	No Data	14/12/2019	1	No Data	15/12/2019	1	No Data
11/12/2019	2	5	12/12/2019	2	No Data	13/12/2019	2	No Data	14/12/2019	2	No Data	15/12/2019	2	No Data
11/12/2019	3	5	12/12/2019	3	No Data	13/12/2019	3	No Data	14/12/2019	3	No Data	15/12/2019	3	No Data
11/12/2019	4	5	12/12/2019	4	No Data	13/12/2019	4	No Data	14/12/2019	4	No Data	15/12/2019	4	No Data
11/12/2019	5	5	12/12/2019	5	No Data	13/12/2019	5	No Data	14/12/2019	5	No Data	15/12/2019	5	No Data
11/12/2019	6	5	12/12/2019	6	No Data	13/12/2019	6	No Data	14/12/2019	6	No Data	15/12/2019	6	No Data
11/12/2019	7	5	12/12/2019	7	No Data	13/12/2019	7	No Data	14/12/2019	7	No Data	15/12/2019	7	No Data
11/12/2019	8	5	12/12/2019	8	No Data	13/12/2019	8	No Data	14/12/2019	8	No Data	15/12/2019	8	No Data
11/12/2019	9	5	12/12/2019	9	No Data	13/12/2019	9	No Data	14/12/2019	9	No Data	15/12/2019	9	No Data
11/12/2019	10	5	12/12/2019	10	No Data	13/12/2019	10	No Data	14/12/2019	10	No Data	15/12/2019	10	No Data
11/12/2019	11	5	12/12/2019	11	No Data	13/12/2019	11	No Data	14/12/2019	11	No Data	15/12/2019	11	No Data
11/12/2019	12	5	12/12/2019	12	No Data	13/12/2019	12	No Data	14/12/2019	12	No Data	15/12/2019	12	No Data
11/12/2019	13	5	12/12/2019	13	No Data	13/12/2019	13	No Data	14/12/2019	13	No Data	15/12/2019	13	No Data
11/12/2019	14	5	12/12/2019	14	No Data	13/12/2019	14	No Data	14/12/2019	14	No Data	15/12/2019	14	No Data
11/12/2019	15	5	12/12/2019	15	No Data	13/12/2019	15	No Data	14/12/2019	15	No Data	15/12/2019	15	No Data
11/12/2019	16	5	12/12/2019	16	No Data	13/12/2019	16	No Data	14/12/2019	16	No Data	15/12/2019	16	No Data
11/12/2019	17	5	12/12/2019	17	No Data	13/12/2019	17	No Data	14/12/2019	17	No Data	15/12/2019	17	No Data
11/12/2019	18	5	12/12/2019	18	No Data	13/12/2019	18	No Data	14/12/2019	18	No Data	15/12/2019	18	No Data
11/12/2019	19	No Data	12/12/2019	19	No Data	13/12/2019	19	No Data	14/12/2019	19	No Data	15/12/2019	19	No Data
11/12/2019	20	No Data	12/12/2019	20	No Data	13/12/2019	20	No Data	14/12/2019	20	No Data	15/12/2019	20	No Data
11/12/2019	21	No Data	12/12/2019	21	No Data	13/12/2019	21	No Data	14/12/2019	21	No Data	15/12/2019	21	No Data
11/12/2019	22	No Data	12/12/2019	22	No Data	13/12/2019	22	No Data	14/12/2019	22	No Data	15/12/2019	22	No Data
11/12/2019	23	No Data	12/12/2019	23	No Data	13/12/2019	23	No Data	14/12/2019	23	No Data	15/12/2019	23	No Data
Maximum		5*			No Data			No Data			No Data			No Data

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
16/12/2019	0	No Data	17/12/2019	0	5	18/12/2019	0	5	19/12/2019	0	8.3	20/12/2019	0	No Data
16/12/2019	1	No Data	17/12/2019	1	5	18/12/2019	1	5	19/12/2019	1	No Data	20/12/2019	1	No Data
16/12/2019	2	No Data	17/12/2019	2	5	18/12/2019	2	5	19/12/2019	2	No Data	20/12/2019	2	No Data
16/12/2019	3	No Data	17/12/2019	3	5	18/12/2019	3	5	19/12/2019	3	No Data	20/12/2019	3	No Data
16/12/2019	4	No Data	17/12/2019	4	5	18/12/2019	4	5	19/12/2019	4	No Data	20/12/2019	4	No Data
16/12/2019	5	No Data	17/12/2019	5	5	18/12/2019	5	5	19/12/2019	5	No Data	20/12/2019	5	No Data
16/12/2019	6	No Data	17/12/2019	6	5	18/12/2019	6	6.0	19/12/2019	6	No Data	20/12/2019	6	No Data
16/12/2019	7	No Data	17/12/2019	7	5	18/12/2019	7	5.2	19/12/2019	7	No Data	20/12/2019	7	No Data
16/12/2019	8	No Data	17/12/2019	8	5	18/12/2019	8	5	19/12/2019	8	No Data	20/12/2019	8	No Data
16/12/2019	9	No Data	17/12/2019	9	5	18/12/2019	9	5	19/12/2019	9	No Data	20/12/2019	9	No Data
16/12/2019	10	No Data	17/12/2019	10	5	18/12/2019	10	5	19/12/2019	10	No Data	20/12/2019	10	No Data
16/12/2019	11	No Data	17/12/2019	11	5	18/12/2019	11	5	19/12/2019	11	No Data	20/12/2019	11	5
16/12/2019	12	No Data	17/12/2019	12	5	18/12/2019	12	5	19/12/2019	12	No Data	20/12/2019	12	5
16/12/2019	13	5	17/12/2019	13	5	18/12/2019	13	5	19/12/2019	13	No Data	20/12/2019	13	5
16/12/2019	14	5	17/12/2019	14	5	18/12/2019	14	5	19/12/2019	14	No Data	20/12/2019	14	5
16/12/2019	15	5	17/12/2019	15	5	18/12/2019	15	5	19/12/2019	15	No Data	20/12/2019	15	5
16/12/2019	16	5	17/12/2019	16	5	18/12/2019	16	5	19/12/2019	16	No Data	20/12/2019	16	5
16/12/2019	17	5	17/12/2019	17	5	18/12/2019	17	5	19/12/2019	17	No Data	20/12/2019	17	5.8
16/12/2019	18	5	17/12/2019	18	5	18/12/2019	18	5	19/12/2019	18	No Data	20/12/2019	18	10.0
16/12/2019	19	5	17/12/2019	19	5	18/12/2019	19	5.3	19/12/2019	19	No Data	20/12/2019	19	9.2
16/12/2019	20	5	17/12/2019	20	5	18/12/2019	20	19.1	19/12/2019	20	No Data	20/12/2019	20	9.2
16/12/2019	21	5	17/12/2019	21	5	18/12/2019	21	15.4	19/12/2019	21	No Data	20/12/2019	21	10.0
16/12/2019	22	5	17/12/2019	22	5	18/12/2019	22	9.8	19/12/2019	22	No Data	20/12/2019	22	6.4
16/12/2019	23	5	17/12/2019	23	5	18/12/2019	23	10.0	19/12/2019	23	No Data	20/12/2019	23	6.5
Maximum		5*			5*			19.1			8.3			10.0

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
21/12/2019	0	5	22/12/2019	0	18.3	23/12/2019	0	5	24/12/2019	0	5	25/12/2019	0	5
21/12/2019	1	5	22/12/2019	1	5.8	23/12/2019	1	5	24/12/2019	1	5	25/12/2019	1	5
21/12/2019	2	5.4	22/12/2019	2	5.8	23/12/2019	2	5	24/12/2019	2	5	25/12/2019	2	5
21/12/2019	3	5	22/12/2019	3	5	23/12/2019	3	5	24/12/2019	3	5	25/12/2019	3	5
21/12/2019	4	5	22/12/2019	4	5	23/12/2019	4	5	24/12/2019	4	5	25/12/2019	4	5
21/12/2019	5	5	22/12/2019	5	5	23/12/2019	5	5	24/12/2019	5	5	25/12/2019	5	5
21/12/2019	6	6.3	22/12/2019	6	5	23/12/2019	6	5	24/12/2019	6	5	25/12/2019	6	5
21/12/2019	7	5	22/12/2019	7	5	23/12/2019	7	5	24/12/2019	7	5	25/12/2019	7	5
21/12/2019	8	5	22/12/2019	8	5	23/12/2019	8	5	24/12/2019	8	5	25/12/2019	8	5
21/12/2019	9	5	22/12/2019	9	5	23/12/2019	9	5	24/12/2019	9	5	25/12/2019	9	5
21/12/2019	10	5	22/12/2019	10	5	23/12/2019	10	5	24/12/2019	10	5	25/12/2019	10	5
21/12/2019	11	5	22/12/2019	11	5	23/12/2019	11	5	24/12/2019	11	5	25/12/2019	11	5
21/12/2019	12	5	22/12/2019	12	5	23/12/2019	12	5	24/12/2019	12	5	25/12/2019	12	5
21/12/2019	13	5	22/12/2019	13	5	23/12/2019	13	5	24/12/2019	13	5	25/12/2019	13	5
21/12/2019	14	5	22/12/2019	14	5	23/12/2019	14	5	24/12/2019	14	5	25/12/2019	14	5
21/12/2019	15	5	22/12/2019	15	5	23/12/2019	15	5	24/12/2019	15	5	25/12/2019	15	5
21/12/2019	16	5	22/12/2019	16	5	23/12/2019	16	5	24/12/2019	16	5	25/12/2019	16	5
21/12/2019	17	5	22/12/2019	17	5	23/12/2019	17	5	24/12/2019	17	5	25/12/2019	17	5
21/12/2019	18	5.4	22/12/2019	18	5	23/12/2019	18	5	24/12/2019	18	5	25/12/2019	18	5
21/12/2019	19	29.2	22/12/2019	19	5	23/12/2019	19	5	24/12/2019	19	5	25/12/2019	19	5
21/12/2019	20	29.2	22/12/2019	20	5	23/12/2019	20	5	24/12/2019	20	5	25/12/2019	20	5
21/12/2019	21	105.8	22/12/2019	21	5	23/12/2019	21	5	24/12/2019	21	5	25/12/2019	21	5
21/12/2019	22	105.8	22/12/2019	22	5	23/12/2019	22	5	24/12/2019	22	5	25/12/2019	22	5
21/12/2019	23	44.2	22/12/2019	23	5	23/12/2019	23	5	24/12/2019	23	5	25/12/2019	23	5
Maximum		105.8			18.3			5*			5*			5*

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
26/12/2019	0	5	27/12/2019	0	No Data	28/12/2019	0	No Data	29/12/2019	0	No Data	30/12/2019	0	No Data
26/12/2019	1	5	27/12/2019	1	No Data	28/12/2019	1	No Data	29/12/2019	1	No Data	30/12/2019	1	No Data
26/12/2019	2	5	27/12/2019	2	No Data	28/12/2019	2	No Data	29/12/2019	2	No Data	30/12/2019	2	No Data
26/12/2019	3	5	27/12/2019	3	No Data	28/12/2019	3	No Data	29/12/2019	3	No Data	30/12/2019	3	No Data
26/12/2019	4	5	27/12/2019	4	No Data	28/12/2019	4	No Data	29/12/2019	4	No Data	30/12/2019	4	No Data
26/12/2019	5	5	27/12/2019	5	No Data	28/12/2019	5	No Data	29/12/2019	5	No Data	30/12/2019	5	No Data
26/12/2019	6	5	27/12/2019	6	No Data	28/12/2019	6	No Data	29/12/2019	6	No Data	30/12/2019	6	No Data
26/12/2019	7	5	27/12/2019	7	No Data	28/12/2019	7	No Data	29/12/2019	7	No Data	30/12/2019	7	No Data
26/12/2019	8	No Data	27/12/2019	8	No Data	28/12/2019	8	No Data	29/12/2019	8	No Data	30/12/2019	8	No Data
26/12/2019	9	No Data	27/12/2019	9	No Data	28/12/2019	9	No Data	29/12/2019	9	No Data	30/12/2019	9	No Data
26/12/2019	10	No Data	27/12/2019	10	No Data	28/12/2019	10	No Data	29/12/2019	10	No Data	30/12/2019	10	No Data
26/12/2019	11	No Data	27/12/2019	11	No Data	28/12/2019	11	No Data	29/12/2019	11	No Data	30/12/2019	11	No Data
26/12/2019	12	No Data	27/12/2019	12	No Data	28/12/2019	12	No Data	29/12/2019	12	No Data	30/12/2019	12	No Data
26/12/2019	13	No Data	27/12/2019	13	No Data	28/12/2019	13	No Data	29/12/2019	13	No Data	30/12/2019	13	No Data
26/12/2019	14	No Data	27/12/2019	14	No Data	28/12/2019	14	No Data	29/12/2019	14	No Data	30/12/2019	14	No Data
26/12/2019	15	No Data	27/12/2019	15	No Data	28/12/2019	15	No Data	29/12/2019	15	No Data	30/12/2019	15	No Data
26/12/2019	16	No Data	27/12/2019	16	No Data	28/12/2019	16	No Data	29/12/2019	16	No Data	30/12/2019	16	No Data
26/12/2019	17	No Data	27/12/2019	17	No Data	28/12/2019	17	No Data	29/12/2019	17	No Data	30/12/2019	17	No Data
26/12/2019	18	No Data	27/12/2019	18	No Data	28/12/2019	18	No Data	29/12/2019	18	No Data	30/12/2019	18	No Data
26/12/2019	19	No Data	27/12/2019	19	No Data	28/12/2019	19	No Data	29/12/2019	19	No Data	30/12/2019	19	No Data
26/12/2019	20	No Data	27/12/2019	20	No Data	28/12/2019	20	No Data	29/12/2019	20	No Data	30/12/2019	20	No Data
26/12/2019	21	No Data	27/12/2019	21	No Data	28/12/2019	21	No Data	29/12/2019	21	No Data	30/12/2019	21	No Data
26/12/2019	22	No Data	27/12/2019	22	No Data	28/12/2019	22	No Data	29/12/2019	22	No Data	30/12/2019	22	No Data
26/12/2019	23	No Data	27/12/2019	23	No Data	28/12/2019	23	No Data	29/12/2019	23	No Data	30/12/2019	23	No Data
Maximum		5*			No Data			No Data			No Data			No Data

Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average	Date	Hour	SO ₂ 1hr Average
31/12/2019	0	No Data												
31/12/2019	1	No Data												
31/12/2019	2	No Data												
31/12/2019	3	No Data												
31/12/2019	4	No Data												
31/12/2019	5	No Data												
31/12/2019	6	No Data												
31/12/2019	7	No Data												
31/12/2019	8	No Data												
31/12/2019	9	No Data												
31/12/2019	10	No Data												
31/12/2019	11	No Data												
31/12/2019	12	No Data												
31/12/2019	13	No Data												
31/12/2019	14	No Data												
31/12/2019	15	No Data												
31/12/2019	16	No Data												
31/12/2019	17	No Data												
31/12/2019	18	No Data												
31/12/2019	19	No Data												
31/12/2019	20	No Data												
31/12/2019	21	No Data												
31/12/2019	22	No Data												
31/12/2019	23	No Data												
Maximum		No Data												

December 2019

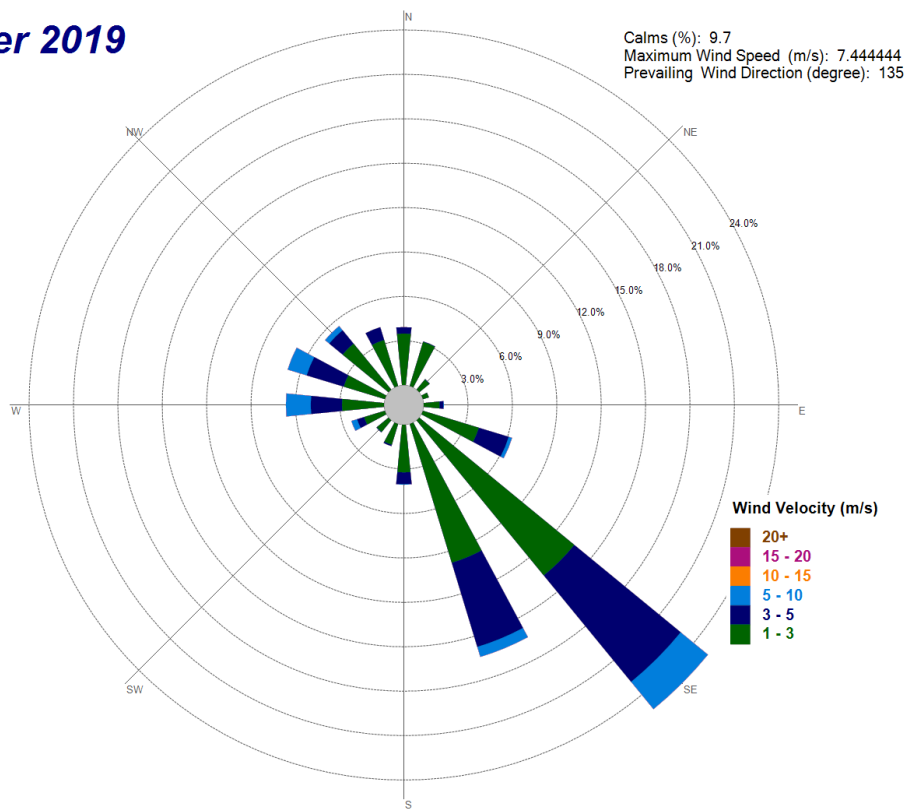


Figure 4 MCC December 2019 Meteorology Data